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**1986  
ANNUAL  
REPORT**

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**MINNESOTA STATE  
BOARD OF  
INVESTMENT**

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**1986  
ANNUAL  
REPORT**

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**MINNESOTA STATE  
BOARD OF  
INVESTMENT**

**GOVERNOR RUDY PERPICH**

**STATE AUDITOR ARNE H. CARLSON**

**SECRETARY OF STATE JOAN ANDERSON GROWE**

**STATE TREASURER ROBERT W. MATTSON**

**ATTORNEY GENERAL HUBERT H. HUMPHREY**

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## INVESTMENT ADVISORY COUNCIL

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Judith W. Mares, Chair, Director Benefit Finance, General Mills

Malcolm W. McDonald, Vice Chair, Director, Space Center

Harry H. Adams, Jr., Exec. Sec., Mpls. Teachers Retirement Fund

Verona D. Burton, Active Employee Representative

James R. Eckmann, Dir. of Investments & Banking, Dayton Hudson

Paul L. Groschen, Exec. Dir., Minnesota State Retirement System

Kenneth F. Gudorf, Sr., C.F.O. and V.P. of Finance, Carlson Cos.

James M. Hacking, Exec. Dir., Public Employees Retirement Assoc.

Richard B. Hume, Sr. Vice President, Marquette Bank Minneapolis

Peter J. Kiedrowski, Commissioner of Finance

Gary R. Norstrem, City Treasurer, St. Paul

Michael I. Rosen, President, Michael I. Rosen & Associates

Joseph T. Rukavina, Active Employee Representative

Harvey Schmidt, Exec. Dir., Teachers Retirement Association

Raymond B. Vecellio, Retiree Representative

Deborah W. Veverka, Manager, Pension Financial Planning, Honeywell

Jan Yeomans, Manager, Pension Fund, 3M Company

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## INVESTMENT DEPARTMENT PERSONNEL

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Howard J. Bicker  
Jeff Bailey  
Roger W. Henry

Executive Director  
Assistant Executive Director  
Equity and Fixed Income Manager

### COMMON STOCKS

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C. Robert Parsons  
Doug Gorence  
Harold L. Syverson

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Senior Portfolio Manager  
Investment Analyst, Senior  
Investment Analyst, Intermediate  
Head Security Trader

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Senior Portfolio Manager  
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Investment Analyst, Senior  
Investment Analyst, Senior

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Deborah F. Griebenow  
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Charlene Olson  
Linda M. Nadeau  
Lavern Jagg

Administrative Director  
Assistant to the Executive Director  
Senior Accounting Officer  
Accounting Officer, Intermediate  
Accounting Officer  
Research Analyst, Intermediate  
Office Services Supervisor II  
Computer Operator  
Clerk Stenographer, Senior  
Clerk Typist II  
Clerk Typist I

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MEMBERS OF THE BOARD:  
GOVERNOR RUDY PERPICH  
STATE AUDITOR ARNE H. CARLSON  
STATE TREASURER ROBERT W. MATTSON  
SECRETARY OF STATE JOAN ANDERSON GROWE  
ATTORNEY GENERAL HUBERT H. HUMPHREY III



EXECUTIVE DIRECTOR  
HOWARD J. BICKER

STATE OF MINNESOTA  
STATE BOARD OF INVESTMENT

Room 105, MEA Building  
55 Sherburne Avenue  
Saint Paul 55155  
296-3328

The State Board of Investment is pleased to submit its annual report for 1986.

Fiscal year 1986 was an outstanding year for the Board. Both the stock and bond markets produced impressive results. The stock market moved to record highs during the year. The bond market, which was stimulated by falling interest rates, also provided excellent gains. Driven by this exceptional performance of the capital markets, the Board's investment gains for the year were among the highest in the last decade.

Several items should be highlighted as major accomplishments for the year:

- o The Basic Retirement Funds, the largest group of funds managed by the Board, produced a total rate of return of 26.2%. Combined with equally strong results in fiscal year 1985, the Basic Funds have generated a 60.0% cumulative return over the last two fiscal years. These gains were largely the result of the Board's asset allocation policy, which allowed the Basic Funds to take full advantage of the superior returns available in the capital markets during this period. (Refer to pages 5-25).
- o The Post Retirement Investment Fund generated earnings that will provide a 9.8% permanent benefit increase for its eligible participants. This increase is more than five times the fiscal year 1986 inflation rate. The Post Fund benefited from high inflation-adjusted yields available in the bond market during 1986. (Refer to pages 27-37).
- o The Supplemental Investment Fund was restructured under legislation proposed by the Board and adopted during the 1986 legislative session. New investment options will be added to the Fund to give participants access to a wider range of investment vehicles. (Refer to pages 39-48).
- o Benchmark portfolios were created for each of the Board's common stock managers. A benchmark portfolio is a customized index that reflects a manager's particular investment style. These new benchmarks will be used to evaluate more effectively the value added to the investment

process by individual managers. Benchmark portfolios are also integral to implementation of a performance-based fee system, outlined below. (Refer to pages 67-68).

- o A performance-based fee system was developed and will be implemented in during fiscal year 1987. After the Securities and Exchange Commission removed its prohibition on performance-based fees, the Board was among the first institutional investors to implement this method of compensation for its external active common stock managers. A performance-based fee will provide for a more productive relationship between the Board and its managers. (Refer to pages 69-71).
- o The Board continued its investment in real estate, venture capital and resource funds. After making several new commitments during the year, the Board has substantially reached its target allocations in the Basic Funds for venture capital. It is continuing to explore additional investment opportunities in the real estate and resource areas in order to complete its target allocation in these categories. (Refer to pages 72-74).
- o A new consultant was selected to advise the Board and its staff on their investment management program. After successfully implementing many fundamental changes in recent years, the Board felt its consultant needs had changed significantly. The Board selected as its consultant Richards & Tierney, a firm which has demonstrated a superior understanding of investment management structures, performance measurement, and investment techniques. The firm's expertise and perspective in these areas will be used to advise the Board on its future decisions. (Refer to pages 71-72).

At the close of fiscal year 1986, the Board's total portfolio reached \$11 billion. This amount is actually a composite of several separate pension funds, trust funds and cash accounts, each with differing investment objectives. In establishing a comprehensive management program, the Board develops an investment strategy for each fund, which reflects the fund's unique needs. The primary purpose of this annual report is to clearly communicate the investment goals, policies and performance of the various funds managed by the Board.

Through the investment programs presented in this report, the State Board of Investment will continue to enhance the management of its funds.

Sincerely,



Howard J. Bicker  
Executive Director

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| <p>The Statistical Data Appendix includes information on the Board's common stock, bond, and alternative equity managers.</p> |      |

PART TWO of the Minnesota State Board of Investment's 1986 ANNUAL REPORT contains financial statements and accounting data.

## INTRODUCTION

All investments undertaken by the State Board of Investment are governed by the common law prudent person rule and other standards codified in Chapter 11A of the Minnesota Statutes. The prudent person rule requires all members of the Board, Investment Advisory Council, and investment staff to "...act in good faith and exercise that degree of judgment and care, under circumstances then prevailing, which persons of prudence, discretion and intelligence exercise in the management of their own affairs, not for speculation, but for investment, considering the probable safety of their capital as well as the probable income to be derived therefrom."

In addition to the prudent person rule, the Minnesota Statutes contain a specific list of asset classes available for investment, including common stocks, bonds, short term securities, real estate, venture capital, and resource programs. The statutes prescribe the maximum percentage of fund assets that may be invested in each asset class and contain specific restrictions to ensure the quality of the investments.

Within the requirements established by state law, the State Board of Investment, in conjunction with the Investment Advisory Council and SBI investment staff, sets the asset allocation targets among stocks, bonds, cash, and alternative equity investments for each fund under management. The asset allocation is based on each fund's specific needs and objectives and thus may differ substantially from fund to fund. In addition, the Board determines the most appropriate investment management structure for each fund, structures which may include the use of external money managers and/or the internal investment staff.

In recent years, the Board, Investment Advisory Council, and SBI staff have conducted comprehensive analyses of the investment needs and objectives of the Basic Retirement Funds, the Post Retirement Investment Fund, the Supplemental Investment Fund, and the Permanent School Fund. These analyses have focused on the selection of appropriate asset mixes and investment management structures to achieve the funds' desired goals. The results of these studies represent the "roadmap" by which the Board manages these funds. The Board intends to update periodically the investment policies established for each fund.

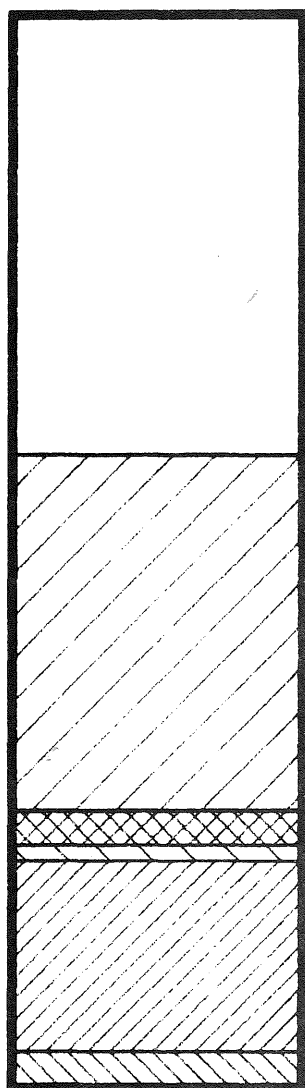
This year the annual report has been divided into two separate publications. The first publication contains the text of the annual report. It describes the investment goals, policies, and performance of those funds managed by the Board. The discussion is broken down on a fund-by-fund basis. It also contains statistical data on the Board's managers. The second publication contains financial statements and accounting data.



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**MINNESOTA STATE BOARD OF INVESTMENT**  
**FUNDS UNDER MANAGEMENT**  
**FISCAL YEAR 1986**

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BASIC RETIREMENT FUNDS-41.3%

POST RETIREMENT INV. FUND-33.1%

SUPPLEMENTAL INV. FUND-3.1%

MN VARIABLE ANNUITY FUND-1.4%

STATE CASH ACCOUNTS-17.8%

PERMANENT SCHOOL FUND-3.3%

## FUNDS MANAGED BY THE STATE BOARD OF INVESTMENT

Market Value  
June 30, 1986  
\$4.6 Billion

### BASIC RETIREMENT FUNDS

The Basic Retirement Funds are the pension assets of the currently working participants in six major statewide retirement plans:

|                                       |                 |
|---------------------------------------|-----------------|
| Teachers Retirement Fund              | \$1,847 million |
| Public Employees Retirement Fund      | 1,298 million   |
| State Employees Retirement Fund       | 969 million     |
| Public Employees Police and Fire Fund | 372 million     |
| Highway Patrol Retirement Fund        | 72 million      |
| Judges Retirement Fund                | 6 million       |

### POST RETIREMENT INVESTMENT FUND

\$3.7 billion

The Post Retirement Investment Fund is composed of the reserves for retirement benefits to be paid to currently retired employees by seven plans. Permanent retirement benefit increases are permitted based on excess earnings from dividends, interest, and net realized capital gains.

### SUPPLEMENTAL INVESTMENT FUND

\$346 million

The Supplemental Investment Fund includes the assets of the state deferred compensation plan, supplemental benefit arrangements, various retirement programs for local police and firefighters, and the unclassified employees of the state. Participants have a choice among four separate accounts with different investment emphases as authorized by law:

|                        |   |
|------------------------|---|
| Income Share Account - | a balanced portfolio of stocks and bonds              |
| Growth Share Account - | a portfolio of common stocks                          |
| Fixed Return Account - | a portfolio of liquid short-term debt investments     |
| Bond Account -         | a portfolio of intermediate maturity debt investments |

### MINNESOTA VARIABLE ANNUITY FUND

\$148 million

The Variable Annuity Fund is an investment option concentrating on common stocks which formerly was offered to members of the Teachers' Retirement Association. It is not available to new members.

### STATE CASH ACCOUNTS

\$2.0 billion

These accounts are composed of short-term investments maturing within three years. They include the Invested Treasurers Cash Fund, transportation funds, and various miscellaneous cash accounts.

### PERMANENT SCHOOL FUND

\$365 million

The Permanent School Fund is a trust established for the benefit of Minnesota public schools.



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# **BASIC RETIREMENT FUNDS**

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**INVESTMENT OBJECTIVES**

**ASSET ALLOCATION**

**INVESTMENT MANAGEMENT**

**INVESTMENT PERFORMANCE**

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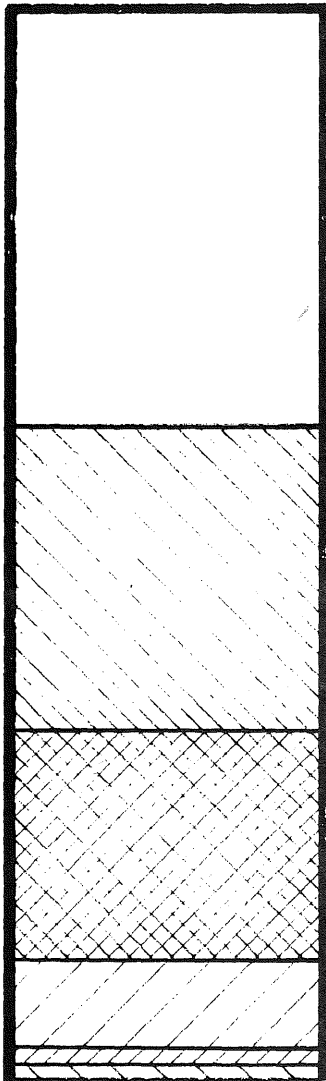
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# BASIC RETIREMENT FUNDS

## COMPOSITION BY FUND

FISCAL YEAR 1986

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TEACHERS RETIREMENT FUND-40.5%

PUBLIC EMPLOYEES RET. FUND-28.4%

STATE EMPLOYEES RET. FUND-21.2%

POLICE AND FIRE FUND-8.2%

HIGHWAY PATROL FUND-1.6%

JUDGES RETIREMENT FUND-0.1%

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## BASIC RETIREMENT FUNDS

The \$4.6 billion Basic Retirement Funds are composed of the retirement assets for currently working participants in six major statewide retirement funds. The graph on the preceding page identifies the individual statewide retirement funds which comprise the Basic Retirement Funds. The Basic Funds serve as accumulation pools in which the pension contributions of public employees and their employers are placed during the employees' years of active service. Approximately 200,000 public employees are participants in the Basic Retirement Funds.

### INVESTMENT OBJECTIVES

The Board pursues several investment objectives in the management of the Basic Retirement Funds' assets. In order of importance, those objectives are:

- o To secure the benefits promised public employees covered by the statewide pension plans.
- o To minimize the cost of providing benefits.
- o To avoid excessive volatility in short-run portfolio returns.

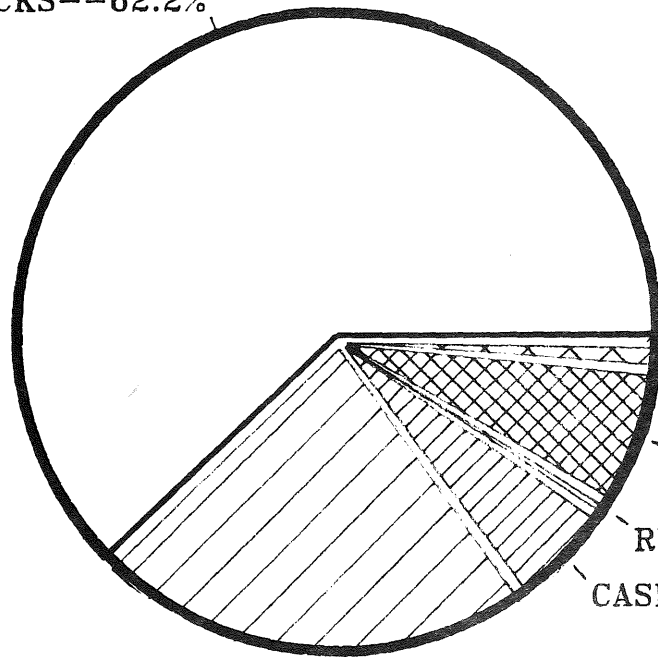
The Board's primary responsibility is to ensure that sufficient funds are available to finance promised benefits upon a public employee's retirement. But other investment goals are also important. Based upon the Basic Funds' adequate funding levels and participant demographics, their investment time horizon is long, in excess of twenty years. This time horizon permits the Board to take advantage of the long-run return opportunities offered by the capital markets. An investment program which is willing to accept short-run volatility in returns can significantly reduce the long-run costs of pension funding. The Board is cognizant, however, that excessive short-run return volatility is undesirable. The Board's investment program is, therefore, designed to limit extreme portfolio return results.

# BASIC RETIREMENT FUNDS

## 1986 FISCAL YEAR END ASSET MIX

### PERCENT OF MARKET VALUE

COMMON STOCKS--62.2%



VENTURE CAPITAL--1.4%

REAL ESTATE--7.2%

RESOURCE FUNDS--0.8%

CASH EQUIVALENTS--5.6%

BONDS--22.8%

|                            | \$(MILLION) | PERCENT |
|----------------------------|-------------|---------|
| COMMON STOCKS              | \$2,838     | 62.2%   |
| BONDS                      | 1,041       | 22.8    |
| CASH EQUIVALENTS*          | 253         | 5.6     |
| ALTERNATIVE EQUITY ASSETS: |             |         |
| REAL ESTATE                | 330         | 7.2     |
| VENTURE CAPITAL            | 65          | 1.4     |
| RESOURCE FUNDS             | 37          | 0.8     |
| TOTAL                      | \$4,564     | 100.0%  |

\*INCLUDES CASH UNCOMMITTED TO LONG-TERM ASSETS  
PLUS CASH HELD BY ALL EXTERNAL MANAGERS

## ASSET ALLOCATION

The choice of a long-run allocation of assets among common stocks, bonds, cash equivalents, and alternative equity investments can have a dramatic impact on investment results. In fact, asset allocation decisions quite frequently overwhelm the impact of individual security selection within a total portfolio.

Based on the Basic Retirement Funds' investment objectives, the Board has adopted the following long-term asset allocation (i.e., policy allocation) for the Basic Funds:

|  |       |
|--|-------|
| Common Stocks                                | 60.0% |
| Fixed Income<br>(bonds and cash equivalents) | 25.0% |
| Real Estate                                  | 10.0% |
| Resource Funds                               | 2.5%  |
| Venture Capital                              | 2.5%  |

The graph on the preceding page presents the asset allocation of the Basic Retirement Funds at the end of the 1986 fiscal year. Historical data on the Basic Funds' asset mix over the last five years are displayed in the graph on page 10 and the table on page 11.

The majority of the Basic Funds' assets are invested in common stocks. This large allocation reflects the long investment time horizon of the Basic Funds and the advantageous long-term risk-return characteristics of common stocks. Further, the Basic Funds' emphasis on maximizing total returns, as opposed to current income, is consistent with the capital gains orientation of common stocks. While this strategy may result in a higher level of total portfolio return volatility than more conservative, higher fixed income allocation strategies, the Board anticipates that additional returns, over the long-run, will more than compensate for the increased volatility.

The fixed income component of the Basic Funds is utilized as a deflation hedge and as a means of dampening short-run portfolio return volatility. In the event of a major deflation, only high quality bonds will protect principal as well as generate sizable capital gains. Fixed income assets serve as a diversifying element in the total portfolio, moderating return volatility. In addition, their inclusion satisfies Minnesota statutes limiting equity investments to 75% of the total fund.

Alternative equity investments, such as real estate and resource funds, provide an inflation hedge that financial assets, such as stocks, and particularly bonds, cannot offer. Hard assets can be expected to appreciate in value at least at a rate equal to inflation. Thus, by holding positions in these investments, the value of the total fund can be protected against catastrophic losses in the event of a sustained high inflation. Moreover, alternative equity investments, including venture



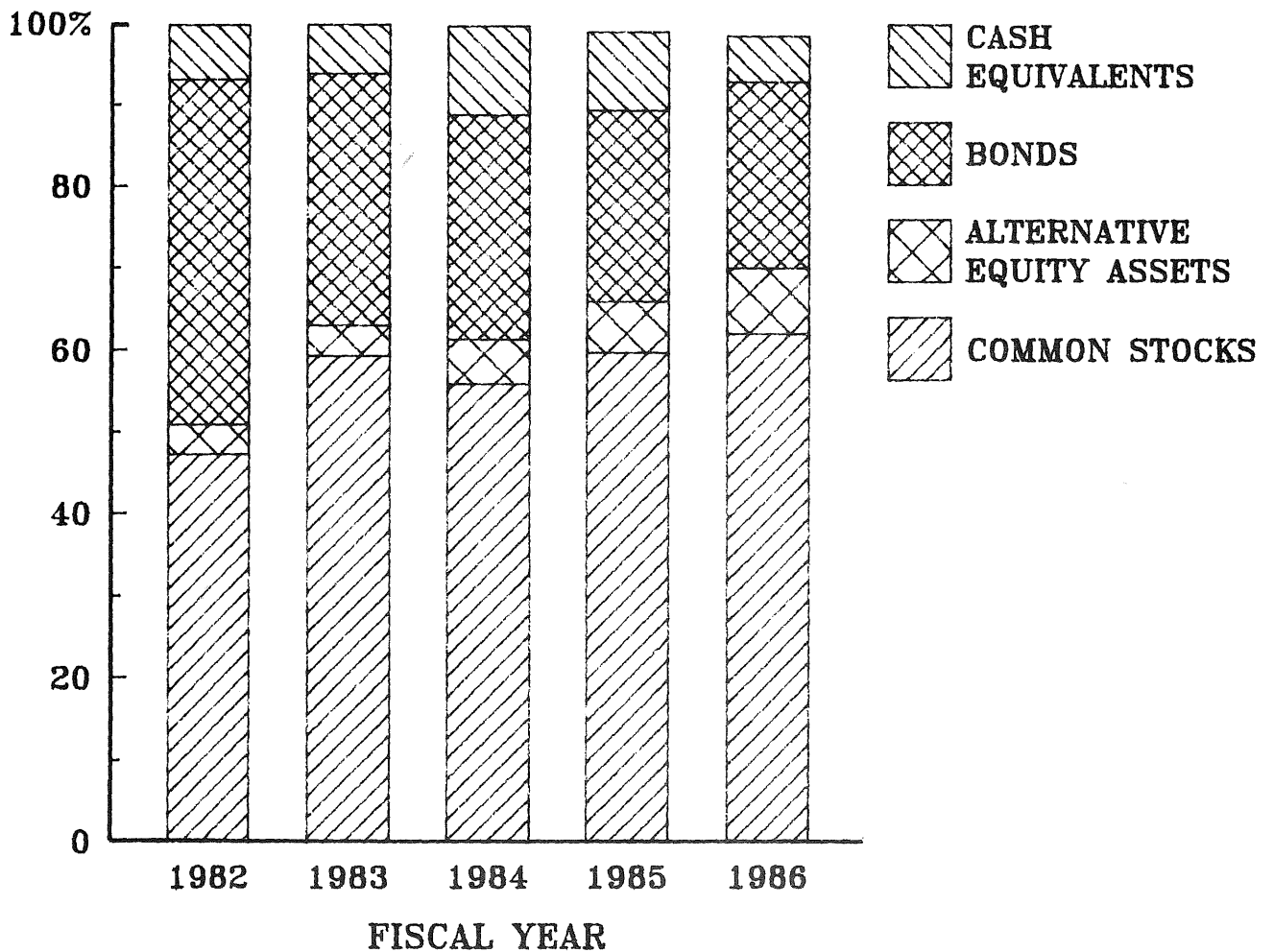
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# BASIC RETIREMENT FUNDS

## HISTORICAL ASSET MIX

PERCENT OF MARKET VALUE  
FISCAL YEAR END ALLOCATIONS

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# BASIC RETIREMENT FUNDS

## HISTORICAL ASSET MIX

PERCENT OF MARKET VALUE  
FISCAL YEAR END ALLOCATIONS

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|                   | FISCAL YEAR |         |         |         |         |
|-------------------|-------------|---------|---------|---------|---------|
|                   | 1982        | 1983    | 1984    | 1985    | 1986    |
| COMMON STOCKS     |             |         |         |         |         |
| \$MILLION         | 1,037.0     | 1,872.0 | 1,696.0 | 2,209.0 | 2,838.0 |
| PERCENT           | 47.5        | 59.5    | 56.1    | 59.9    | 62.2    |
| BONDS             |             |         |         |         |         |
| \$MILLION         | 922.0       | 970.0   | 829.0   | 865.0   | 1,041.0 |
| PERCENT           | 42.2        | 30.8    | 27.4    | 23.4    | 22.8    |
| CASH EQUIVALENTS* |             |         |         |         |         |
| \$MILLION         | 146.0       | 188.0   | 331.0   | 355.0   | 253.0   |
| PERCENT           | 6.7         | 6.0     | 10.9    | 9.6     | 5.6     |
| REAL ESTATE       |             |         |         |         |         |
| \$MILLION         | 62.0        | 96.0    | 140.0   | 203.0   | 330.0   |
| PERCENT           | 2.8         | 3.1     | 4.6     | 5.5     | 7.2     |
| RESOURCE FUNDS    |             |         |         |         |         |
| \$MILLION         | 18.0        | 19.0    | 23.0    | 25.0    | 37.0    |
| PERCENT           | 0.8         | 0.6     | 0.8     | 0.7     | 0.8     |
| VENTURE CAPITAL   |             |         |         |         |         |
| \$MILLION         | 0.0         | 0.0     | 4.0     | 34.0    | 65.0    |
| PERCENT           | 0.0         | 0.0     | 0.2     | 0.9     | 1.4     |
| TOTAL FUND        |             |         |         |         |         |
| \$MILLION         | 2,185.0     | 3,145.0 | 3,023.0 | 3,691.0 | 4,564.0 |
| PERCENT           | 100.0       | 100.0   | 100.0   | 100.0   | 100.0   |

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\*INCLUDES CASH UNCOMMITTED TO LONG-TERM ASSETS  
PLUS CASH HELD BY ALL EXTERNAL MANAGERS

capital, offer historically attractive returns. They also add diversification to the total portfolio, helping to prevent excessively volatile short-run returns.

## INVESTMENT MANAGEMENT

The assets of the Basic Retirement Funds are managed entirely by external advisers, with the temporary exception of one active equity account. For many years, internal staff managed all of the Basic Funds' assets. However, based on its analysis of the investment needs and objectives of the Basic Retirement Funds, the Board adopted a complete external management structure for the Basic Funds. As a result, fiscal years 1983 and 1984 were periods of major transition for the Basic Funds, as the shift from internal to external management was implemented.

The Basic Retirement Funds' investment management structure was largely unchanged in fiscal year 1986. New commitments to real estate and venture capital continued at a measured pace as the Board moved toward its funding targets in those asset classes.

### COMMON STOCKS

The SBI utilizes a two-part approach to the management of the Basic Retirement Funds' common stock portfolio, combining a \$2.0 billion core diversified passive portfolio (i.e., an index fund) with approximately \$900 million in non-diversified actively managed portfolios.

An index fund is a well-diversified portfolio of common stocks designed to match the rate of return performance of a predetermined stock market index. The index fund utilized by the SBI tracks the Wilshire 5000, a broad-based equity market indicator composed of the common stocks of all U.S.-domiciled corporations for which daily prices are available. In effect, the Wilshire 5000 represents virtually the entire domestic common stock market.

The SBI's decision to utilize an index fund is based on the inherent difficulty of actively managing a multi-billion dollar common stock portfolio. The Board has chosen to accept market returns on a substantial portion of its common stock portfolio through the utilization of an index fund. The SBI seeks above-market returns through the active management of the remaining common stock assets.

The actively managed segment of the Basic Retirement Funds' common stock portfolio is designed to complement the core index fund. With the index fund providing adequate diversification for the Funds' total portfolio, the active managers are expected to add incremental value, over the long-run, through aggressive

investment management decisions. A comprehensive monitoring system has been established to ensure that the active managers maintain non-diversified investment positions, consistent with their own particular investment approaches.

A summary of the investment styles and portfolio characteristics of each of the common stock managers is included in the Statistical Data Appendix.

## BONDS

The Basic Retirement Funds' \$1.1 billion bond portfolio is managed by six external bond managers. The managers' funding in early fiscal year 1985 was the final step in the Basic Funds' move to total external management. The group of six managers was selected for its blend of investment styles. Each of the managers invests in high-quality fixed income securities and emphasizes active investment decisions. The managers vary, however, in the emphasis they place on interest rate anticipation and in the manner in which they approach their issue selection and sector weighting decisions.

In keeping with the objective of utilizing the bond portfolio as a deflation hedge, the managers are restricted regarding the minimum average life of their portfolios. This requirement is designed to prevent the Basic Retirement Funds' total bond portfolio from assuming an excessively short-lived position and thus, severely diluting its deflation hedge capacity. Further, the bond managers are permitted to hold only high quality (BAA or better) fixed income assets. In addition, to avoid extreme variability in total bond portfolio returns, the maximum average life of the managers' portfolios is also constrained.

A summary of each bond manager's investment approach and portfolio characteristics is presented in the Statistical Data Appendix.

## CASH EQUIVALENTS

The long-term asset mix of the Basic Retirement Funds does not include an allocation to cash equivalents. Given the long-run objectives of the Funds, a permanent commitment to short-term investments is not appropriate. On the other hand, at any given time it is quite likely that cash reserves will compose three percent or more of the Basic Funds' market value. Cash equivalent holdings are derived from two sources: first, new contributions provided by the retirement funds which have yet to be allocated to a specific long-term asset segment; and second, the external investment managers, who are permitted to hold cash as part of their own individual short-run asset mix strategies.

Cash reserves are invested in a short-term investment fund (STIF) managed by State Street Bank and Trust, the Basic Retirement Funds' master custodian. The STIF is a separate

account invested under the same state statutes which guide SBI investment staff's short-term investments.

## REAL ESTATE

The SBI has targeted 10% of the Basic Retirement Funds for investment in real estate. Under state law, the SBI is authorized to invest in real estate through commingled funds, limited partnerships, and trusts. In each of the Board's real estate investments there must be at least four other participants. In addition, the Board's investment may not exceed 20% of a total fund. The SBI does not invest in real estate through direct investments, separate accounts, or individual transactions.

The SBI has adopted a three-part program to implement the policy allocation: 30-40% of the real estate portfolio is invested in open-end diversified commingled funds; 30-40% is invested in closed-end diversified commingled funds; and, 20-30% is placed in less diversified, more focused commingled funds.

The objective of the first two parts of the SBI's real estate program is to create a large core portfolio that is broadly diversified by property type, location, and financing structure. The core portfolio is designed to reflect the composition of the aggregate U.S. real estate market and, as such, is expected to earn market returns. The broad diversification of the core portfolio enables the Board to implement the third part of real estate program, the selection of less diversified, special orientation managers. With their more focused approach to real estate management, these funds offer the ability to enhance the return earned by the core portfolio.

The review of prospective real estate managers is conducted by SBI investment staff and the IAC's Alternative Investment Committee. In their evaluations, the staff and the Committee focus on the managers' experience, performance history, and investment strategy.

The Board continued to make progress toward its policy allocation to real estate during fiscal year 1986. New commitments were made to two closed-end commingled funds in both the diversified and specialty segments of the portfolio. The Board will continue to review and add new real estate investments to the portfolio as needed to fulfill the target 10% allocation. Future commitments likely will be in the form of follow-on funds with existing managers.

A description of the Board's real estate managers is included in the Statistical Data Appendix.

## VENTURE CAPITAL

The SBI has allocated 2.5% of the Basic Retirement Funds to investment in venture capital. Under state law, the Board is authorized to invest in venture capital through limited partnerships and corporations. As with real estate investments, each venture capital investment must have at least four other investors. Further, the Board's maximum investment size is 20% of a particular fund.

Like the real estate portfolio, the Board's venture capital portfolio is broadly diversified. It consists primarily of participations in venture capital partnerships and is diversified across three dimensions: location, industry type, and stage of corporate development of individual portfolio companies.

The search for venture capital managers is conducted by SBI investment staff and the IAC's Alternative Investment Committee. Venture Economics, the SBI's venture capital advisor, assists in the selection process. The SBI staff and the Committee's venture recommendations are based primarily on the managers' experience, performance history, investment strategy, and diversification potential.

The Board's policy allocation to venture capital essentially was attained in fiscal year 1986. Two new commitments to venture capital limited partnerships were made. The Board will make additional commitments in future years as the growth of the Basic Retirement Funds warrants the expansion of the venture capital portfolio and as the existing commitments begin to generate cash distributions.

A description of the Board's venture capital managers is included in the Statistical Data Appendix.

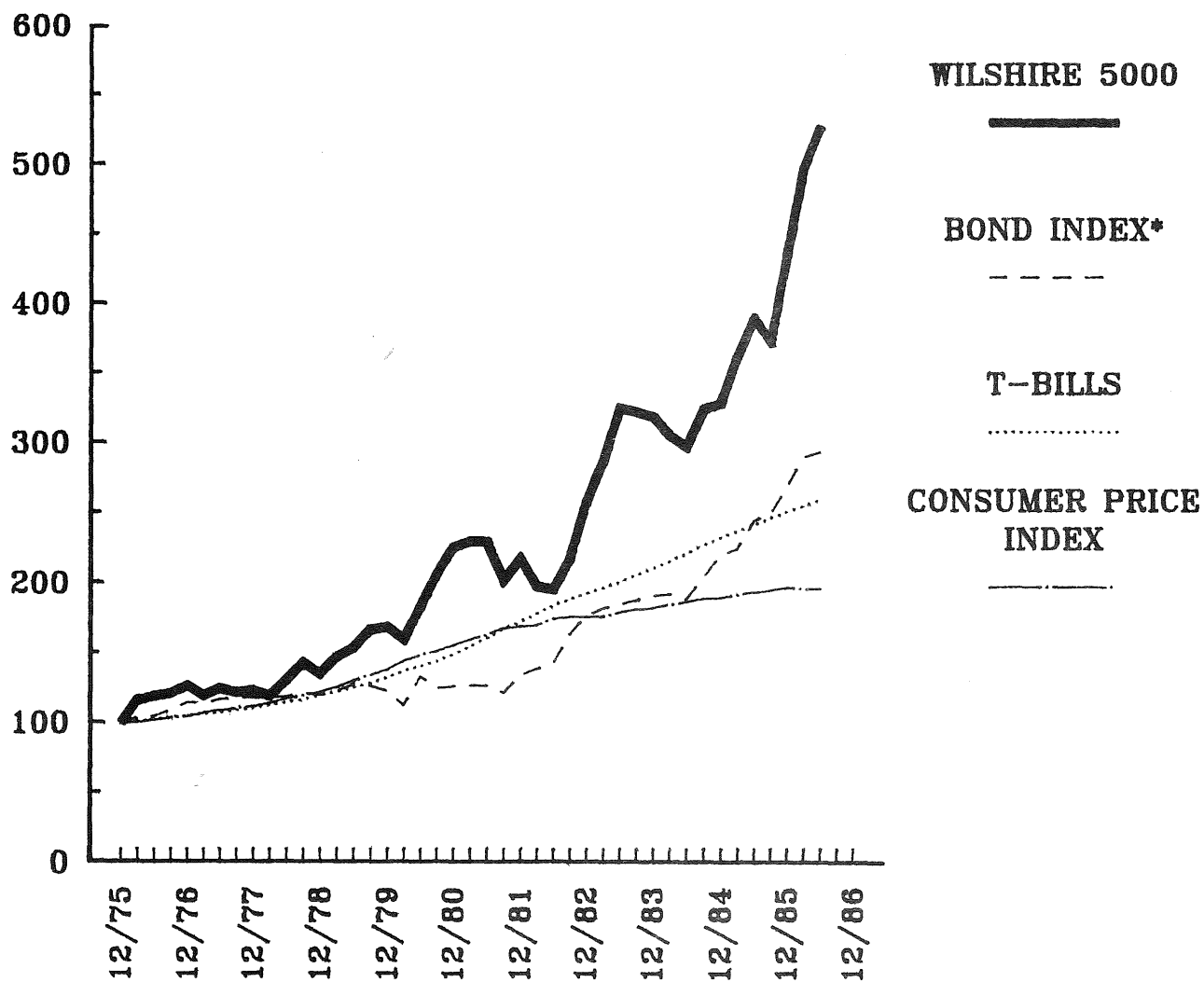
## RESOURCE FUNDS

The SBI has allocated 2.5% of the Basic Retirement Funds' assets for investment in oil and gas partnerships. The Board invests in partnerships structured specifically for tax-exempt investors. Again, there must be four other participants in each of the Board's resource investments and the Board may invest no more than 20% of a fund's total capital. The resource partnerships in which the Board invests concentrate their investments in producing properties and royalty interests that are diversified geographically and/or geologically.

Resource investments are reviewed by SBI investment staff and the IAC's Alternative Investment Committee. Resource reviews are similar to those conducted for potential real estate and venture investments. SBI staff and the Committee focus on the resource managers' experience, performance history, and investment strategy.

# PERFORMANCE OF CAPITAL MARKETS

## CUMULATIVE RETURNS



\*M.L. MASTER INDEX THROUGH 12/79  
SALOMON BROAD INDEX 1/80-6/86

During the 1986 fiscal year, SBI investment staff and the IAC's Alternative Investment Committee evaluated several possible new investments for the Basic Retirement Fund's resource portfolio. Only one of these investments was recommended to the Board. The sharp decline in energy prices and the financial shake-out in the energy sector have created the potential for profitable investment opportunities. However, SBI investment staff and the Committee have found it difficult to locate investments whose terms and assumptions properly reflect the decline in energy prices. Staff and the Committee plan to continue to review quality resource investments for possible inclusion in the Funds' portfolio.

A description of the Board's resource fund managers is included in the Statistical Data Appendix.

## INVESTMENT PERFORMANCE

### RISK-RETURN OBJECTIVES

The Board has adopted performance objectives which are consistent with the needs of the Basic Retirement Funds and realistic in the sense that they are both attainable and measurable. The evaluation of performance outcomes relative to objectives is an integral part of the SBI's investment management system.

Given the long-term investment time horizon of the Basic Retirement Funds, the performance evaluation time period is necessarily long-term as well. Recognizing that excessive attention to performance in the short-run can have a negative impact on investment results, the Board evaluates investment performance over a time horizon of approximately three to five years (roughly corresponding to a typical market cycle). While performance is measured and reviewed quarterly to identify trends and control extreme underperformance, decisions regarding the effectiveness of a particular investment management structure are made over a considerably longer period.

The Basic Retirement Funds' multi-manager structure requires that investment performance be evaluated on two distinct levels: the total fund level and the individual manager level. The use of total fund risk-return targets ensures that long-run strategic decisions which affect the total performance of the Funds are developed and implemented in a manner consistent with the Funds' needs. Risk-return objectives for the individual asset managers are designed to ensure that the managers adhere to their assigned investment roles. In addition, the objectives permit evaluation of the value that the managers add to the investment process.



## TOTAL FUND RISK-RETURN OBJECTIVES

To a significant degree, the risk level of the total fund is set implicitly when the long-term asset mix (policy portfolio) and investment management structure are determined. Given the adequate funding levels and long-term investment time horizons of the Basic Retirement Funds, the Board has targeted an above average risk posture for the Basic Funds. The Board's objective is to take advantage of the established relationship between risk and return. Higher risk investment strategies have been shown to offer higher long-run returns than lower risk strategies. The Board's risk target is implemented through the long-term commitment of a sizable proportion the Basic Funds' assets to equities and the adoption of an investment management structure which has an aggressive orientation.

The Basic Funds' long-term rate of return performance is evaluated relative to four specific benchmarks:

- o First, based on the Funds' long-term asset mix targets and the historical real returns offered by the various asset classes, the total portfolio is expected to achieve an annualized real rate of return of 5%.
- o Second, the returns produced by the total portfolio are expected to exceed those derived from a composite of asset class market indices, weighted in the same proportion as the Basic Funds' policy asset allocation. Because comprehensive data is available for only the stock, bond and cash equivalents markets, the composite index is weighted 65% stocks, 30% bonds, 5% cash equivalents.
- o Third, the Basic Funds' portfolio is expected to outperform the median return produced by a representative sample of other public and private tax-exempt balanced funds.
- o Fourth, the return on the Funds' total portfolio should exceed that of its actuarial assumed annual return of 8%.

## INDIVIDUAL MANAGER RISK-RETURN OBJECTIVES

Two primary long-run risk objectives have been established for the Basic Retirement Funds' common stock managers. The first objective is based on each manager's individual investment approach. Each manager (active or passive) is expected to hold a portfolio that is consistent, in terms of risk characteristics, with the managers' stated investment approach. The second objective relates to the managers' levels of diversification. The active common stock managers are expected to hold highly non-diversified portfolios, while the index fund manager is expected to hold a well-diversified portfolio. In the short-run, the active common stock managers may depart from these two risk targets as part of their specific investment strategies.

The common stock managers' returns are evaluated against the performance of a customized index constructed to represent the managers' specific investment approaches. The Board expects the equity managers to add value to their individual investment styles. The benchmarks take into account the equity market forces that at times favorably or unfavorably impact certain investment approaches. Thus, the benchmarks are appropriate boogies against which to judge the managers' performances.

The risk of the bond managers' portfolios is constrained in such a way as to ensure that they fulfill their deflation hedge and total fund diversification roles. The bond managers are restricted in terms of the average life (i.e., the durations) of their portfolios and the quality of their fixed income investments.

However, the bond managers' investment styles are more broad-based than those of the equity managers. Thus, the benchmark used to evaluate the bond managers is the Salomon Brothers Broad Bond Index, which represents the performance of the entire bond market.

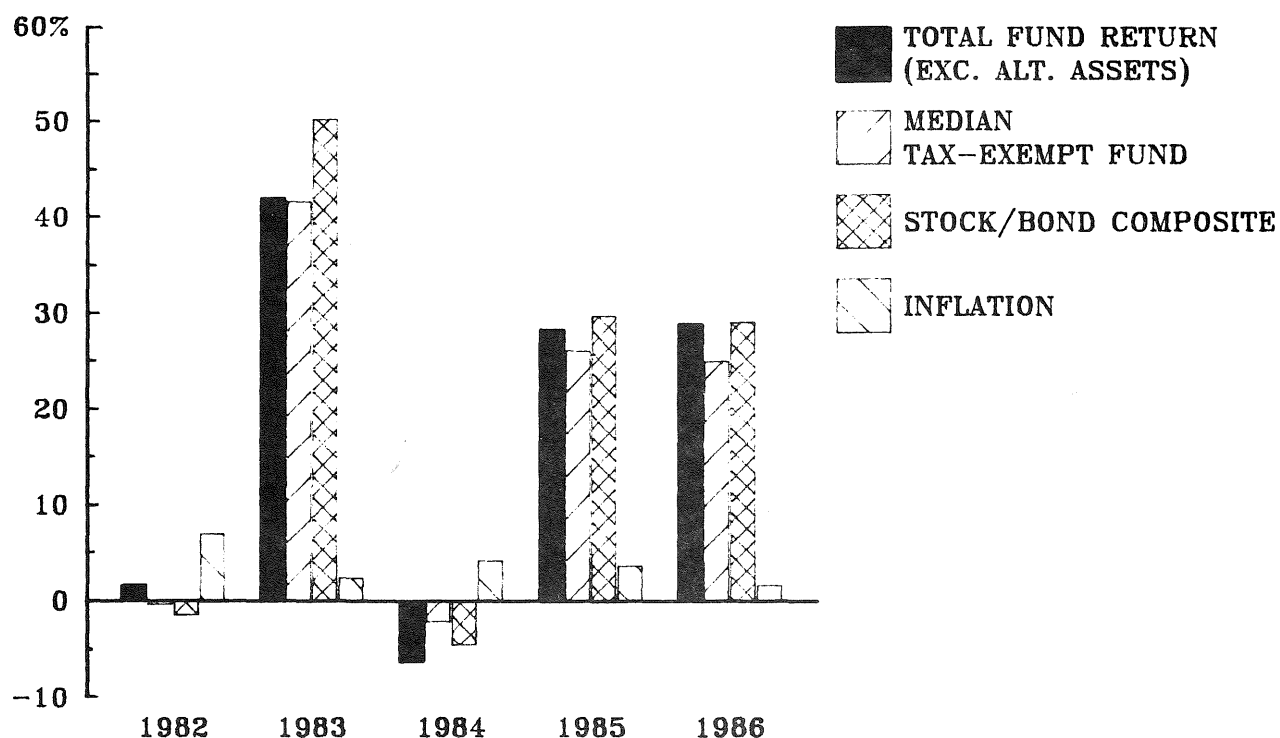
At this time, specific performance objectives have not been established for the alternative investment managers. The long-term nature of their investments and the lack of comprehensive data on the returns provided by the real estate, resource, and venture capital markets precludes effective performance evaluation. In the future, as markets for these assets become more institutionalized, the Board will more fully integrate these assets into its performance analysis.

#### **TOTAL FUND RISK-RETURN PERFORMANCE RESULTS**

Progress toward fulfillment of the Board's long-term asset mix targets continued during fiscal year 1986. The common stock and bond targets have been achieved for the past two years. Primary activity has centered around the Basic Retirement Funds' alternative investment programs. New commitments were made to real estate, venture capital, and resource investments during the year. With alternative investments near their policy asset allocation, only moderate additional activity is expected over the next several years.

Like the preceding year, fiscal year 1986 was an excellent period of performance for the Basic Retirement Funds. Both the stock and bond markets produced outstanding results. The stock market, as represented by the Wilshire 5000, moved to record highs, generating a 35.3% total return for the year. The bond market, which was stimulated by sharply declining interest rates, likewise produced impressive results. For the year, the bond market, as represented by the Salomon Broad Bond Index, produced a 19.9% total return.

## BASIC RETIREMENT FUNDS INVESTMENT RETURNS



|               | FISCAL YEAR |       |       |       |       | (Annualized) |       |
|---------------|-------------|-------|-------|-------|-------|--------------|-------|
|               | 1982        | 1983  | 1984  | 1985  | 1986  | 3 YR.        | 5 YR. |
| TOTAL FUND    |             |       |       |       |       |              |       |
| (incl.)*      | 2.0%        | 40.5% | -5.5% | 26.8% | 26.2% | 14.9%        | 16.8% |
| (excl.)       | 1.8         | 42.1  | -6.3  | 28.4  | 29.0  | 15.8         | 17.5  |
| MEDIAN FUND** | -0.1        | 41.3  | -2.1  | 26.3  | 25.1  | 16.4         | 17.6  |
| COMPOSITE***  | -1.6        | 50.3  | -4.7  | 29.8  | 29.2  | 16.9         | 18.8  |
| INFLATION     | 7.1         | 2.6   | 4.2   | 3.7   | 1.7   | 3.2          | 3.9   |

\* Includes Alternative Equity Assets: Real Estate, Venture Capital and Resource Funds

\*\* Wilshire Assoc. Trust Universe Comparison Service median tax-exempt balanced portfolio

\*\*\* 50/45/5 Wilshire 5000/Salomon Broad Bond Index/91 Day T-Bills Composite through 12-31-82, 65/30/5 Composite thereafter

Driven by these exceptional capital markets performances, the Basic Retirement Funds' total portfolio generated a 26.2% total rate of return for fiscal year 1986. (Excluding alternative investments, the portfolio produced a 29.0% return.) Combined with the equally strong 1985 results, the Basic Funds have generated a 60.0% cumulative return over the last two fiscal years. (Excluding alternative investments, the Basic Funds produced a two-year return of 65.6%).

Relative to established total fund performance objectives, the Basic Retirement Funds performed well. The Basic Funds' portfolio return substantially surpassed the return on the median tax-exempt fund, and exceeded the real rate of return and actuarial return targets. The Basic Funds roughly matched the return on the stock/bond/cash target. Performance relative to total fund targets is presented on pages 20 and 22.

#### INDIVIDUAL MANAGER RISK-RETURN PERFORMANCE RESULTS

With few exceptions, the external common stock managers successfully fulfilled their long-term risk objectives assigned to them by the Board. In general, the managers constructed portfolios consistent with their stated investment approaches and maintained appropriate levels of diversification.

From a total return perspective, the active equity managers' results were mixed. The majority of the managers outperformed their benchmark portfolios. However, several underperformed their benchmarks. The aggregate result for all of the common stock managers was performance below that of the stock market.

Fiscal year 1986 was a period in which managers who pursue a "Growth" style of investing generally far outperformed managers who follow a more defensive, "Value" style. These results were in sharp contrast to fiscal year 1985, when the opposite situation occurred. These divergences in investment style performances were very evident among the Board's common stock managers.

The index fund deviated modestly from its target, the Wilshire 5000, during the fiscal year. The tracking error was higher than expected due to unusually large cash positions temporarily held in the index fund's portfolio. These cash positions were caused by stock sales required to fund withdrawals from the Basic Retirement Funds due to the "Rule of 85."

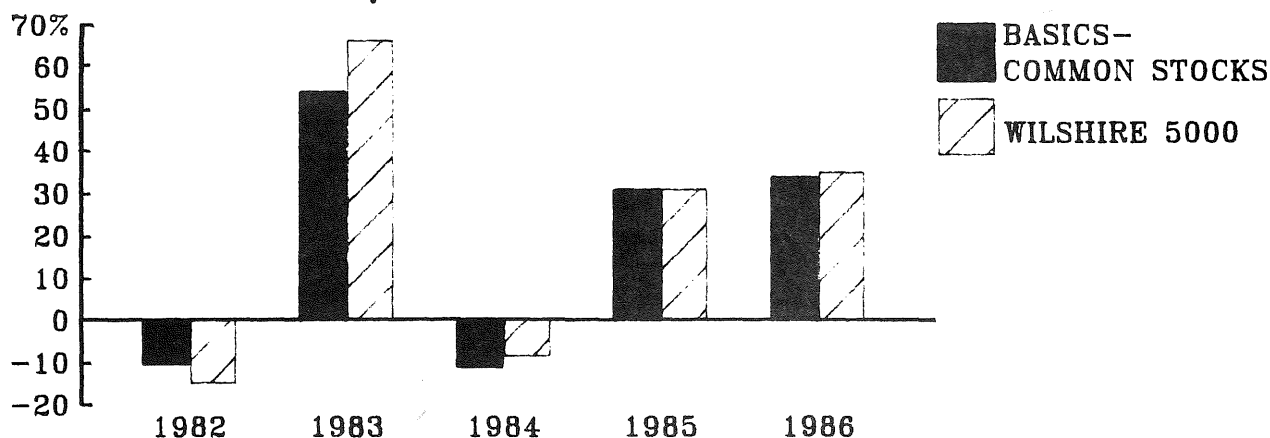
During fiscal year 1986, the bond managers fulfilled their assigned long-term risk targets. Portfolio quality and maturities were maintained in the specified ranges.

Rate of return results for the bond managers were generally unfavorable during the fiscal year. Most of the bond managers failed to outperform their assigned benchmark. This result was due, in large part, to less than market portfolio durations and

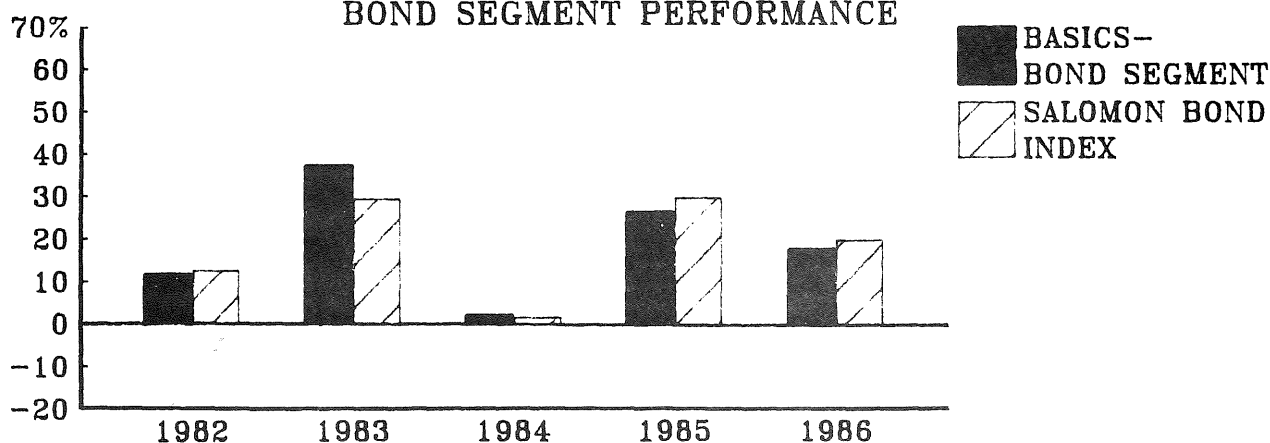
# BASIC RETIREMENT FUNDS

## PORTFOLIO SEGMENT PERFORMANCE

### EQUITY SEGMENT PERFORMANCE



### BOND SEGMENT PERFORMANCE



### FISCAL YEAR

(Annualized)

|                | 1982   | 1983  | 1984   | 1985  | 1986  | 3 YR. | 5 YR. |
|----------------|--------|-------|--------|-------|-------|-------|-------|
| EQUITY SEGMENT | -10.4% | 54.1% | -11.1% | 30.9% | 33.8% | 15.9% | 16.6% |
| WILSHIRE 5000  | -15.0  | 66.5  | -8.7   | 31.2  | 35.3  | 17.4  | 18.1  |
| BOND SEGMENT   | 11.9   | 37.4  | 2.2    | 26.4  | 17.6  | 15.0  | 18.5  |
| SALOMON INDEX* | 12.9   | 29.7  | 1.8    | 29.9  | 19.9  | 16.6  | 18.3  |

\*SALOMON BROTHERS BROAD BOND INDEX

large mortgage positions held by the majority of the managers in a declining interest rate environment.

Performance data for the individual equity and bond managers are presented on pages 24-25.

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## **BASIC RETIREMENT FUNDS EQUITY MANAGER PERFORMANCE**

**FISCAL YEAR 1986**

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| <b>MANAGER</b>                       | <b>TOTAL<br/>PORTFOLIO RETURN</b> |
|--------------------------------------|-----------------------------------|
| FRED ALGER                           | 47.2%                             |
| ALLIANCE CAPITAL                     | 43.9                              |
| BEUTEL GOODMAN                       | 16.3                              |
| BMI CAPITAL                          | 36.7                              |
| FORSTMANN LEFF                       | 44.1                              |
| HELLMAN JORDAN                       | 29.5                              |
| IDS ADVISORY                         | 41.9                              |
| INVESTMENT ADVISERS                  | 29.3                              |
| LIEBER & COMPANY                     | 42.1                              |
| PEREGRINE CAPITAL                    | 20.1                              |
| WADDELL & REED                       | 28.5                              |
| INTERNAL MANAGER                     | 18.6                              |
| <br>TOTAL-EXT. ACTIVE STOCK MANAGERS | <br>32.4                          |
| WILSHIRE ASSOCIATES (INDEX FUND)     | 34.4                              |
| <br>TOTAL-ALL COMMON STOCK MANAGERS  | <br>33.8                          |
| <br><b>PERFORMANCE STANDARDS</b>     |                                   |
| WILSHIRE 5000                        | 35.3                              |
| S&P 500                              | 35.9                              |
| TUCS MEDIAN EQUITY PORTFOLIO         | 32.0                              |
| INFLATION                            | 1.7                               |

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## **BASIC RETIREMENT FUNDS FIXED INCOME MANAGER PERFORMANCE**

**FISCAL YEAR 1986**

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| <b>MANAGER</b>                      | <b>TOTAL<br/>PORTFOLIO RETURN</b> |
|-------------------------------------|-----------------------------------|
| INVESTMENT ADVISERS                 | 16.2%                             |
| LEHMAN MANAGEMENT                   | 17.1                              |
| MILLER, ANDERSON & SHERRERD         | 18.5                              |
| MORGAN STANLEY                      | 17.9                              |
| PEREGRINE CAPITAL                   | 13.1                              |
| WESTERN ASSET                       | 20.6                              |
| <br>TOTAL EXT. ACTIVE BOND MANAGERS | <br>17.9                          |

### **PERFORMANCE STANDARDS**

|                          |      |
|--------------------------|------|
| SALOMON BROAD BOND INDEX | 19.9 |
| TUCS MEDIAN BOND MANAGER | 18.4 |





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# **POST RETIREMENT INVESTMENT FUND**

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**INVESTMENT OBJECTIVES**

**ASSET ALLOCATION**

**INVESTMENT MANAGEMENT**

**INVESTMENT PERFORMANCE**

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## POST RETIREMENT INVESTMENT FUND

The Post Retirement Investment Fund contains the pension assets of retired public employees covered by seven statewide retirement plans (i.e., the Basic Retirement Funds and the Legislative & Survivors Retirement Fund). The assets of the Fund are used to finance monthly annuities paid to retirees. These annuities may be adjusted upwards based on the earnings of the Fund. At the end of the 1986 fiscal year, the Post Retirement Investment Fund had a market value of \$3.6 billion. As of that date, almost 45,000 retirees were participants in the Fund.

### INVESTMENT OBJECTIVES

Public employees participating in the statewide retirement plans are promised benefits based on their total years of service and their "high five" average salaries. Upon the employees' retirement, sums of money sufficient to finance fixed monthly annuities are transferred from the accumulation pools to the Post Retirement Investment Fund. In order to support promised benefits, the Fund must "earn" at least 5% on its invested assets each year. If the Fund exceeds this earnings rate, excess earnings are used to finance permanent benefit increases for eligible retirees.

The SBI pursues two primary investment goals for the Post Retirement Investment Fund:

- o To produce annual earnings sufficient to maintain promised benefits at current levels.
- o To generate additional earnings which allow benefits to be increased at a rate which compensates, to some degree, for inflation.

In order to achieve these two objectives, the Board recognizes that the Post Retirement Investment Fund requires a completely different investment approach than that applied to the Basic Retirement Funds.

The ability of the Post Retirement Investment Fund to maintain current benefit levels and provide future benefit increases is dependent upon its earnings. As specified by statute, earnings for the Fund are defined as interest and dividend income as well as realized equity and fixed income capital gains (or losses). Unrealized capital gains have no

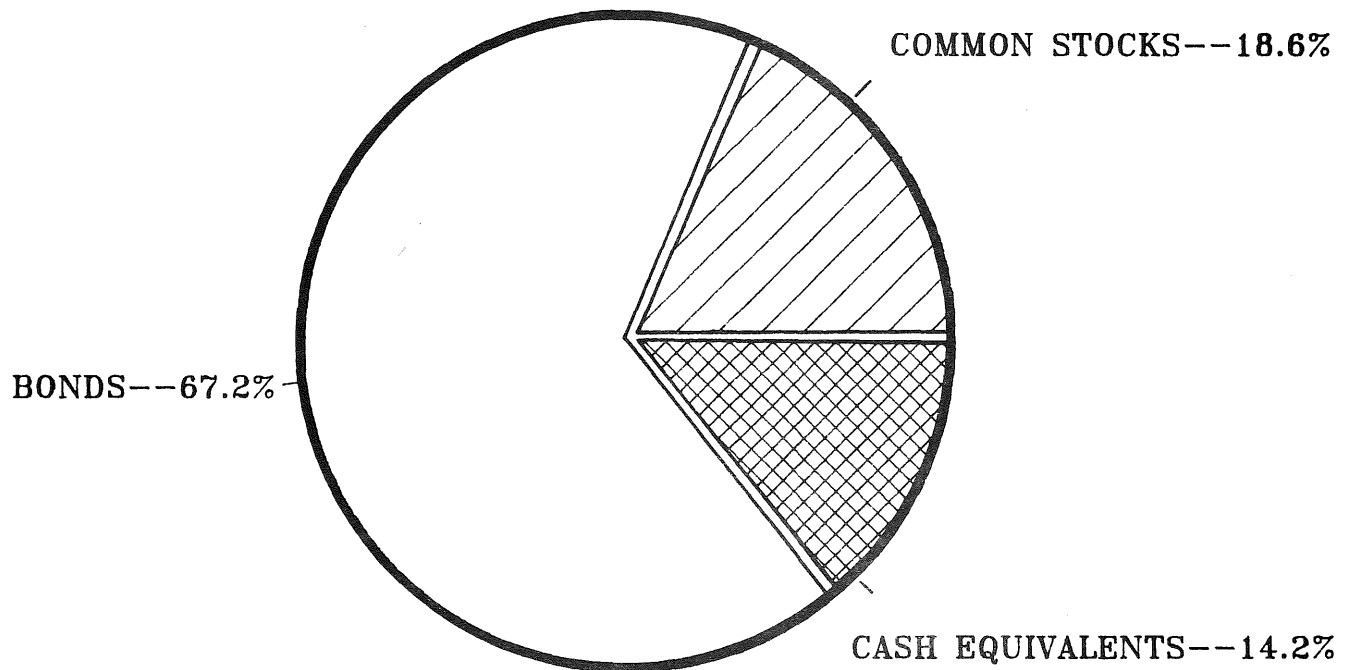
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## POST RETIREMENT INVESTMENT FUND

### 1986 FISCAL YEAR END ASSET MIX

PERCENT OF MARKET VALUE

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|                  | \$MILLION | PERCENT |
|------------------|-----------|---------|
| COMMON STOCKS    | \$ 681    | 18.6%   |
| BONDS            | 2,457     | 67.2    |
| CASH EQUIVALENTS | 520       | 14.2    |
| TOTAL            | \$3,658   | 100.0%  |

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direct impact on the benefits paid out to retirees. Unrealized capital gains (or losses) are excluded from defined earnings in order to make benefit payments largely insensitive to near-term fluctuations in the capital markets. As a result, the Fund is not oriented toward long-term total rate of return maximization. Rather, the Board attempts to generate a high, consistent stream of earnings for the Fund that will maintain current benefits, as well as produce benefit increases over time.

## ASSET ALLOCATION

The asset mix of the Post Retirement Investment Fund is designed to generate the sizable, stable earnings stream referred to in the previous section. The Fund's year-end asset mix, as well as its historical asset allocation data, are presented on pages 30 and 32.

The majority of the Fund's assets are invested in a dedicated bond portfolio. A dedicated bond portfolio is a collection of various maturity, high quality bonds which generate cash flows from income and principal payments that match a specific stream of liabilities. The highly predictable benefits owed to the Fund's retired participants, and the high real interest rates that have existed in recent years, have created an ideal situation to employ a dedicated bond portfolio.

The Post Retirement Investment Fund's dedicated bond portfolio facilitates the attainment of the Fund's two objectives. Most importantly, it ensures that funds are available at the required times to meet promised benefit payments. The dedicated bond portfolio also earns enough additional interest income to consistently permit a minimum annual benefit increase of 3%, provided the portfolio yields at least 8% on an annual basis. If the Fund's other investments do well, as has been the case recent years, the Fund can offer eligible retirees even more than this floor benefit increase.

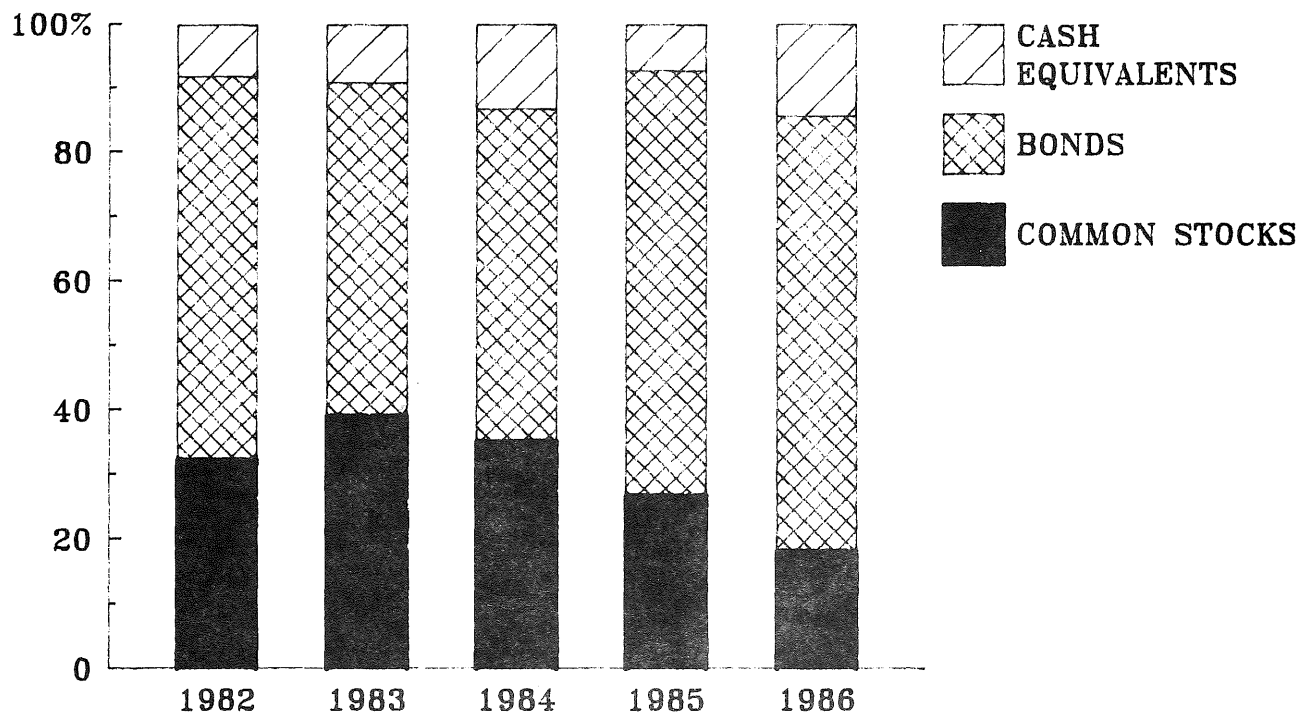
While bonds represent the largest asset class in the Post Retirement Investment Fund's total portfolio, common stocks also play an important role. Common stocks provide the Fund with a source of long-run earnings growth not available from fixed income investments. In recent years, realized gains on common stocks have contributed importantly to the large benefit increases.

Cash equivalents make up the remainder of the Fund's portfolio. These assets provide the Fund with a certain amount of inflation protection, as their yields are highly inflation sensitive. Further, cash equivalents give the Fund the liquidity necessary to meet withdrawals required for benefit payments.

# POST RETIREMENT INVESTMENT FUND

## HISTORICAL ASSET MIX

PERCENT OF MARKET VALUE  
FISCAL YEAR END ALLOCATIONS



|                         | FISCAL YEAR |         |         |         |         |
|-------------------------|-------------|---------|---------|---------|---------|
|                         | 1982        | 1983    | 1984    | 1985    | 1986    |
| <b>COMMON STOCKS</b>    |             |         |         |         |         |
| \$MILLION               | 382.0       | 693.0   | 657.0   | 733.0   | 681.0   |
| PERCENT                 | 32.7        | 39.5    | 35.5    | 27.1    | 18.6    |
| <b>BONDS</b>            |             |         |         |         |         |
| \$MILLION               | 692.0       | 903.0   | 951.0   | 1,780.0 | 2,457.0 |
| PERCENT                 | 59.3        | 51.5    | 51.4    | 65.7    | 67.2    |
| <b>CASH EQUIVALENTS</b> |             |         |         |         |         |
| \$MILLION               | 93.0        | 157.0   | 243.0   | 196.0   | 520.0   |
| PERCENT                 | 8.0         | 9.0     | 13.1    | 7.2     | 14.2    |
| <b>TOTAL FUND</b>       |             |         |         |         |         |
| \$MILLION               | 1,167.0     | 1,753.0 | 1,851.0 | 2,709.0 | 3,658.0 |
| PERCENT                 | 100.0       | 100.0   | 100.0   | 100.0   | 100.0   |

The asset mix of the Post Retirement Investment Fund was altered modestly during fiscal year 1986. The sharp decline in interest rates necessitated an increase in the size of the dedicated bond portfolio and a concomitant reduction in the size of the common stock portfolio. With lower interest rates, new cash flows into the Fund must now be invested at lower yields than in the recent past. If interest rates remain at current relatively low levels, the size of the common stock portfolio will continue to shrink slowly as the dedicated bond portfolio grows larger.

## INVESTMENT MANAGEMENT

The Post Retirement Investment Fund is managed solely by the SBI's investment staff. This management structure is employed for three reasons. First, the low turnover, limited discretion nature of the dedicated bond portfolio makes bond management by SBI staff cost effective. Second, with respect to common stock management, the Fund's equity managers must be concerned with generating current income and avoiding realized losses. Most external investment managers are not used to functioning under the Fund's unique investment requirements. SBI staff, on the other hand, has managed the Fund's portfolio since its inception. Third, the SBI investment staff is more aware of the risk-return preferences of the retirees.

### BONDS

As described above, the dedicated bond portfolio represents the bulk of the Post Retirement Investment Fund's assets. SBI investment staff constructs the lowest cost portfolio, within established constraints, that produces sufficient cash flows to fund promised benefit payments and maintains adequate quality levels.

The management of the dedicated bond portfolio requires that the State's actuary supply SBI investment staff with forecasts of benefit payments expected to be paid over a twenty-year horizon. Based upon these forecasts, a computer program generates a list of bonds that will meet these forecasted benefits. SBI staff then attempts to purchase the recommended issues. If these bonds are not available, substitute bonds are purchased. The dedicated bond portfolio is rebalanced annually following the receipt of the benefit projections from the retirement systems.

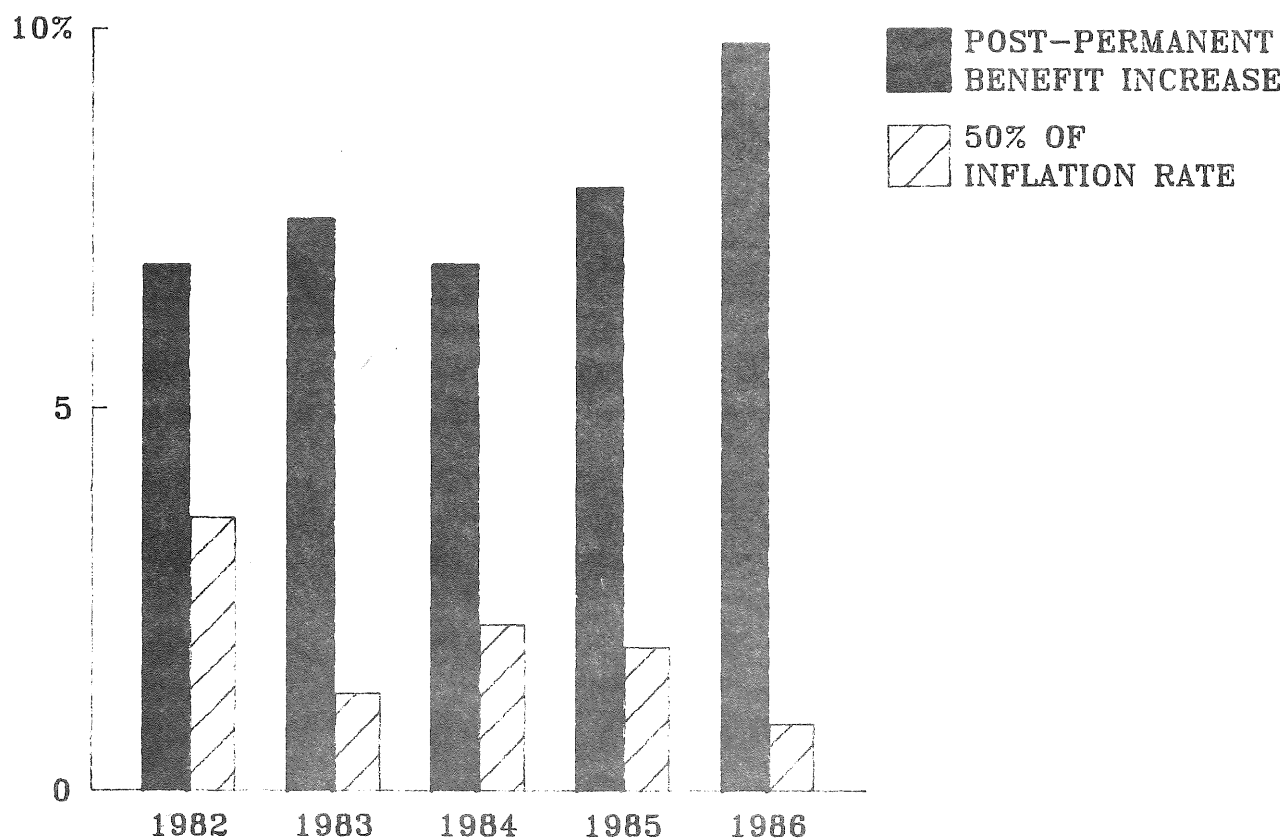
### COMMON STOCKS

The focus of the investment staff's common stock management is long-term, value-based stock selection. The strategies implemented by the investment staff are less aggressive than those utilized by the Basic Retirement Funds' external equity managers. As the only common stock manager for the Post



# POST RETIREMENT INVESTMENT FUND

## BENEFIT INCREASES VERSUS INFLATION



|                    | FISCAL YEAR |      |      |      |      | (Annualized) |       |
|--------------------|-------------|------|------|------|------|--------------|-------|
|                    | 1982        | 1983 | 1984 | 1985 | 1986 | 3 YR.        | 5 YR. |
| BENEFIT INCREASE   | 6.9%        | 7.5% | 6.9% | 7.9% | 9.8% | 8.2%         | 7.8%  |
| 50%-INFLATION RATE | 3.6         | 1.3  | 2.1  | 1.9  | 0.9  | 1.6          | 2.0   |

Retirement Investment Fund, the investment staff recognizes the diversification requirements of the Fund's stock portfolio. Further, staff is aware of the Fund's need to avoid investment strategies which generate high portfolio turnover and which, at times, could result in sizable realized losses.

The investment staff attempts to identify stocks that have attractive expected returns, yet do not possess significantly high levels of market volatility. The staff uses recommendations generated by quantitative valuation models as the primary source of investment candidates. In addition, selected recommendations of the Board's external equity managers are utilized if they fit the investment goals of the Fund. Investment staff always maintains a fully invested position in the equity portfolio. Market timing strategies are not utilized.

## INVESTMENT PERFORMANCE

### RISK-RETURN OBJECTIVES

Because of its focus on generating current income, the risk composition of the Post Retirement Fund's investment portfolio is conservatively structured. The majority of the Fund's assets are invested in high quality bonds. Further, the Fund's equity portfolio maintains a relatively high level of diversification and a moderate level of relative market volatility.

In terms of long-term rate of return objectives, the Fund's investment results are compared to three standards:

- o First, in order to finance promised benefit payments, the Fund must generate a level of interest and dividend income which, combined with realized capital gains, meets the Fund's actuarial assumptions of 5% per year.
- o Second, the Fund is expected to produce additional earnings sufficient to allow benefits to increase at a rate at least one-half of the inflation rate.
- o Third, the total rate of return on the Fund's actively-managed common stock portfolio is expected to exceed the performance of the Wilshire 5000.

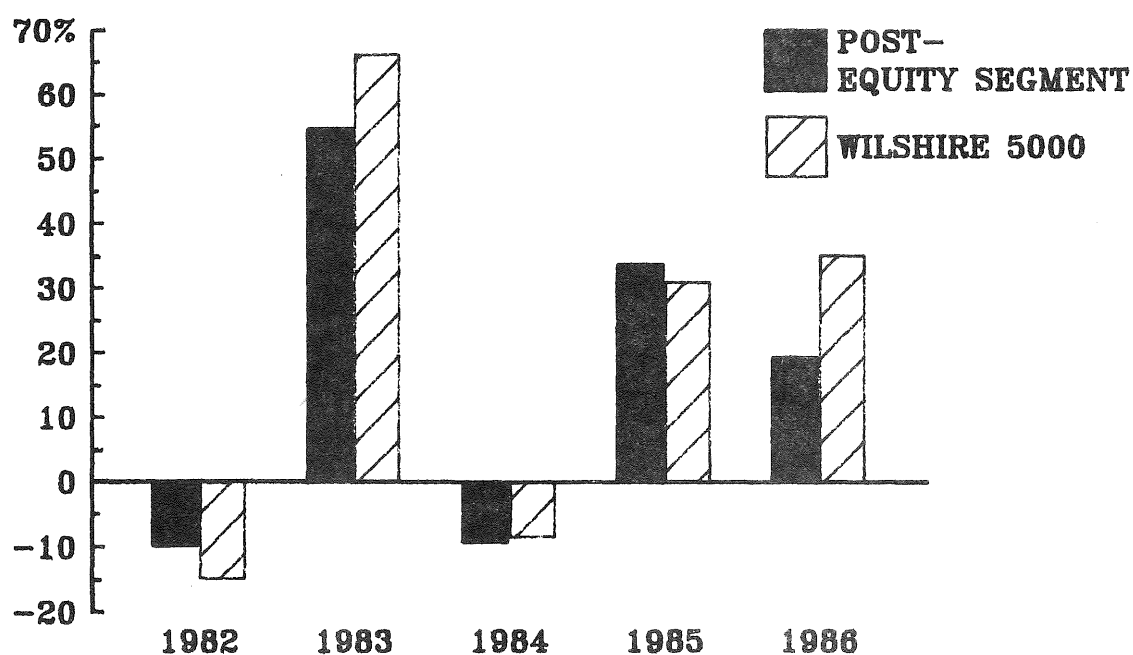
### RISK-RETURN PERFORMANCE RESULTS

The Post Retirement Investment Fund's total portfolio met all of the prescribed risk targets during the 1986 fiscal year. The Fund was approximately 70% invested in fixed income assets, with an average quality rating of AAA. The Fund's common stock portfolio maintained a slightly above average level of relative market volatility and was consistently well-diversified.

# POST RETIREMENT INVESTMENT FUND

## EQUITY SEGMENT PERFORMANCE

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|                | FISCAL YEAR |       |       |       |       | (Annualized) |       |
|----------------|-------------|-------|-------|-------|-------|--------------|-------|
|                | 1982        | 1983  | 1984  | 1985  | 1986  | 3 YR.        | 5 YR. |
| EQUITY SEGMENT | -9.8%       | 54.9% | -9.3% | 33.9% | 19.5% | 13.2%        | 15.2% |
| WILSHIRE 5000  | -15.0       | 66.5  | -8.7  | 31.2  | 35.3  | 17.4         | 18.1  |

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Overall, investment returns relative to performance objectives were satisfactory for the 1986 fiscal year. The Fund generated income and realized capital gains in excess of the amount needed to fund promised benefits. The surplus earnings will permit a benefit increase of approximately 9.8%, considerably above the fiscal year 1986 inflation rate of 1.7%. Equity performance, on a relative basis, was disappointing. The contrarian value style pursued by the Fund's internal equity manager did not perform well in a market dominated by consumer growth stocks. For the fiscal year, the equity component failed to outperform its benchmark, the Wilshire 5000. However, the internal manager did perform roughly in line with the other contrarian/value managers retained by the Board. Post Retirement Investment Fund performance data for the most recent fiscal year, as well as the last five years, are presented on page 36.



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**SUPPLEMENTAL  
INVESTMENT FUND**

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**INCOME SHARE ACCOUNT**

**GROWTH SHARE ACCOUNT**

**FIXED RETURN ACCOUNT**

**BOND ACCOUNT**

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# MINNESOTA SUPPLEMENTAL INVESTMENT FUND

The Minnesota Supplemental Investment Fund is a multi-purpose investment program that offers a range of investment options to state and local public employees. The different participating groups use the Fund for a variety of purposes:

- o It functions as the investment manager for all assets of the Unclassified Employees Retirement Plan.
- o It acts as the investment manager for all assets of the supplemental retirement programs for state university and community college teachers and for Hennepin County Employees.
- o It is one investment vehicle offered to public employees as part of the state's Deferred Compensation Plan.
- o It serves as an external money manager for a portion of some local police and firefighter retirement plans.

The Supplemental Investment Fund serves more than 14,000 individuals. On June 30, 1986 the market value of the entire fund was \$346 million.

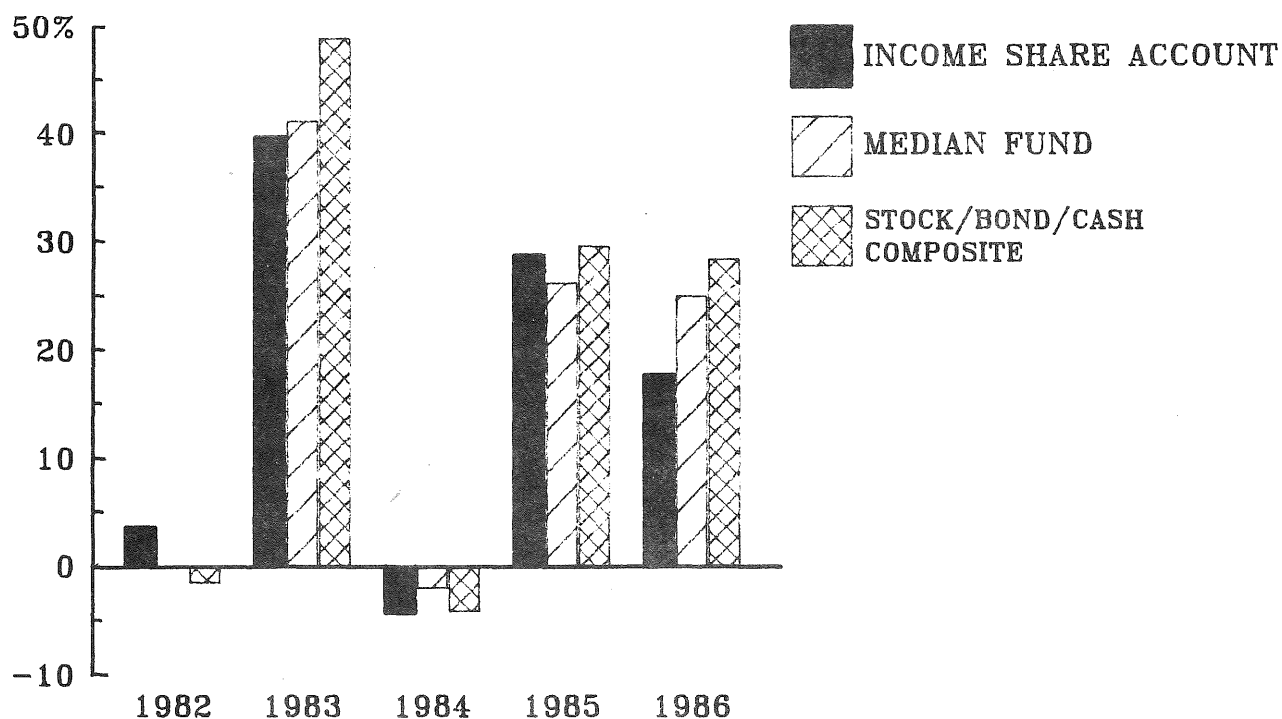
A wide diversity of investment goals exists among the Fund's participants. In order to meet those needs, the Fund has been structured much like a "family of mutual funds." Participants may allocate their investments among one or more accounts that are appropriate for their needs, within the statutory requirements and rules established by the participating organizations. Participation in the Fund is accomplished through the purchase or sale of shares in each account.

Throughout fiscal year 1986 most participants in the Fund had three different investment options: the Income Share Account; the Growth Share Account; or one of two debt-related accounts, the Fixed Return Account for individuals, or the Bond Account for retirement plans. At the Board's request, new legislation was passed during the 1986 legislative session to expand the range of options available to participants. As a result, three new accounts will be available to most participants beginning in fiscal year 1987: a Common Stock Index Account, a passively managed common stock portfolio; a Bond Market Account, a fixed income portfolio that will reflect changes in market value; and a Guaranteed Return Account, an investment option utilizing guaranteed investment contracts (GIC's). In addition, the Fixed Return Account will be converted to the Money Market Account, reflecting modifications in investment objectives.



# SUPPLEMENTAL INVESTMENT FUND (INCOME SHARE ACCOUNT)

## TOTAL ACCOUNT PERFORMANCE



|                | FISCAL YEAR |       |       |       |       | (Annualized) |       |
|----------------|-------------|-------|-------|-------|-------|--------------|-------|
|                | 1982        | 1983  | 1984  | 1985  | 1986  | 3 YR.        | 5 YR. |
| TOTAL FUND     | 3.7%        | 39.8% | -4.4% | 28.8% | 17.8% | 13.2%        | 16.1% |
| MEDIAN FUND*   | -0.1        | 41.3  | -2.1  | 26.3  | 25.1  | 16.4         | 17.6  |
| COMPOSITE**    | -1.6        | 49.0  | -4.2  | 29.7  | 28.5  | 16.9         | 18.5  |
| EQUITY SEGMENT | -5.1        | 53.7  | -11.0 | 30.4  | 19.9  | 11.7         | 15.3  |
| WILSHIRE 5000  | -15.0       | 66.5  | -8.7  | 31.2  | 35.3  | 17.4         | 18.1  |
| BOND SEGMENT   | 12.1        | 36.2  | 2.3   | 32.1  | 16.2  | 16.2         | 19.1  |
| BOND INDEX***  | 12.9        | 29.7  | 1.8   | 29.9  | 19.9  | 16.6         | 18.3  |

\* TUCS MEDIAN TAX-EXEMPT BALANCED PORTFOLIO

\*\* 50/45/5 WILSHIRE 5000/SALOMON BOND INDEX/91 DAY  
T-BILLS COMPOSITE THROUGH 12-31-82, 60/35/5 COMPOSITE  
THEREAFTER

\*\*\* SALOMON BROTHERS BROAD BOND INDEX

Each account in the Fund establishes a share value and participants may buy or sell shares monthly, based on the most recent unit value. In the existing Income Share and Growth Share Accounts and the new Common Stock Index and Bond Market Accounts, shares are priced monthly based on the market value of the entire account. In these accounts, investment returns are measured by changes in the account's share value, which in turn is a function of the income and capital appreciation (or depreciation) generated by the securities in the account. In the existing Fixed Return Account and its successor, the Money Market Account, share values remain constant and the accrued interest income is credited to the accounts through the purchase of additional shares, at predetermined intervals. In the Bond Account and the new Guaranteed Return Account, shares are valued in the same manner as the Fixed Return Account.

Fiscal year 1986 marked the first year the Fund participated in the Combined Investment Funds. The Combined Investment Funds are pools of assets invested in equities, fixed income securities and other asset classes utilized by the Board. Participation in the Combined Investment Funds provides the Supplemental Investment Fund with the same flexibility and efficiency of investment management afforded the Basic Retirement Funds.

The investment objectives, asset allocation, investment management and investment performance of each existing account in the Fund is explained in the following sections.

## **INCOME SHARE ACCOUNT**

### **INVESTMENT OBJECTIVES AND ASSET ALLOCATION**

The primary investment objective of the \$179 million Income Share Account is similar to that of the Basic Retirement Funds. The Account seeks to maximize long-term inflation-adjusted rates of return. The Account pursues this objective within the constraints of protecting against disastrous financial environments and limiting short-run portfolio return volatility.

To achieve this objective, the Income Share Account is invested in a balanced portfolio of common stocks and fixed income securities. The Account's policy portfolio calls for a long-term asset allocation of 60% common stocks, 35% bonds, and 5% cash equivalents. Common stocks provide the potential for significant long-term capital appreciation, while bonds provide both a hedge against deflation and the diversification needed to limit excessive portfolio return volatility.

## INVESTMENT MANAGEMENT

The Income Share Account's investment management structure combines internal and external management. The SBI's investment staff manages the entire fixed income component of the Account's portfolio and approximately four-fifths of the common stock portfolio. The balance of the common stock segment is managed externally.

The SBI investment staff manages the internal portion of the common stock portfolio with a long-term value-oriented approach appropriate for the balanced nature of the Account. The Income Share Account's external stock managers provide a complementary aggressive investment style. Due to the balanced investment goals of the Account, the percentage of the total portfolio assigned to aggressive equity management has been kept at a relatively low level. Through its participation in the common stock segment of the Combined Investment Funds, the Account utilizes the same external active equity managers as the Basic Retirement Funds.

## INVESTMENT PERFORMANCE

Similar to the other SBI funds which utilize a multi-manager investment structure, the performance of the Income Share Account is evaluated on two levels: the total account and the individual manager level.

The total account performance of the Income Share Account is expected to exceed the returns of a composite of market indices weighted in the same proportion as the Account's policy asset allocation. Performance objectives for the Account's external equity managers are described on page 18 and 19 of the Basic Retirement Funds' discussion. Performance objectives for the Account's internal manager are described on page 33 and 35 of the Post Retirement Investment Fund discussion.

The Income Share Account failed to meet its performance targets on both a total account and individual manager level during the 1986 fiscal year. Total account results are presented on page 42. Discussion of individual manager performance can be found on page 24.

## GROWTH SHARE ACCOUNT

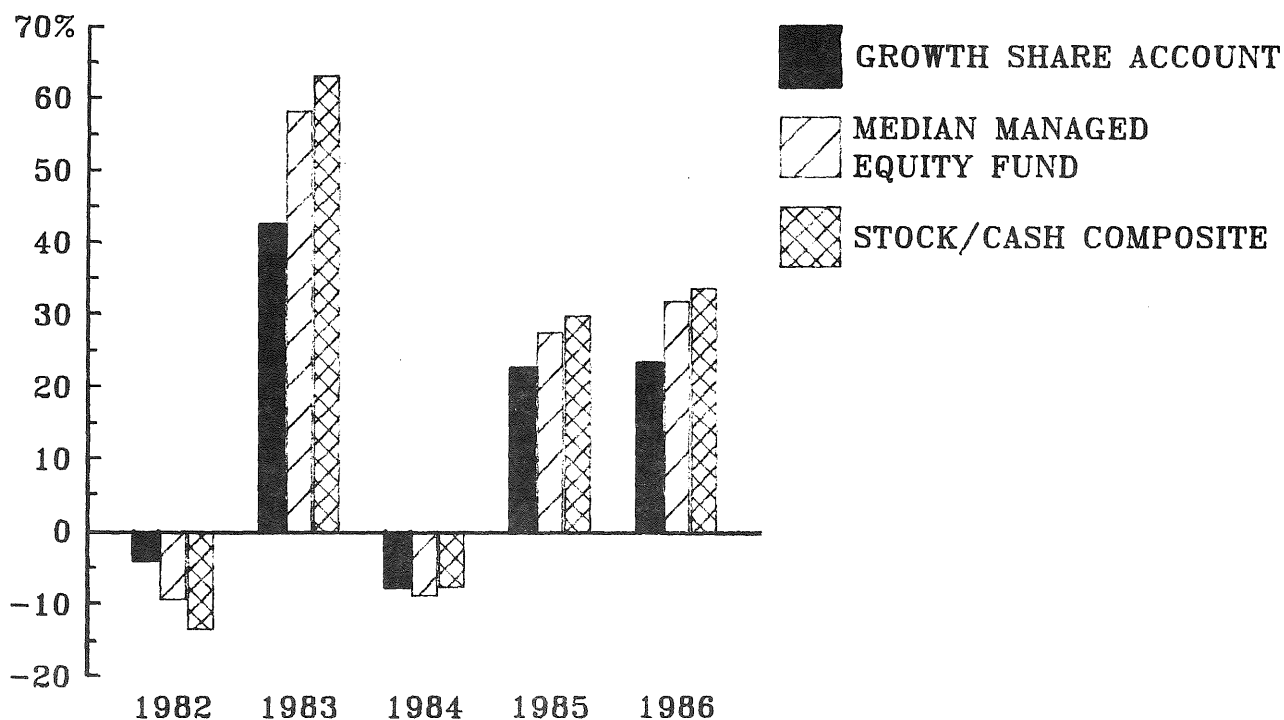
### INVESTMENT OBJECTIVES AND ASSET ALLOCATION

The primary investment objective of the \$79 million Growth Share Account is to generate above-average capital appreciation.

To achieve this objective, over the long-run the Account will hold a large permanent equity commitment. The Account's policy

# SUPPLEMENTAL INVESTMENT FUND (GROWTH SHARE ACCOUNT)

## TOTAL ACCOUNT PERFORMANCE



|                | FISCAL YEAR |       |       |       |       | (Annualized) |       |
|----------------|-------------|-------|-------|-------|-------|--------------|-------|
|                | 1982        | 1983  | 1984  | 1985  | 1986  | 3 YR.        | 5 YR. |
| TOTAL FUND     | -4.2%       | 42.7% | -7.5% | 22.9% | 23.4% | 11.8%        | 13.9% |
| MEDIAN FUND*   | -9.5        | 58.3  | -9.0  | 27.7  | 32.0  | 15.8         | 18.3  |
| COMPOSITE**    | -13.6       | 63.2  | -7.8  | 30.0  | 33.8  | 17.0         | 17.7  |
| EQUITY SEGMENT | -9.4        | 56.7  | -17.9 | 28.1  | 24.0  | 9.2          | 13.1  |
| WILSHIRE 5000  | -15.0       | 66.5  | -8.7  | 31.2  | 35.3  | 17.4         | 18.1  |

\* TUCS MEDIAN MANAGED EQUITY PORTFOLIO

\*\* 95/5 WILSHIRE 5000/91 DAY T-BILLS COMPOSITE

asset allocation reflects this commitment through an asset mix of 95% common stocks, 5% cash equivalents. The small cash equivalents component represents the normal cash reserves held by the Account as a result of new contributions to the Account not yet allocated to common stocks. The Account's asset mix may vary substantially from its assigned policy portfolio at times. Depending on the Account managers' near-term outlook for the capital markets, the Account may invest up to 100% of its market value in stocks or may make a sizable allocation to cash equivalents.

Because of its sizeable common stock commitment, the Growth Share Account's returns likely will be more variable than those of the balanced Income Share Account. Higher long-run returns from the Growth Share Account's investments are expected to compensate for the additional variability of returns.

#### **INVESTMENT MANAGEMENT**

The management of the Growth Share Account's common stock portfolio is split equally between internal and external management. The SBI investment staff manages the internal component with a long-term value-oriented approach. The balance of the Growth Account's portfolio is managed by the Board's external active equity managers. As with the Income Share Account, the Growth Share Account's external equity component is achieved through its participation in the common stock segment of the Board's Combined Investment Funds. A larger percentage of the Growth Share Account than the Income Account is allocated to the external active equity managers to reflect the Growth Account's more aggressive investment policy.

#### **INVESTMENT PERFORMANCE**

The performance of the Growth Share Account is evaluated on a total account level and an individual manager level. The total account performance is expected to exceed the returns of a composite of market indices weighted in the same proportion as the Account's policy asset allocation. Performance objectives for the Growth Share Account's individual managers are described in the Income Share Account discussion.

The Growth Share Account in fiscal year 1986 failed to meet its total account and individual manager performance targets. Total account results are shown on page 45. Discussion of individual manager performance is located on page 24.

## **FIXED RETURN ACCOUNT**

### **INVESTMENT OBJECTIVE AND ASSET ALLOCATION**

The Fixed Return Account's investment objective is to generate high levels of current income by investing in debt securities. The Account's sole source of earnings is the interest income produced by its portfolio of securities. Participants experience minimal investment risk because all portfolio assets are held to maturity. Given this structure, there is little likelihood that the Account will realize capital losses (or gains) as a result of changes in the market value of the Account's assets. On June 30, 1986, the Account's market value was \$77 million.

As currently established, the Fixed Return Account permits participation only by individual public employees as part of their authorized investment options. (Various retirement associations participate in a similar style of investment management through the Bond Account described below.)

### **INVESTMENT MANAGEMENT**

The Fixed Return Account is managed entirely by SBI investment staff. Since all portfolio assets are held to maturity, staff provides very cost-effective management for the Account. To achieve the Account's investment objectives staff invests solely in investment grade debt securities (i.e. those rated BAA or above). Historically, investment staff had invested the Account in an intermediate-term maturity fixed income portfolio. New investments were made in the two-to-three year maturity range. Restructuring plans for the Supplemental Investment Fund called for the Fixed Return Account to be managed as a liquid money market fund beginning in fiscal year 1987. Thus, as interest rates declined during the 1986 fiscal year, investment staff gradually liquidated the Fixed Return Account's bond portfolio and reinvested the proceeds in cash equivalents. By year-end, the Account's portfolio maturity had been moved down to the targeted short-term level.

## **BOND ACCOUNT**

The Bond Account was established by the 1981 Legislature to provide a separate fixed return investment vehicle for police and firefighter retirement organizations. The Bond Account is a low risk investment option which earns a high level of current income from quality debt securities. The Bond Account is managed solely by SBI investment staff. The Account is managed in a similar manner as the Fixed Return Account. However, the average life of the Bond Account's investments is longer than that of the Fixed Return Account. On June 30, 1986, the Bond Account had a market value of \$11 million.

Participation in the Bond Account is offered to qualified retirement organizations only. Individuals do not participate in this Account. The Account is designed to offer participating organizations a fixed rate of return for a specified period of time. The length of time this established return is in effect depends on the average maturity of the Account's investments, usually in the range of six-to-eight years.

Contributions to the Bond Account made by the participating retirement organizations are grouped by year, referred to as a class year. Depending on the available fixed income investment opportunities available at the initiation of a class year, a rate of return is established for the contributions made by the participants in the class year. This rate is in effect for the life of the class. If a retirement organization chooses to withdraw from the Bond Account prior to the expiration of a class year, its shares are redeemed at market value.

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# MINNESOTA VARIABLE ANNUITY FUND

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INVESTMENT OBJECTIVES

ASSET ALLOCATION

INVESTMENT MANAGEMENT

INVESTMENT PERFORMANCE

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## MINNESOTA VARIABLE ANNUITY FUND

The Minnesota Variable Annuity Fund is an investment option formerly offered to members of the Teachers' Retirement Association. The Fund was designed as an alternative to the regular teachers' retirement plan. The opportunity to enroll in the Fund is no longer offered to new Association members, although members enrolled prior to the cutoff date may retain their participation in the Fund and continue to make contributions. The June 30, 1986 market value of the Fund was \$148 million.

### INVESTMENT OBJECTIVE AND ASSET ALLOCATION

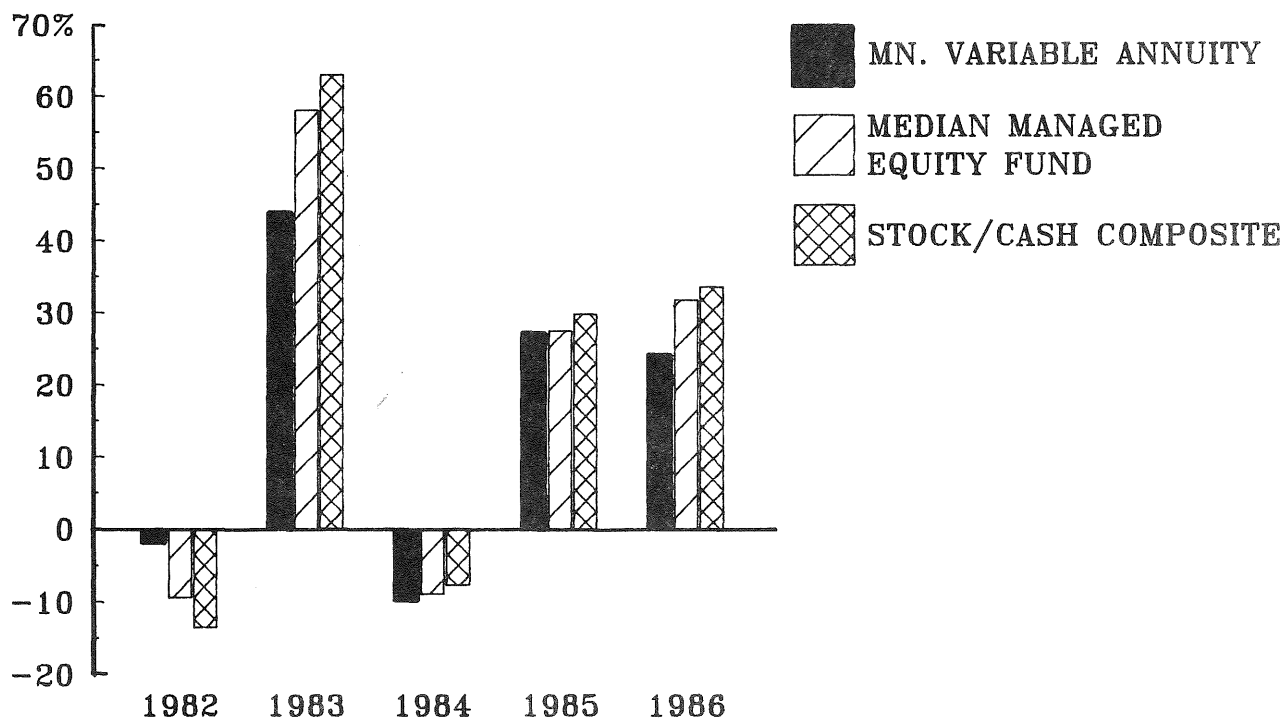
The investment objective of the Fund is the same as that of the Growth Share Account in the Supplemental Investment Fund. The purpose of the Variable Annuity Fund is to provide participants with above average long-run capital appreciation on their investments. This investment objective necessitates a sizable long-term commitment to common stocks. The Minnesota Variable Annuity Fund is authorized to hold up to 100% of its market value in common stocks. However, the Fund's portfolio may contain a considerable cash equivalent component at any given time, depending on the near-term investment strategies of its managers. Like the Growth Share Account in the Supplemental Investment Fund, the Variable Fund's policy asset allocation is weighted 95% common stocks/5% cash equivalents.

### INVESTMENT MANAGEMENT

Management of the Fund is split equally between external and internal management. The role of the external managers is to provide an aggressive approach complementary to that of the internal investment staff. Like the Supplemental Investment Fund, the Variable Annuity Fund utilizes the same active external equity managers who invest common stocks for the Basic Retirement Funds. This sharing of equity managers is accomplished through participation in the equity segment of the Combined Investment Funds.

# MINNESOTA VARIABLE ANNUITY FUND

## TOTAL FUND PERFORMANCE



|                | FISCAL YEAR |       |       |       |       | (Annualized) |       |
|----------------|-------------|-------|-------|-------|-------|--------------|-------|
|                | 1982        | 1983  | 1984  | 1985  | 1986  | 3 YR.        | 5 YR. |
| TOTAL FUND     | -1.9%       | 44.2% | -9.8% | 27.5% | 24.5% | 12.7%        | 15.1% |
| MEDIAN FUND*   | -9.5        | 58.3  | -9.0  | 27.7  | 32.0  | 15.8         | 18.3  |
| COMPOSITE**    | -13.6       | 63.2  | -7.8  | 30.0  | 33.8  | 17.0         | 17.7  |
| EQUITY SEGMENT | -7.6        | 55.8  | -14.1 | 30.3  | 24.9  | 11.9         | 15.0  |
| WILSHIRE 5000  | -15.0       | 66.5  | -8.7  | 31.2  | 35.3  | 17.4         | 18.1  |

\* TUCS MEDIAN MANAGED EQUITY PORTFOLIO

\*\* 95/5 WILSHIRE 5000/91 DAY T-BILLS COMPOSITE

## INVESTMENT PERFORMANCE

The Minnesota Variable Annuity Fund's total fund performance is expected to surpass the returns of a market indices composite weighted in the same proportion as the Fund's policy asset allocation. Performance objectives for the Fund's external equity managers are described on pages 18 and 19 of the Basic Retirement Funds discussion. Performance objectives for the Fund's internal manager are described on pages 33 and 35 of the Post Retirement Investment Fund discussion.

During the 1986 fiscal year, the Minnesota Variable Annuity Fund's performance failed to exceed the results of its total fund and individual manager performance objectives. Total fund results are presented on page 52. Discussion of individual manager performance can be found on page 24.



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# **PERMANENT SCHOOL FUND**

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**INVESTMENT OBJECTIVES**

**ASSET ALLOCATION**

**INVESTMENT MANAGEMENT**

**INVESTMENT PERFORMANCE**

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## PERMANENT SCHOOL FUND

The Permanent School Fund is a trust fund created by the Minnesota State Constitution. The Fund was designed to serve as a long-term source of revenue for public schools. Proceeds from land sales, mining royalties, timber sales, and lakeshore and other leases are invested in the Fund. Income generated by the Fund's assets currently is used to offset state school aid payments. During the 1986 fiscal year, these offsets totaled \$27 million. As of June 30, 1986, the Permanent School Fund had a market value of \$365 million.

### INVESTMENT OBJECTIVES

The Investment Board invests the Permanent School Fund to produce a high, consistent level of income that will assist in offsetting state expenditures on school aids. The Fund's investment objectives are influenced by the restrictive accounting provisions under which its investments must be managed. These provisions require that the Fund's principal remain inviolate. Further, any net realized equity and fixed income capital gains must be added to principal. Moreover, if the Fund realizes net capital losses, these losses must be offset against interest and dividend income before such income can be distributed. Finally, all interest and dividend income must be distributed in the year in which it is earned.

These accounting provisions limit the investment time horizon over which the Permanent School Fund is managed. Long-run growth in the Fund's assets is difficult to achieve without seriously reducing current spendable income and exposing the spendable income stream to unacceptable volatility. The Board, therefore, invests the Fund's assets to produce the maximum amount of current income, within the constraint of maintaining adequate portfolio quality.

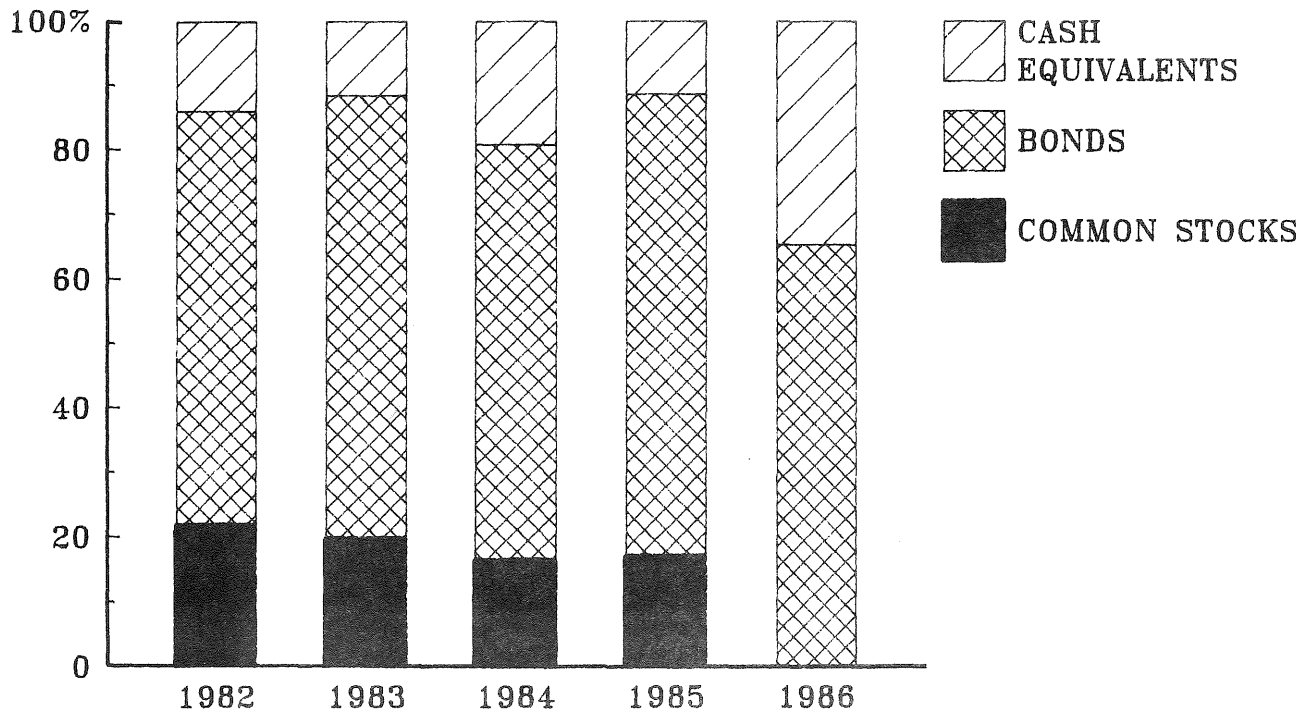
The Board maximizes current income by investing all of the Permanent School Fund's assets in fixed income securities. The Board has a strong incentive not to invest in equity assets for the following reasons. First, common stock dividend yields are considerably lower than bond yields. Thus, common stocks generate less current income than bonds. Second, equity prices are highly volatile and at times may produce realized capital



# PERMANENT SCHOOL FUND

## HISTORICAL ASSET MIX

PERCENT OF MARKET VALUE  
FISCAL YEAR END ALLOCATIONS



|                         |           | FISCAL YEAR |       |       |       |       |
|-------------------------|-----------|-------------|-------|-------|-------|-------|
|                         |           | 1982        | 1983  | 1984  | 1985  | 1986  |
| <b>COMMON STOCKS</b>    | \$MILLION | 52.0        | 59.0  | 46.0  | 58.0  | 0.0   |
|                         | PERCENT   | 22.0        | 19.9  | 16.6  | 17.2  | 0.0   |
| <b>BONDS</b>            | \$MILLION | 152.0       | 203.0 | 178.0 | 241.0 | 239.0 |
|                         | PERCENT   | 64.1        | 68.6  | 64.3  | 71.5  | 65.4  |
| <b>CASH EQUIVALENTS</b> | \$MILLION | 33.0        | 34.0  | 53.0  | 38.0  | 126.0 |
|                         | PERCENT   | 13.9        | 11.5  | 19.1  | 11.3  | 34.6  |
| <b>TOTAL FUND</b>       | \$MILLION | 237.0       | 296.0 | 277.0 | 337.0 | 365.0 |
|                         | PERCENT   | 100.0       | 100.0 | 100.0 | 100.0 | 100.0 |

losses that will reduce spendable income. Finally, net capital gains become part of the Fund's principal. Therefore, the effect of the volatility of equity prices on the Fund's spendable income cannot be smoothed out by spending past realized capital gains.

## ASSET ALLOCATION

Based upon a staff study of the Permanent School Fund's investment needs and objectives, late in the 1985 fiscal year the Investment Board chose to eliminate the Fund's relatively small equity holdings. In early fiscal year 1986, all of the Fund's assets were moved into fixed income securities. With the sharp decline in interest rates that occurred in fiscal year 1986, the Board maintained the proceeds of the equity sales in short-term securities. This move gives the Fund added flexibility in the event interest rates should rise again. The Fund's 1986 year-end asset mix, as well as its historical asset allocation data, are shown on page 58.

The Permanent School Fund's current investment focus is short-term. This situation is necessitated by the Fund's restrictive accounting provisions. However, the Board believes that the Fund's needs could better be met by a longer-term outlook. Under the current asset allocation, spendable income cannot grow over time. As a result, the value of income produced by the Fund, in inflation-adjusted terms, will gradually decline. On the other hand, a longer-term outlook that includes investments in equity assets could allow the Fund's principal, and hence spendable income, to grow. For a longer-term approach to be implemented, the Fund's accounting provisions will have to be altered. However, based on an Attorney General's opinion, it appears that the necessary changes will require a Constitutional amendment.

## INVESTMENT MANAGEMENT

The Permanent School Fund is managed entirely by SBI investment staff. Given the existing accounting restrictions of the Fund, it would be extremely difficult for external managers to invest the Fund's portfolio. Typically, money managers seek to earn superior total rates of return (which include income and capital appreciation) through active management. The Fund's emphasis on producing high levels of current spendable income through passive investments is not compatible with the investment style of most money managers. In addition, with the move to an all-fixed income portfolio, SBI staff management of the Fund is the most cost-effective approach. The SBI investment staff manages the Permanent School Fund's bond portfolio primarily through a buy-and-hold approach. New purchases are evaluated in light of prevailing financial market conditions, as well as expectations of near-term changes in those conditions.

## **RISK-RETURN OBJECTIVES**

The Permanent School Fund's investment current objective is to maximize spendable income, within the constraint of maintaining adequate portfolio quality. From a risk perspective the Fund's portfolio is very conservatively structured, as its target asset mix calls for a full commitment to fixed income securities. The risk assumed by the bond portfolio is influenced by its buy-and-hold investment approach. Subject to current and expected future financial conditions, the Fund will attempt to maximize interest income by investing in longer-term, high yielding investment grade bonds.

From a rate of return perspective, the Fund is not concerned with total rates of return. Market value changes have no effect on the Fund's ability to produce spendable income. Spendable income is affected only to the extent that any securities are sold at losses. Thus, the Fund's return objective is to maintain a high current yield on new investments.

## **RISK-RETURN PERFORMANCE RESULTS**

At the end of the fiscal year, the Fund's bond portfolio had a duration of 4.6 years with an average quality rating of AAA.

The liquidation of the Fund's equity portfolio was invested in short-term securities. These securities generated a higher level of current income than was formerly provided by common stocks. For the fiscal year, the Finance Department's spendable income target was exceeded. Further, the Fund now has considerable flexibility should interest rates rise and/or yield spreads widen in the near future. In that environment, portfolio maturities can be lengthened and quality lowered to enhance portfolio yields.

## STATE CASH ACCOUNTS

The \$2.0 billion cash assets of State agency accounts and trust funds are invested to provide a high level of current income. These assets are invested in highly liquid, investment grade securities which mature within at least 3 years. All cash investments are managed by the SBI investment staff. Short-term investments include U.S. Treasury and Agency issues, repurchase agreements, bankers acceptances, commercial paper, and certificates of deposit. The maturity structure of each individual account's portfolio depends on the cash flow needs of the respective account. The largest short-term accounts are the \$851 million Invested Treasurers Cash; the \$475 million Highway Funds; and the \$201 million Debt Service Account.

As part of the cash management program, the SBI administers a securities lending program in which U.S. Treasury and Government Agency securities held by the SBI are loaned to banks and government security dealers for a daily fee. These loans are fully collateralized. The Securities Lending Program has generated approximately \$1.5 million per year in additional income for its accounts.

The SBI also manages a certificate of deposit (CD) program in which it purchases CD's from Minnesota banks and savings and loan institutions. The Board receives a market rate of return on these investments, utilizing the average secondary CD market rate quoted by the New York Federal Reserve Bank. All investments are fully insured by the Federal Deposit Insurance Corporation or Federal Savings and Loan Insurance Corporation. The Minnesota Certificate of Deposit program provides a reliable source of capital to all Minnesota financial institutions, regardless of size, many of which do not have access to the national CD market. The SBI designed the loan process so that no single institution is favored in the allocation of assets. Since it began in 1980, the CD program has loaned over \$900 million to 365 financial institutions throughout the state.



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# **FISCAL YEAR 1986**

## **MAJOR DEVELOPMENTS**

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**SUPPLEMENTAL INVESTMENT FUND**  
**BENCHMARK PORTFOLIOS**  
**PERFORMANCE-BASED FEES**  
**CONSULTANT SEARCH**  
**ALTERNATIVE INVESTMENT FUNDING**  
**SOUTH AFRICA RESOLUTION**  
**SHAREHOLDER ACTIVITIES**

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# 1986 MAJOR DEVELOPMENTS

## SUPPLEMENTAL INVESTMENT FUND

The Supplemental Investment Fund is a multi-purpose investment program that offers a range of investment options to state and local public employee groups. The nature of the retirement programs offered through the Fund varies from group to group. The Fund serves as a tax-sheltered savings program, similar to corporate 401(K) plans, for the Deferred Compensation Plan. For unclassified state employees, the Fund represents their entire pension plan. For local police and firefighter retirement plans, the Fund serves as a money manager for part of the plans' assets. Finally, for state university/community college teachers and Hennepin County employees, the Fund is a pension supplement. More than 14,000 individuals participate in the Fund.

Because the Supplemental Investment Fund plays many roles for many retirement groups, it needs to offer a wide array of investment alternatives. Participants should then be able to select the option(s) that best meet their particular investment objectives.

In recent years, the Supplemental Investment Fund has offered three alternatives. The first option is the Growth Share Account. It is an all-common stock fund which aggressively seeks superior returns through assuming above-average levels of investment risk. The second option is the Income Share Account. It is a balanced fund that holds a diversified portfolio of common stocks, bonds, and cash equivalents. It too seeks superior total returns, but without exposing itself to the volatility of the Growth Share Account. The final option is the Fixed Return Account (for individuals) and the Bond Account (for retirement organizations). These accounts buy and hold high quality, short-to-intermediate term debt securities and provide interest bearing, low risk investments.

After reviewing this account structure, SBI staff determined that the existing set of investment options did not provide sufficient investment flexibility and diversity. To address this deficiency, staff recommended that the Fund be restructured in two ways. First, the Fund should offer a wider range of investment vehicles. Second, the investment goals of each account should be more narrowly focused.





With its new account structure, the Supplemental Investment Fund will be better able to meet the differing needs of the public employees and retirement plans that participate in the Fund. Through the purchase of shares in one or more accounts, participants will have the flexibility to design investment programs that are tailored to meet their individual investment objectives.

## BENCHMARK PORTFOLIOS

During fiscal year 1986, the investment staff developed benchmark portfolios for the Board's twelve active common stock managers. A benchmark portfolio, also termed a "normal" portfolio, is a customized index that represents the investment style of an individual money manager. A benchmark portfolio reflects the prominent risk characteristics that a manager's portfolio would exhibit if the manager were making no active investment judgments.

Benchmark portfolios are useful to pension plan sponsors on two levels: the total fund level and the individual manager level.

On the total fund level, a fund's long-run investment objectives can be represented by the asset mix of a benchmark portfolio. Active strategies that cause a plan to deviate temporarily from its long-term asset mix policy weights can be evaluated by comparing the actual performance of the fund with the performance of the benchmark portfolio.

The Board has included total fund benchmarks in its performance evaluation and measurement system for several years. Custom indices have been developed as performance targets for the Basic Retirement Funds, Supplemental Investment Fund, and the Minnesota Variable Annuity Fund. The custom indices are composites of broad market indices, weighted to reflect the risk-return objectives of the individual funds. For example, the performance of the Basic Retirement Funds' total portfolio (excluding alternative equity assets) is evaluated relative to the performance of a benchmark portfolio weighted 65% Wilshire 5000, 30% Salomon Brothers Broad Bond Index, and 5% Cash Equivalents. A more comprehensive description of the total fund benchmarks and their function in the Board's evaluation system is included in the individual fund sections. (See pages 18, 43, 46 and 51).

On the individual manager level, benchmark portfolios serve three primary functions.

- o First, as representations of managers' styles, benchmark portfolios are useful in the selection of managers.

- o Second, the benchmark portfolios of individual managers can be aggregated to yield a picture of the long-run risk exposure of a total portfolio.
- o Finally, benchmark portfolios are appropriate targets against which to measure the performance of individual managers. At times, a manager may perform well simply because his style is "in favor." As representations of managers' styles, benchmark portfolios compensate for this factor, allowing plan sponsors to evaluate more effectively the value a manager has added to the investment process.

The construction of the individual manager benchmark portfolios entailed five basic steps:

- o First, a qualitative understanding of the managers' investment decision-making processes was gained through a lengthy series of interviews between SBI staff and the common stock managers.
- o Second, the managers' past portfolio holdings were analyzed to identify prominent financial characteristics.
- o Third, lists of securities constituting the managers' benchmark portfolios were developed by screening a broad list of securities. The financial characteristics identified in the previous step were used for the screens.
- o Fourth, the securities were weighted and a normal cash position was assigned to reflect the managers' general operating policies.
- o Finally, the benchmark portfolios were backtested. In this step, the performances of the benchmark portfolios over the past several years were compared with the managers' actual performances and the performance of the stock market during the same period.

The construction of benchmark portfolios involves many subjective decisions. The benchmark portfolios constructed in 1986 reflect staff's current understanding of the managers' investment styles. The portfolios may be modified in the future to reflect new insights into the managers' investment styles or changes in those styles.

Going forward, the benchmark portfolios will be used in the on-going monitoring of the active equity managers. The risk characteristics and the performance of the managers' actual portfolios will be assessed relative to their assigned benchmark portfolios. In addition, benchmark portfolios will be a key component of the Board's new performance-based fee system, which is described in the following section.

## PERFORMANCE-BASED FEES

The Minnesota State Board of Investment was one of the first major institutional investors to adopt a performance-based fee system for its active common stock managers. Two significant events occurred during fiscal year 1986 which enabled the Board to institute the new fee system.

First, the Securities and Exchange Commission (SEC) lifted its long-standing prohibition on performance-based fees. Prior to November 1985, the SEC had allowed only flat fee systems. Compensation for managers under flat fee systems is calculated as a specific percentage of the market value of the assets a manager is investing. Under this type of system, managers receive compensation regardless of their absolute or relative performance.

The second event to occur was the completion of benchmark portfolios for the Board's active common stock managers. To implement a performance-based fee system, managers must be evaluated relative to meaningful performance targets. Benchmark portfolios are the appropriate targets.

As discussed in the previous section, benchmark portfolios are custom indices that represent managers' particular investment styles. As such, they compensate for the fact that managers may perform well or poorly simply because their styles are "in" or "out" of favor. Under flat fee systems, a manager's compensation is tied to the market value of the assets the manager is investing. Since the market values of managers' assets may increase primarily because their styles have performed well, managers may be rewarded for events which are essentially outside their control. Benchmark portfolios enable sponsors to assess the value managers add to the investment process in excess of the value added by their investment styles. By basing fees on this "excess" performance, the managers' compensation is shifted to events within their own control.

In proposing the new fee system to the Board, staff and the Equity Manager Committee cited three principal advantages of performance-based fees over flat fees.

- o First, because managers must share the risk of poor performance with the client, performance-based fees provide for a more equitable relationship between manager and client.
- o Second, performance-based fees lead to a more efficient relationship between client and manager since managers must

consider a client's risk-return preferences when constructing the client's portfolio.

- o Finally, performance-based fees result in a more comprehensive client/manager relationship by giving the managers a monetary incentive to examine all the aspects of the investment business that impact the client's portfolio, including commission costs, market impact of trades, etc.

Staff and the Committee evaluated several different types of performance fee structures. Based on its study of various fee designs and their potential impact on the behavior of managers, the staff and Committee recommended that the Board adopt a symmetrical fulcrum fee system for the Board's active common stock managers.

A symmetrical fulcrum fee establishes a base compensation for a manager and a performance target against which additional compensation (positive and negative) is paid. The base fee is set at a rate similar to the fees paid under a flat fee system. If a manager's performance matches that of the target, no additional fee is paid. If his performance exceeds that of the target, an additional predetermined amount is paid. If his performance fails to match that of the target, the base fee is reduced by the same predetermined formula. Thus, performance above the target produces additional payments to managers that are equivalent to those withheld from managers for performance below the target.

The Board adopted the symmetrical fee system at its March 5, 1986 meeting. The system was presented to the Board's external active common stock managers. Ten of the eleven managers accepted the proposal. Effective July 1, 1986, the ten managers will be compensated under the same formula. (The one remaining manager will continue to be compensated under a flat fee system.) The major provisions of the performance-based fee agreement are described below:

- o The annual fee will be composed of two parts: the base fee and the performance fee.
- o The base fee will be paid quarterly, in arrears. It will be calculated as a percentage of the end-of-quarter market value of the total SBI assets managed by the manager and will be paid at an annual rate of 50 basis points.
- o The performance fee will be paid annually, in arrears, and will be based on the manager's total fund return relative to the manager's benchmark portfolio return.
- o The performance fee will be computed according to the following formula (in basis points)

$$PF = (RM - RN - 200) / 15$$

where:

PF = performance fee

RM = return on manager's portfolio

RN = return on benchmark portfolio

- o The maximum annual performance fee rate will be 50 basis points. The minimum rate will be -50 basis points.
- o The performance fees will be calculated by assigning a one-quarter weight to the most recent year's relative returns and a three-quarters weight to the trailing three year's relative returns. Provisions have been made for applying the formula in the first two years of implementation.
- o The performance measurement period will be one full fiscal year ending June 30.
- o If a contract with a manager is terminated prior to the end of a full fiscal year, no performance fee will be paid for that year.
- o In the event of a manager termination, any and all outstanding performance fee balances must be paid in full within 60 days of the termination date.

## CONSULTANT SEARCH

At its March 5, 1986 meeting the Board requested that its consulting contract be rebid. The Board expressed satisfaction with the performance of Evaluation Associates, whose consulting contract was to expire at the end of fiscal year 1986. However, the Board felt that its consulting needs had changed substantially and wished to reassess the firm's capabilities in light of new alternatives.

A Committee was formed to conduct the consultant search. The Committee was composed of one person appointed by each Board member as well as two IAC members with experience in this area.

Working with SBI investment staff, the Committee prepared a request-for-proposal and submitted it to fifteen consulting firms, ten of which responded. After reviewing the responses, the Committee selected the following three firms for personal interviews: DeMarche Associates, Evaluation Associates, and Richards and Tierney.

Based on the responses to the request-for-proposal and the interviews, the Committee recommended that Richards and Tierney be retained by the SBI as its consultant. In presenting its recommendation to the Board, the Committee cited Richards and Tierney's superior understanding of investment management

structures, performance measurement and investment techniques. The Committee noted that the firm's expertise and perspective in these areas would be extremely helpful in advising the Board on its future decisions.

The Board approved the hiring of Richards and Tierney at its June 12, 1986 meeting. The consulting contract will be effective for one year, fiscal year 1987, but can be renewed on an annual basis.

In addition to this contract, the Committee also recognized that the Board may periodically require other specialized consulting services on an ad hoc or project basis. In order to obtain the most appropriate consultants for these projects, the Committee recommended that the Board contract with firms for special projects as needed. As with all requests for consulting services, the Board will review and approve all special project contracts as they arise.

## **ALTERNATIVE INVESTMENT FUNDING**

### **REAL ESTATE**

In the first phase of its three-part real estate program, the establishment of a broadly diversified core portfolio, the SBI committed a total of \$120 million to three open-end commingled funds. The funds are designed specifically for institutional investors and are managed by the Aetna, Equitable, and Prudential Insurance Companies. The Board initiated phase two of its program, the allocation to diversified closed-end funds, in 1984 with commitments of \$75 million to the USA Fund III, managed by the Rosenberg Real Estate Equity Funds (RREEF) and \$20 million to Heitman Real Estate Fund I, managed by Heitman Advisory Corporation.

The third stage of the real estate program, the selection of special orientation managers, began in 1985. During the specialty manager search, the SBI investment staff and the Investment Advisory Council's Alternative Investment Committee interviewed managers that specialize in particular property types, geographic regions, or financing mechanisms. The staff and Committee recommended, and the Board approved, commitments of \$40 million to Trust Company of the West Fund III and \$20 million to State Street Bank and Trust Fund III, managed by Aldrich, Eastman and Waltch. Both Trust Company of the West and Aldrich, Eastman, Waltch specialize in the use of innovative investment vehicles such as convertible and participating mortgages to maximize real estate returns.

During fiscal year 1986, the Board continued the implementation of phases two and three of the program with

commitments to two closed-end funds. The Board committed \$30 million to the diversified Heitman Fund II and \$20 million to the special-orientation State Street Fund IV. These two funds will be managed in essentially the same manner as their predecessor funds, Heitman I and State Street III.

Since the program's inception in 1981, the Board has approved a total of \$325.0 million in commitments to ten real estate funds. The program is approaching completion. The investment staff and Committee anticipate that the Basic Funds' target 10% allocation will be reached primarily through follow-on investments in funds raised by the Board's current group of real estate managers. It is expected that the real estate program will be completed within the next one to two years.

#### **VENTURE CAPITAL**

The SBI initiated the Basic Funds' venture capital program in 1984 with commitments of \$10 million to Northwest Venture Partners, a Minnesota-based diversified venture capital limited partnership, and \$25 million to the Kohlberg, Kravis, and Roberts 1984 Leveraged Buyout Fund. During fiscal year 1985, the SBI proceeded with the implementation of the program, making a total of \$52.5 million in commitments to the following six venture funds: First Century III (Smith Barney); Summit Ventures; Data Science Ventures IV; Matrix Partners II; Inman and Bowman, and the Allied Venture Partnership. The partnership selections were based primarily on the venture managers' extensive venture capital experience and their ability to contribute to the diversification of the aggregate Basic Funds' venture portfolio.

The Board continued the implementation of the venture program in fiscal year 1986. The Board committed an additional \$50 million to KKR's \$2 billion 1986 Leveraged Buyout Fund. In addition, with its diversified venture portfolio in place, the Board initiated its first special orientation venture investment with a commitment of \$6.6 million to Superior Ventures. Superior Ventures, a \$34 million venture capital limited partnership, will be managed by a subsidiary of Investment Advisers, Inc. Up to 15% of the Superior Ventures Fund will be invested in other Minnesota-based venture capital partnerships. The remainder of the fund will be invested directly in operating companies located within Minnesota. With the exception of its geographic focus, the structure of Superior Ventures is similar to a venture partnership currently managed by Investment Advisers.

In addition to these commitments, the Committee and staff evaluated methods of handling possible distributions of common stock from the venture partnerships in which the Board participates. Committee and staff recommended, and the Board subsequently approved, the hiring of T. Rowe Price Associates to manage future stock distributions. T. Rowe Price has an experienced emerging growth stock research staff. More importantly, the firm has the trading capacity to sell the



illiquid small capitalization securities the Board is likely to receive from its partnerships.

With the 1986 commitments, the Basic Funds' venture program is essentially complete. New venture investments will be added to the portfolio as needed to maintain the target 2.5% allocation.

#### RESOURCE FUNDS

A commitment of \$22 million to two oil and gas partnerships sponsored in 1981 and 1983 by First Reserve represented the inception of the Basic Funds' resource program. The program continued with the Board's 1984 commitment of \$22.5 million to an investment sponsored by Apache Corporation. In 1986, the Board committed an additional \$23 million to a second Apache fund. This fund financed the acquisition of a number of both fully and partially developed oil and gas properties which will be managed by Apache Petroleum Corporation.

As discussed on page 17, the Alternative Investment Committee and staff believe that the sharp decline in energy prices and the resulting depressed state of the oil and gas industry will lead to attractive investment opportunities. However, Committee and staff have found it difficult to identify resource investments that fully reflect the lowered energy prices. Committee and staff will continue to review available opportunities and will bring recommendations to the Board in fiscal year 1987 as appropriately structured vehicles are found.

#### RESOLUTION ON COMPANIES THAT DO BUSINESS IN SOUTH AFRICA

On October 2, 1985, the Board adopted a resolution concerning its holdings in companies doing business in the countries of South Africa and Namibia. The resolution calls for the Board to implement a four-phase divestment program which will be completed in 1989. The resolution also requires that divestment action will not take place before the Board obtains legal and financial advice concerning any impact on its fiduciary responsibilities. (See page 77 for the complete text.)

When the resolution was adopted, the Board created a Task Force on South Africa to advise the Board on its implementation process. Membership of the Task Force includes one person designated by each of the five Board members as their representative, one representative from the private sector, one representative from the retirement fund systems, and one public employee representative.

## SUMMARY OF RESOLUTION

The resolution establishes the following timetable for the SBI's divestment program:

Phase 1: By January 2, 1986, the SBI will limit its holdings and future investments to companies that are signatories of the Sullivan Principles, as most recently amended, and/or are making substantial efforts to eliminate Apartheid.

Phase 2: By August 3, 1986, the SBI will limit its holdings and future investments to companies that meet the requirements of Phase 1 and that subject their behavior in South Africa or Namibia to monitoring by Arthur D. Little, Inc., or similar, suitable monitor.

Phase 3: By August 3, 1987, the SBI will limit its holdings and future investments to companies that have complied with Phases 1 and 2 and that obtain the highest Sullivan Principles rating by Arthur D. Little, Inc., or the equivalent thereof.

Phase 4: By August 3, 1989, the SBI will be divested of and make no new investments in companies doing business in South Africa.

In addition, the resolution requires the SBI to consider divesting its holdings in companies which operate in a manner which directly supports Apartheid. Companies that support Apartheid are those which provide goods or services to governmental agencies responsible for the enforcement of Apartheid; provide technology or facilities which make South Africa or Namibia less dependent on international trade; or provide financial services to the government or governmental agencies of South Africa or Namibia.

## ACTIVITIES DURING PHASE 1

During Phase 1, the Board and the Task Force focused implementation of the resolution on companies in the actively managed common stock portfolios that had not signed the Sullivan Principles. During late calendar 1985 the Board corresponded with more than 100 companies that were known to do business in South Africa. Based on that correspondence and on information available through Investor Responsibility Research Center (IRRC), it was initially determined that twenty companies in the actively managed portfolios had not signed the Sullivan Principles. By the end of Phase 1, fourteen of these companies became

signatories or instituted a policy comparable to the Sullivan Principles, and three companies sold their operations in South Africa.

As part of its implementation of the resolution, the Board planned to sponsor or co-sponsor nine shareholder resolutions during the 1986 proxy season calling for companies to sign the Sullivan Principles. Six of these resolutions were withdrawn when the companies became signatories prior to their annual meetings. The three resolutions co-sponsored by the Board and a count of their affirmative vote are shown below:

|                  |        |
|------------------|--------|
| Diamond Shamrock | 18.03% |
| Hughes Tool      | 21.14% |
| U.S. Steel (USX) | 16.38% |

While these totals may appear low, it should be noted that shareholder resolutions usually receive about 5% of the vote.

At the end of Phase I, three companies in the actively managed common stock portfolios had not signed the Sullivan Principles (or instituted a comparable policy). After reviewing the reports of its financial and legal advisors, the Board decided not to immediately liquidate stocks in these companies, but chose to proceed with divestiture through transactions occurring during the normal course of business. If investment managers decided to sell any of these stocks through the normal course of business, the Board instructed them not to repurchase the security unless the managers anticipated that action would violate their fiduciary obligations. If managers repurchased any stock in these companies, they were instructed to notify the Board of that action. The managers abided by the Board's request, and in those instances where the stock was sold, there was no repurchase.

Before the end of fiscal year 1986, external stock managers had sold approximately 50% of their holdings in the three companies identified in Phase 1 (based on December 31, 1985 market value of shares sold compared to the market value of holdings on December 31, 1985).

Events occurring after June 30, 1986 would not normally be included within this annual report. However, it is significant to note that as of August 31, 1986, the actively managed common stock portfolios did not contain the stock of any company which had not signed the Sullivan Principles. This change was largely due to U.S. Steel (USX) signing the Sullivan Principles early in fiscal year 1987. In addition, several stock managers sold their holdings in other non-signatory companies during the normal course of business.

**RESOLUTION OF THE  
MINNESOTA STATE BOARD OF INVESTMENT**

WHEREAS, the policy of Apartheid as maintained by the present government of the Republic of South Africa is not only morally repugnant to all who believe in the inherent rights of individual freedom and equal treatment under the law and has resulted in the systematic enslavement and subjugation of the non-white majority of South Africa and Namibia but casts doubt on the safety and stability of investment in companies doing business with, operating in, or making loans to the Republic of South Africa or Namibia:

NOW, THEREFORE, BE IT RESOLVED THAT:

1. No monies held and invested by the Minnesota State Board of Investment (SBI) shall remain invested in or hereinafter be invested in the stocks, securities or other obligations of:

- (a) any foreign or United States company or any subsidiary or affiliate thereof doing business or operating in the Republic of South Africa or Namibia, or
- (b) any bank or financial institution which makes loans to the Republic of South Africa or Namibia or a governmental enterprise thereof, or other loans deemed by the SBI to directly support Apartheid, subject to and in accordance with the provisions hereinafter set forth.

2. Foreign and United States companies, and subsidiaries and affiliates thereof covered by Section 1 shall be identified:

- (a) by reference to the most recent annual report of the American Consulate General of Johannesburg, entitled "American Firms, Subdivisions and Affiliates - South Africa," of
- (b) through correspondence with the United Nation's Office of the Commissioner for Namibia and the United Nation's Center on Transnational Corporations, or
- (c) by other procedures satisfactory to the SBI.

3. Banks or financial institutions covered by Section 1 shall be identified:

- (a) from the records of the Interfaith Center on Corporate Responsibility, or
- (b) from affidavits of such institutions, or
- (c) by other procedures satisfactory to the SBI.

4. The divestiture required by Section I shall be completed not later than August 3, 1989. Notwithstanding anything contained herein to the contrary, if during the process of divestiture, the SBI determines that completion of divestiture not later than August 3, 1989 would be inconsistent with the SBI's fiduciary obligations, then the SBI shall authorize an extension of time within which to complete divestiture. The SBI shall periodically evaluate the situation in the Republic of South Africa and Namibia and determine whether the divestiture program shall be accelerated, decelerated or otherwise modified, including whether, as a result of lack of improvement in conditions in those countries, or for other reasons, it is necessary to seek complete divestiture of the securities covered by this resolution.

5. During implementation of this resolution, the SBI shall hereafter neither invest funds in the stocks, securities or other obligations of i) foreign and United States companies and subsidiaries and affiliates thereof or ii) banks or financial institutions both of which are described in sections one, two and three of this resolution nor reinvest funds in the stocks, securities or obligations of such entities following the divestment or sale thereof unless:

- (a) SBI staff or other persons and entities charged with the day-to-day investment of funds entrusted to the SBI conclude that other available investment alternatives are not as sound from a fiduciary point of view, or
- (b) the SBI concludes that the failure to invest or reinvest in such entities would be inconsistent with the SBI's fiduciary obligations.
- (c) the entities meet the standards set forth in section 7 of the resolution.

6. The process of divestiture of and limiting new investments in equity securities will be conducted according to the timetable set forth below, consistent with fiscal prudence and so as to minimize financial market disturbance.

- (a) Phase One, to be completed within three months of approval of this resolution, will cover equity securities of those businesses covered by Section 1 of this resolution which (i) operate in a manner which directly supports Apartheid; or (ii) are not signatories of the Sullivan Principles, as amended from time to

time, and have never exhibited evidence of a similar corporate policy promoting equal treatment and improving the lives of non-white workers in the Republic of South Africa or Namibia. The SBI shall determine which corporate equities are covered under Phase One through evidence gathered by outside groups monitoring corporate behavior in the Republic of South Africa and/or Namibia as well as by corporate responses to their own inquiries a company shall be deemed to be operating in a manner which directly supports Apartheid if:

- (i) it provides goods or services to the South African military, police, prisons, the Ministry of Cooperation and Development (which administers the pass laws), or any other governmental agency responsible for the enforcement or maintenance of Apartheid;
  - (ii) it provides technology or facilities such as energy producing plants that tend to make the Republic of South Africa less dependent on international trade and thus less susceptible to outside pressure for change;
  - (iii) it provides loans directly to, underwrites securities of, sells gold on behalf of, or otherwise provides financial services to, the government of the Republic of South Africa; or
  - (iv) its activities in the Republic of South Africa and Namibia are deemed by the SBI to be especially egregious for other reasons.
- (b) Phase Two, to be completed by August 3, 1986, will cover equity securities of those businesses covered by Section 1 of this resolution which, having signed the Sullivan Principles, as amended from time to time, or having exhibited evidence of a similar corporate policy promoting equal treatment and improving the lives of non-white workers in the Republic of South Africa and Namibia do not subject their behavior in the Republic of South Africa and/or Namibia to monitoring by Arthur D. Little, Inc. or another independent monitor satisfactory to the SBI.
- (c) Phase Three, to be completed by August 3, 1987, will cover equity securities of those businesses covered by Section 1 of this resolution that did not obtain a performance rating in the most recent Arthur D. Little, Inc. report within the highest category of the Sullivan Principles rating system, or an equivalent thereof.
- (d) Phase Four, to be completed not later than August 3, 1989, will cover all other equity securities covered by Section 1 of this resolution.

7. Notwithstanding the foregoing, the SBI may authorize the holding of investments covered by Phases Two, Three and Four of this resolution in companies engaging in corporate political, social, and economic activities, in addition to compliance with the Sullivan Principles, as amended from time to time, or a similar corporate policy that are deemed by the SBI to be of substantial assistance to efforts to eliminate Apartheid.

Evidence to the SBI of such corporate political, social and economic activities, which must go beyond workplace reform and include steps taken in substantial opposition to Apartheid, shall include the following:

- (a) actions to persuade the government of the Republic of South Africa to eliminate Apartheid and to comply with the United Nations Security Council Resolution 435 on Namibia, including tangible opposition to the system of pass laws, influx controls and other fundamental building blocks of Apartheid;
- (b) absence of participation and investment in the bantustan/homelands;
- (c) formal recognition of and collective bargaining with black trade unions that are independent of government control;
- (d) providing specific training and upgrading programs at the work-place and increasing the number of non-whites in technical, skilled, professional and management position, including positions in which non-whites supervise whites;
- (e) payment of a reasonable, livable wage to all employees;
- (f) substantial expenditures to raise the level of education and skills of the non-white majority population, including the provision of schooling for workers and children in the community;
- (g) substantial expenditures to provide decent, affordable, permanent housing units to workers and their families on a non-discriminatory basis; and
- (h) substantial expenditures to provide health and medical services to workers and their families on a non-discriminatory basis.

To be substantial, a company's expenditures should represent a proportion of profit after taxes or of revenue that is among the highest proportions spent by all United States companies in South Africa and Namibia and that is significantly more than the proportion spent by the company in other countries.

8. Notwithstanding the foregoing, during Phases Two and Three the SBI may also direct the divestment of equity securities in companies or institutions which have signed and observed the Sullivan Principles, as amended from time to time, or implemented a similar policy, but are nevertheless deeply involved in South Africa and/or Namibia in a way which lends support to Apartheid. Such deep involvement may be demonstrated by such activities as the expansion of operations in those countries or significant business with agencies or enterprises of the South African government other than agencies described in Phase One.

9. In furtherance of the principles set forth in the resolution, the SBI shall, pursuant to procedure set forth in section 12 of this resolution, seek out and persuade other shareholders to act in a concerted manner to change corporate political, social and economic activities in the Republic of South Africa and Namibia. The SBI, in conjunction with its staff, shall

- (a) during Phase One, (i) notify issuers who have signed the Sullivan Principles, as amended from time to time, or never exhibited evidence of a similar corporate policy promoting equal treatment and improving the lives of non-white workers in the Republic of South Africa and Namibia of the proposals for action by the stockholders of such issuers requiring such issuers to subscribe to the Sullivan Principles, as amended from time to time, (ii) to submit such proposals to such issuers, and (iii) to supply supporting statements for such proposals for inclusion in the issuers' proxy statements;
- (b) during Phase Two, (i) notify, issuers who have signed the Sullivan Principles, as amended from time to time, or have exhibited evidence of a similar corporate policy promoting equal treatment and improving the lives of non-white workers in the Republic of South Africa and Namibia but have not subjected their behavior to monitoring by Arthur D. Little, Inc. or another independent monitor satisfactory to the SBI of its intention to present proposals for action by the stockholders to require such issuers to subject themselves to such monitoring (ii) to submit such proposals to such issuers, and (iii) to supply supporting statements for such proposals for inclusion in the issuers' proxy statements;
- (c) during Phase Three, (i) notify issuers who have not obtained a performance rating within the highest category of the Sullivan Principles, as amended from time to time, rating from Arthur D. Little, Inc. or an equivalent rating from another independent monitor satisfactory to the SBI of its intention to present proposals for action by the stockholders to require such issuers to modify their behavior in order to obtain such



a performance rating, (ii) to submit such proposals to such issuers, and (iii) to submit such proposals for inclusion in the issuers' proxy statements;

- (d) during all phases of the divestiture, the SBI shall act in these and other ways to persuade corporations to continually improve their corporate political, social and economic activities in the Republic of South Africa and/or Namibia consistent with the resolution; and
- (e) from the date of this resolution, vote the shares held "For" all management or stockholder proposals consistent with clauses (a), (b), (c), and (d) of this section.

10. The SBI directs its staff, upon adoption of this resolution, to write to the companies and institutions identified in Sections 2 and 3 of this resolution to inform them of the adoption of this resolution and its provisions, to give them notice of the actions they should take in order to avoid divestiture, and to provide them an opportunity to describe any actions they may be taking to work for peaceful fundamental change in the Republic of South Africa and Namibia; and further directs that prior to implementing Phases Two, Three and Four of the divestiture program, the SBI staff again communicate with such companies and institutions to provide them an opportunity to describe any changes that have been made in their operations and policies with respect to the Republic of South Africa and Namibia.

11. The SBI shall seek financial and legal advice concerning the divestiture program set forth for consideration in this resolution. Before each stage of the divestiture program, the SBI shall seek advice from financial experts concerning the effect of proposed divestiture program shall be implemented so as to be consistent with the advice received from the SBI's financial and legal advisors.

12. To advise and assist it in implementation of this resolution, the SBI hereby authorizes the formation of an Advisory Task Force on Divestment composed of a representative selected by each member of the SBI and at least one representative from the Minnesota corporate community, one representative from a Minnesota public employee labor group and one representative from a public employee retirement group.

13. To assist in implementation of section eight of this resolution, the SBI directs its Executive Director to obtain the consulting services of a representative from the Interfaith Center on Corporate Responsibility.

14. This resolution shall take effect immediately.

Presented this 2nd day of October, 1985.

## SHAREHOLDER ACTIVITIES

As a stockholder, the State Board of Investment is entitled to participate in corporate annual meetings, through direct attendance or casting its votes by proxy. Through proxy voting, the Board directs company representatives to vote its shares in a particular way on resolutions under consideration at annual meetings. Resolutions prepared at annual meetings range from routine issues, such as those involving the election of corporate directors and ratification of auditors, to non-routine items involving such matters as merger proposals and corporate social responsibility issues. In effect, as a shareholder the State Board of Investment can participate in shaping corporate policies and practices.

All non-routine proxy matters are reviewed by a committee of the State Board of Investment and voted in accordance with the SBI's statement of investment responsibility, which states, in part:

"...The Investment Board recognizes that when performing their duty of investing the trust funds (pension and other funds) for which they are custodian, their primary responsibility is the prudent and responsible investment of the assets of the funds for the economic benefit of the beneficiaries of the funds...

...Consistent with prudent and responsible investment policy, the Investment Board shall not knowingly invest or maintain holdings in those corporations which are in flagrant violation of the law or in stubborn disregard of the social welfare of the society, or do not recognize environmental responsibilities in their corporate actions, and are not taking reasonable steps to overcome the situations..."



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# **FISCAL YEAR 1986**

## **STATISTICAL DATA APPENDIX**

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## EXTERNAL COMMON STOCK MANAGERS

### FRED ALGER MANAGEMENT INC.

Fred Alger searches for companies expected to experience above-consensus earnings gains. These earnings gains may be either cyclical or secular. The firm focuses on two types of companies. First, companies whose products are expected to produce high consistent unit volume growth rates. Second, companies undergoing a positive life cycle change not yet fully recognized by the market. The proportion of the total portfolio invested in these two types of companies varies over time. On average, however, the high unit growth companies tend to dominate the total portfolio. Fred Alger is not an active market timer, usually maintaining a fully invested position.

### ALLIANCE CAPITAL MANAGEMENT CORP.

Alliance searches for companies likely to experience high rates of earnings growth, on either a cyclical or secular basis. Alliance has invested in a wide range of growth opportunities from small, emerging growth to large, cyclically sensitive companies. There is no clear distinction on the part of the firm as to an emphasis on one particular type of growth company over another. However, the firm's decision-making process appears to be much more oriented toward macroeconomic considerations than is the case with most other growth managers. Accordingly, cyclical earnings prospects, rather than secular, appear to play a larger role in terms of stock selection. Alliance is not an active market, rarely raises cash above minimal levels.

### BMI CAPITAL CORP.

BMI's investment approach focuses on companies expected to exhibit strong sustained earnings gains. BMI attempts to identify two types of "growth" companies: first, misperceived companies that are in the process of undergoing dynamic changes that will cause them to produce materially higher earnings over the near-term; and second, small-to-medium sized companies that exhibit the potential for rapid future earnings growth. The weighting of the two types of growth companies within the firm's portfolio will vary over time depending upon economic and financial conditions. Generally, however, the misperceived companies will make up the majority of the portfolio. On the other hand, the smaller high growth companies tend to dominate the portfolio's risk characteristics. The firm concentrates almost exclusively on stock selection, only rarely raising cash to significant levels.



## **BEUTEL, GOODMAN CAPITAL MANAGEMENT, LTD.**

Beutel Goodman searches for companies whose stock prices are low in comparison to estimated tangible book value or companies whose P/E's are low in relation to earnings quality and expected earnings growth. This "value" investment approach is contrarian and defensive by nature, exhibiting less volatility than investment styles focusing on growing earnings. Beutel Goodman is not an active market timer and is almost always fully invested.

## **FORSTMANN LEFF ASSOCIATES**

Forstmann Leff is a classic example of a "rotational" manager. The firm focuses almost exclusively on asset mix and sector weighting decisions. Based upon its macroeconomic outlook, the firm will move aggressively into and out of asset classes and equity sectors over the course of a market cycle. The firm tends to purchase liquid, large capitalization stocks. Forstmann-Leff will make sizable market timing moves at any point during a market cycle.

## **HELLMAN JORDAN MANAGEMENT CO.**

Hellman Jordan is a "rotational" manager. Its cyclical and secular economic forecasts drive its asset mix and industry sector selections. The firm's primary focus is asset allocation, although it will invest in a wide range of industries over a market cycle. The firm tends to purchase liquid, large capitalization stocks. Hellman Jordan will make sudden and significant asset mix shifts over a market cycle.

## **IDS ADVISORY**

IDS employs a "rotational" style of management, shifting among industry sectors based upon its outlook for the economy and the financial markets. The firm emphasizes primarily sector weighting decisions. Moderate market timing is also used. Over a market cycle IDS will invest in a wide range of industries. It tends to buy liquid, large capitalization stocks. While IDS will make occasional significant asset mix shifts over a market cycle, the firm is a less aggressive market timer than most rotational managers.

## **INVESTMENT ADVISERS**

Investment Advisers is a "rotational" manager. Its macroeconomic forecasts drive its investment decision-making. The firm emphasizes market timing and sector weighting decisions. Investment Advisers will invest in a wide range of industries

over a market cycle. It tends to hold liquid, medium to large capitalization stocks. The firm is an active market timer, willing to make gradual but significant asset mix shifts over a market cycle.

#### **LIEBER & COMPANY**

Lieber & Co. seeks to identify investment concepts that are either currently profitable or likely to become so in the near future, yet whose prospects are not reflected in the stock prices of the companies associated with the concepts. The investment concepts upon which the firm focuses are related to both macroeconomic trends and specific product developments within particular industries or companies. Stocks purchased by Lieber tend to be those of well-managed, high growth and high return on equity, small-to-medium sized companies. The stocks may be undervalued due to the failure of investors to recognize fully either the value of new products or a successful turnaround situation. Particularly attractive to Lieber are small-to-medium sized takeover candidates. The firm generally is fully invested, with any cash positions the result of a lack of attractive investment concepts.

#### **WADDELL & REED**

Waddell & Reed focuses its attention primarily on small capitalization aggressive growth stocks. However, the firm has demonstrated a willingness to make significant bets against this investment approach for extended periods of time. The firm is an active market timer and will raise cash to extreme levels at various points in the market cycle.

#### **PEREGRINE CAPITAL**

Peregrine is a contrarian investor searching for poorly performing stocks that have been "oversold" by the market. The firm expects that the prices of these stocks will rebound as the market's "emotional excesses" come to be recognized. The firm is very price sensitive. As a result it is an active trader, buying stocks as their performance relative to the market declines and selling stocks as relative performance rises. Peregrine tends to hold small positions in a large number of stocks, avoiding significant bets on individual issues. The firm is a moderate market timer, alternating its cash position incrementally around a moderately low cash position.

#### **WILSHIRE ASSOCIATES**

The index fund managed by Wilshire Associates is a well-diversified portfolio of common stocks designed to match the rate

of return performance of a predetermined stock market index. The index fund utilized by the SBI tracks the Wilshire 5000, a broad-based equity market indicator composed of the common stocks of all U.S.-domiciled corporations for which daily prices are available. In effect, the Wilshire 5000 represents virtually the entire domestic common stock market.

# EXTERNAL BOND MANAGERS

## INVESTMENT ADVISERS, INC.

Investment Advisers is a traditional top down bond manager. The firm's approach is oriented toward correct identification of the economy's position in the credit cycle. This analysis leads the firm to its interest rate forecast and maturity decisions, from which the firm derives most of its value-added. Investment Advisers is an active asset allocator, willing to make rapid, significant moves between cash and long maturity investments over the course of an interest rate cycle. Quality, sector and issue selection are secondary decisions. Quality and sector choices are made through yield spread analyses consistent with the interest rate forecasts. Individual security selection receives very limited emphasis, focusing largely on specific bond characteristics such as call provisions.

## LEHMAN MANAGEMENT CO.

Lehman's primary emphasis is on forecasting cyclical interest rate trends and positioning its portfolios in terms of maturity, quality and sectors, in response to its interest rate forecast. However, the firm avoids significant, rapidly changing interest rate bets. Instead, it prefers to shift portfolio interest rate sensitivity gradually over a market cycle, avoiding extreme positions in either long or short maturities. Individual bond selection is based on a quantitative valuation approach and the firm's internally-conducted credit analysis. High quality (A or better) undervalued issues are selected consistent with the desired maturity, quality and sector composition of the portfolios.

## MILLER, ANDERSON AND SHERRERD

Miller Anderson focuses its investments in misunderstood or under-researched classes of securities. Over the years this approach has led the firm to emphasize mortgage-backed securities in its portfolios. Based on its economic and interest rate outlook, the firm establishes a desired maturity level for its portfolios. This decision is instituted primarily through the selection of specific types of mortgage securities that have prepayment expectations consistent with the portfolio's desired maturity. The firm will also move in and out of cash, but generally only gradually over an interest rate cycle and never taking extremely high cash positions. Total portfolio maturity is always kept within an intermediate three-to-seven year duration band. Unlike many other firms that also invest in mortgage securities, Miller Anderson intensively researches and,

even in some cases manages, the mortgage pools in which it invests.

#### **MORGAN STANLEY ASSET MANAGEMENT**

Morgan Stanley takes a very conservative approach to fixed income investing, emphasizing the preservation of capital through the generation of consistent real returns. This philosophy has led the firm to maintain a vast majority of its portfolio in short to intermediate maturity, high quality (A or better) securities. Large positions in maturities longer than ten years are held only as temporary trading opportunities. These positions are increased or reduced gradually as the firm's expectations of the cyclical level of interest rates changes. Issue selection is of secondary importance to maturity decisions. Rather, given its maturity decisions, the firm prefers to make sizable investments in specific areas of the market where it believes persistent misvaluations are present.

#### **PEREGRINE CAPITAL MANAGEMENT, INC. (Norwest Bank)**

Peregrine Capital stresses consistency of fixed income portfolio relative returns. To accomplish this goal, the firm maintains a portfolio of high quality, liquid securities and a balance of maturity levels avoiding extreme exposures on either the long or short end. Further, Peregrine will make only gradual moves between maturities over an interest rate cycle. The firm also concentrates on exploring misperceived fixed income securities, which has led the firm to make extensive use of mortgage-backed securities and floating rate notes.

#### **WESTERN ASSET MANAGEMENT**

Western recognizes the importance of interest rates changes on fixed income portfolio returns. However, the firm believes that successful interest rate forecasting, particularly short-run forecasting, is extremely difficult to accomplish consistently. Thus, the firm attempts to keep portfolio maturity in a narrow band near that of the market, making only relatively small, gradual shifts over an interest rate cycle. It prefers to add value primarily through appropriate sector decisions. Based on its economic analysis, Western will significantly overweight particular sectors, shifting these weights as economic expectations warrant. Issue selection, like its maturity decisions, are of secondary importance to the firm.

# ALTERNATIVE EQUITY INVESTMENT MANAGERS

## RESA

Real Estate Separate Account (RESA) is an open-end commingled real estate fund managed by the Aetna Life and Casualty Company of Hartford, Conn. The fund was formed in January, 1978. The fund has no termination date; investors have the option to withdraw all or a portion of their investment. RESA invests primarily in existing equity real estate. Investments are diversified by location and type of property. On-site management of properties is contracted to outside firms or conducted by a joint venture partner.

## SEPARATE ACCOUNT #8

Separate Account #8 was formed in August 1973 by the New York-based Equitable Real Estate Group, Inc. The account is an open-end commingled real estate fund. The fund has no termination date; investors retain the option to withdraw all or a portion of their investment. The fund makes equity investments in existing real estate. The fund's portfolio is diversified by location and property type. Management of the fund's properties is contracted to outside firms or is conducted by joint venture partners.

## PRISA I

PRISA I is an open-end commingled real estate fund. One of the largest and oldest of the open-end funds, PRISA I was formed in July 1970 by the Prudential Investment Management Corporation of New Jersey. PRISA's real estate portfolio consists primarily of equity investments in existing properties. Investments are diversified by both the type and location of properties. Prudential contracts with outside firms for the on-site management of its properties or retains joint venture partners as property managers. The fund has no termination date. Investors have the option quarterly to withdraw a portion or all of their investment.

## RREEF USA III

RREEF USA III is managed by the Rosenberg Real Estate Equity Funds. It has a twelve year term. Typically, the trust purchases 100% of the equity of its properties with cash. The trust generally does not utilize leverage or participating mortgages. Properties are diversified by location and type. RREEF's in-house staff manages the trust's real estate properties. The firm's primary office is located in San Francisco.

## HAC GROUP TRUST I

HAC Group Trust I was formed in May 1984 and has a term of twelve years. HAC Group Trust I is managed by the Heitman Advisory

Group, which is based in Chicago. The majority of the trust investments are equity real estate. The real estate portfolio is diversified by the type and location of the properties. Centre Properties, Ltd., an affiliate of Heitman, manages the trust's wholly-owned properties. Properties that are partially owned by the trust may be managed by joint venture partners.

#### **HAC GROUP TRUST II**

HAC group Trust II was formed in October, 1985. The trust is managed by Heitman Advisory Group. Its terms and strategy are identical to those of HAC Group Trust I.

#### **TCW REALTY FUND III**

TCW Realty Fund III was formed in July 1985 and has a term of ten years. Management of the fund is a joint venture between Trust Company of the West and Westmark Real Estate Investment Services of Los Angeles. The fund managers utilize specialty investment vehicles such as convertible and participating mortgages to enhance real estate returns. Investments are diversified by location and type. Management of portfolio properties typically is conducted by local property management firms. Although the SBI committed to the fund at its June, 1985 meeting, funding did not take place until July 1986.

#### **STATE STREET REAL ESTATE FUND III**

State Street Real Estate Fund III was formed in August 1985. The fund has a term of fifteen years. It is managed by the State Street Bank and Trust Company of Boston. State Street Bank has retained Aldrich, Eastman and Waltch as the Fund's advisor. The fund's special orientation is the use of creative investment vehicles such as convertible and participating mortgages to maximize real estate returns. The real estate portfolio is diversified by location and property type. On-site property management typically is contracted to outside firms or conducted by joint venture partners.

#### **STATE STREET REAL ESTATE FUND IV**

State Street Real Estate Fund IV was formed in June 1986. State Street Bank and Trust Company serves as the Fund's manager and Alrich, Eastman and Waltch of Boston is the Fund's advisor. The Fund will be managed in essentially the same manner as State Street Fund III.

#### **NORTHWEST VENTURE PARTNERS I**

Northwest Venture Partners I was formed in January 1984, has a term of ten years. Norwest Venture Capital Management, a wholly owned subsidiary of Norwest Corp., is the general partner and manager of the partnership. Norwest Venture Capital also manages the Norwest Growth Fund, an SBIC, and Norwest Equity Capital, a

leveraged buyout fund. Norwest Venture Partners' investment focus is on high technology companies in the early stages of corporate development. However, the partnership's portfolio also includes investments in expansion stage firms and is diversified by the location and industry type of its portfolio companies.

#### **KKR 1984 LBO FUND**

KKR's 1984 Leveraged Buyout Fund was formed in March 1984 and has a term of twelve years. It is the third leveraged buyout fund to be managed by Kohlberg, Kravis, Roberts and Co., which operates offices in New York and San Francisco. The 1984 fund invests in large management leveraged buyouts. The partnership's portfolio companies are mature, low technology companies with very diversified operations.

#### **KKR 1986 LBO FUND**

KKR's 1986 Leveraged Buyout Fund was organized in December, 1985. The Fund's investment strategy and terms are essentially identical to those of KKR's 1984 Fund.

#### **SUMMIT VENTURES**

Summit Ventures has a ten year term. It was formed in December 1984 by Stamps, Woodsum & Co., the managing general partners of the fund and Shearson/American Express. Stamps and Woodsum focus on profitable, expansion stage firms that have not yet received any venture backing. The majority of the partnership's investments are in high tech firms. Investments are diversified by location and industry type.

#### **FIRST CENTURY III**

First Century III was formed in December 1984, and has a term of ten years. The general partner and manager of the partnership is Smith Barney Venture Corp., a subsidiary of Smith Barney Harris Upham and Co. Smith Barney Venture has offices in New York and San Francisco. This is the third fund formed by the firm since 1972. The partnership invests primarily in early stage, high technology companies. Investments are diversified by location and industry group.

#### **DSV PARTNERS IV**

DSV Partners IV was formed in April, 1985. It has a twelve year term. DSV Partners IV is the fourth venture fund to be managed by DSV Management Ltd since the firm's inception in 1968. The firm's primary office is located in Princeton, New Jersey. However, the firm will open a California office in 1986. DSV Partners' investment emphasis is on portfolio companies in the



start up and early stages of corporate development. The geographic focus of the partnership is on East and West Coast firms. Investments are diversified by industry type.

#### **INMAN & BOWAN**

Inman & Bowan was formed in June, 1985. Its investment focus is early-stage, high-technology firms. The fund will emphasize investments in California, where the general partner, Inman & Bowman Management, is based. However, Inman and Bowman work closely with Rainier Venture Partners, a small Washington venture firm. They expect to make several co-investments with Rainier in the Pacific Northwest. The partnership has a ten year term.

#### **MATRIX PARTNERS II**

Matrix Partners II was formed in August, 1985 and has a term of ten years. The fund's investment emphasis is on high-technology firms in the early and expansion stages of corporate development. However, for diversification the Fund's portfolio will include a sizable component of non-technology firms. The portfolio may include several small leveraged buyout investments as well. The fund is managed by five experienced general partners. The partners have offices in Boston, San Jose, and San Francisco.

#### **ALLIED VENTURE PARTNERSHIP**

Allied Venture Partnership was formed in September 1985 and has a ten year term. Based in Washington D.C., the fund will focus on later stage, low technology companies located in the Southeastern and Eastern U.S. Most investments will be made in syndication with Allied Capital, a large publicly-owned venture capital corporation formed in 1958.

#### **SUPERIOR VENTURE PARTNERS**

Superior Ventures is a Minnesota-based venture capital limited partnership. It was formed in June 1986 and has an eleven year term. Superior Ventures is managed by IAI Venture Capital Group, a subsidiary of Investment Advisers, Inc. Up to 15% of the fund will be invested in other Minnesota-based venture capital limited partnerships. The remainder of the fund will be invested in operating companies located within the state.

#### **T. ROWE PRICE**

T. Rowe Price, a Baltimore-based money management firm, was selected to manage stock distributions from the Board's venture capital limited partnerships. T. Rowe Price has extensive research capabilities in the small capitalization company area. In addition, the firm has a large trading staff with particular expertise in the trading of small capital, illiquid stocks.

## AMGO I

AMGO I was formed in July 1981 and has a term of twenty years. The general partner and manager of the fund is First Reserve Corp. The general partner's long-term investment strategy is to create a diversified portfolio of oil and gas investments for the fund. The portfolio is diversified across four dimensions: location, geological structure, investment type, and operating company.

## AMGO II

Formed in December 1982, Amgo II has a nineteen year term. First Reserve Corp. of New York is the general partner and manager of both Amgo I and Amgo II. First Reserve's strategy for Amgo II is similar to that of Amgo I. Amgo II's portfolio is diversified by location, geological structure, investment type, and operating company.

## APACHE CORP.

The Apache Corp. 10% Equipment Financing Notes are a \$150 million private placement to finance Apache's portion of production facility expenditures. The expenditures were made under the terms of a series of offshore joint ventures in the Gulf of Mexico. The joint ventures were organized by Shell Oil Company. In addition to fixed interest payments of 10% per annum, noteholders will receive additional interest of 2% of Apache's share of gross revenues from the joint ventures. Principal and interest on the notes are estimated to be repaid by 1992. The 2% additional interest will be paid to noteholders throughout the life of producing properties. Apache Corp. is based in Minneapolis.

## APC 1985

The APC 1985 Properties Acquisition Notes are a \$118 million private placement to finance the acquisition and tangible development costs related to certain producing oil and gas properties, of which some are fully developed and some are partially developed. In addition to fixed interest payments of 10% per annum, noteholders will receive additional interest of 2% of Apache's share of gross revenues from the properties. Principal and interest on the notes are estimated to be repaid by 1996. The 2% additional interest will be paid to noteholders throughout the life of producing properties.

# ALTERNATIVE EQUITY INVESTMENTS

| FUND<br>-----    | COMMITMENT<br>(millions)<br>----- | FUNDED<br>----- | INCEPTION<br>DATE<br>----- | FUND SIZE<br>(millions)<br>----- |
|------------------|-----------------------------------|-----------------|----------------------------|----------------------------------|
| REAL ESTATE:     |                                   |                 |                            |                                  |
| Equitable        | \$ 40.0                           | \$ 40.0         | 10/81                      | \$3124.0                         |
| Aetna            | 40.0                              | 40.0            | 4/82                       | 1664.0                           |
| Prudential       | 40.0                              | 40.0            | 9/81                       | 5316.0                           |
| RREEF            | 75.0                              | 47.0            | 4/84                       | 773.0                            |
| Heitman I        | 20.0                              | 20.0            | 6/84                       | 113.0                            |
| Heitman II       | 30.0                              | 30.0            | 10/85                      | 238.0                            |
| TCW I            | 40.0                              | 40.0            | 7/85                       | 216.0                            |
| State Street III | 20.0                              | 20.0            | 7/85                       | 103.0                            |
| State Street IV  | 20.0                              | 0.0             | 7/86                       | 100.0                            |
|                  | -----                             | -----           |                            |                                  |
| Total:           | \$325.0                           | \$276.0         |                            |                                  |

Target: (\$450 Million or 10% of Basic Retirement Funds)

## VENTURE CAPITAL:

|                  |         |         |       |         |
|------------------|---------|---------|-------|---------|
| Norwest          | \$ 10.0 | \$ 7.0  | 1/84  | \$ 60.0 |
| KKR I            | 25.0    | 25.0    | 3/84  | 1000.0  |
| KKR II           | 50.0    | 7.0     | 12/85 | 2000.0  |
| Summit           | 10.0    | 7.5     | 12/84 | 93.0    |
| First Century    | 10.0    | 2.5     | 12/84 | 100.0   |
| DSV IV           | 10.0    | 7.0     | 4/85  | 60.0    |
| Matrix           | 10.0    | 4.0     | 7/85  | 70.0    |
| Inman/Bowman     | 7.5     | 2.0     | 6/85  | 44.0    |
| Allied           | 5.0     | 1.6     | 7/85  | 40.0    |
| Superior Venture | 6.0     | 1.5     | 6/86  | 35.0    |
|                  | -----   | -----   |       |         |
| Total:           | \$143.5 | \$ 65.1 |       |         |

Target: (\$112.5 Million or 2.5% of Basic Retirement Funds)

## RESOURCE:

|           |         |         |       |          |
|-----------|---------|---------|-------|----------|
| Amgo I    | \$ 15.0 | \$ 15.0 | 7/81  | \$ 144.0 |
| Amgo II   | 7.0     | 7.0     | 2/83  | 36.0     |
| Apache I  | 22.5    | 0.5     | 5/84  | 150.0    |
| Apache II | 23.0    | 22.4    | 10/85 | 180.0    |
|           | -----   | -----   |       |          |
| Total:    | \$ 67.5 | \$ 42.5 |       |          |

Target: (\$112.5 Million or 2.5% of Basic Retirement Funds)

## EQUITY MANAGER PORTFOLIO STATISTICS GLOSSARY

In the following pages, summary descriptions of the individual equity managers' investment philosophy, risk characteristics, and performance data are displayed. Some of the statistics presented are technical in nature. This glossary is designed to aid in understanding the terms that are introduced.

The first five portfolio characteristics listed in the glossary are presented in the Quarterly Investment Review and Appendix on an absolute basis. The remaining portfolio statistics are reported relative to the stock market. The purpose of presenting these statistics in a relative fashion is to "normalize" them, or remove the impact of market-wide changes on the characteristics of a manager's portfolio. In calculating the relative values, the stock market is represented by the 1000 largest capitalization companies in the Wilshire 5000. The managers' portfolio characteristics are reported in standard deviation units relative to the average or mean of these 1000 companies. Thus, a positive (negative) value for a portfolio characteristic indicates a value higher (lower) than the market average.

- |                         |   |
|-------------------------|---|
| # of Stocks             | - number of different issues held in the manager's stock portfolio.   |
| Qtr. Port. Turnover     | - the manager's total equity asset sales during the quarter divided by the average value of the manager's equity assets over the quarter.   |
| Equity Allocation       | - percent of the manager's total portfolio invested in common and preferred stocks and convertible securities.  |
| Diversification<br>(R2) | - extent to which a manager's equity holdings statistically resemble the stock market. Low (high) diversification portfolios will experience returns which are not well (are well) correlated with those of the market. By definition, the market has a diversification measure of 1.0. The less a portfolio is diversified, the lower will be its diversification measure (referred to as R-squared). The SBI's managers are required, over the long-term, to hold portfolios with diversification levels less than .85. |

Market Volatility  
(Equity Beta)

- degree to which the returns on the manager's stock portfolio are sensitive to movements in the stock market's return. By definition the market has a market volatility measure (referred to as beta) of 1.0. Portfolios with values greater (less) than 1.0 have above (below) average sensitivity to market moves. The SBI's managers are required, over the long-term to hold portfolios with market volatility levels above 1.10. This measure does not include the impact of cash holdings on total portfolio volatility.

Price Variability  
(MVAR)

- risk related to the historical variability of the prices of stocks in the manager's portfolio. The more variable are the portfolio's securities' prices, the more risky is the portfolio. Items such as current stock price, twelve month price range, trading volume, and beta make up this measure.

Earnings Variability  
(EVAR)

- risk related to the variability of the earnings of those companies owned in the manager's portfolio. The more variable are the companies' earnings, the more risky is the portfolio. Items such as variance of accounting earnings, variance of cash flow, occurrence of extraordinary accounting items, and the correlation of companies' earnings with U.S. corporate earnings make up this measure.

12-Month Relative  
Return (REL RET)

- the return on the stocks currently in the manager's portfolio over the last twelve months less the return on the S&P 500.

Price-to-Book Ratio  
(P/B)

- the market value of the manager's portfolio divided by the latest available annual book value.

5 Year Earnings  
Growth (5 YR. EARN.)

- the annualized growth of the average earnings per share of the manager's portfolio over the latest five fiscal years.

Size and Immaturity  
(SIZE)

- Risk related to the size and maturity of the companies held in the portfolio. The smaller and younger the companies, the more risky is the portfolio. Items such as total assets, market capitalization, gross plant/book value ratio, and company age make up this measure.

Growth (GROW)

- risk related to the growth orientation of companies owned by the manager. The more growth-oriented are the companies, the riskier is the portfolio. Items such as dividend yield, E/P ratio, and growth in total assets make up this measure.

Earnings-to-Price  
Ratio (E/P)

- the weighted average trailing four quarter earnings per share of the manager's common stock portfolio divided by the weighted average price per share of the manager's common stock portfolio.

Dividend Yield  
(YIELD)

- indicated annual dividend of the manager's stock portfolio divided by the portfolio market value.

Financial Leverage  
(FINL)

- risk related to the extent to which companies held in the portfolio have used debt to finance their operations. The more leveraged are the companies, the riskier is the portfolio. Items such as debt/asset ratio, current asset/current liability ratio, and uncovered fixed charges make up this ratio.

Industry Sector  
Overweightings

- those sectors of the economy in which the manager has invested a significantly larger percentage of the portfolio than is represented by the stock market.

Industry Sector  
Underweightings

- those sectors of the economy in which the manager has invested a significantly smaller percentage of the portfolio than is represented by the stock market.

# EXTERNAL EQUITY MANAGERS

## PORTFOLIO STATISTICS RELATIVE TO BENCHMARK PORTFOLIOS

1986 FISCAL YEAR END PORTFOLIO STATISTICS

| MANAGER                         |     | # OF<br>STOCKS | EQUITY<br>ALLOC. | MKT.<br>VOLTY | DIVER. | YIELD | E/P   | REL.<br>RET. | P/B   | 5 YR<br>EARN | MVAR | EVAR  | SIZE  | GROW | FINL  |
|---------------------------------|-----|----------------|------------------|---------------|--------|-------|-------|--------------|-------|--------------|------|-------|-------|------|-------|
| GROWTH MANAGERS                 |     |                |                  |               |        |       |       |              |       |              |      |       |       |      |       |
| Fred Alger                      | (A) | 39             | 94               | 1.31          | 0.92   | -0.56 | -0.04 | 0.74         | 0.40  | 0.09         | 0.88 | 0.35  | 0.02  | 0.39 | -0.0  |
|                                 | (B) | 720            | 95               | 1.20          | N.A.   | -0.38 | 0.00  | -0.05        | 0.42  | 0.49         | 0.47 | 0.03  | 0.29  | 0.49 | -0.12 |
| Alliance                        | (A) | 37             | 98               | 1.21          | 0.89   | -0.50 | -0.02 | 0.30         | 0.75  | 0.48         | 0.88 | 0.35  | -0.19 | 0.68 | -0.26 |
|                                 | (B) | 367            | 95               | 1.27          | N.A.   | -0.48 | -0.07 | -0.18        | 0.22  | 0.46         | 0.64 | 0.06  | 0.61  | 0.64 | -0.06 |
| SMALL GROWTH MANAGERS           |     |                |                  |               |        |       |       |              |       |              |      |       |       |      |       |
| BMI Capital                     | (A) | 31             | 95               | 1.37          | 0.90   | -0.84 | -0.08 | 0.23         | 0.23  | -0.14        | 1.10 | 0.31  | 1.60  | 0.95 | -0.17 |
|                                 | (B) | 806            | 95               | 1.33          | N.A.   | -0.59 | -0.07 | -0.09        | 0.43  | 0.38         | 0.85 | 0.18  | 1.34  | 0.86 | -0.20 |
| Lieber & Co.                    | (A) | 110            | 99               | 1.32          | 0.90   | -0.36 | 0.14  | 0.12         | 0.05  | 0.15         | 0.59 | 0.12  | 1.50  | 0.55 | -0.33 |
|                                 | (B) | 1,286          | 95               | 1.31          | N.A.   | -0.46 | -0.01 | -0.21        | 0.07  | 0.19         | 0.65 | 0.14  | 1.77  | 0.81 | -0.32 |
| Waddell & Reed                  | (A) | 67             | 79               | 1.28          | 0.93   | -0.35 | -0.02 | 0.28         | 0.02  | -0.04        | 0.74 | 0.08  | 0.30  | 0.23 | -0.02 |
|                                 | (B) | N.A.           | 80               | 1.35          | N.A.   | 0.06  | 0.20  | -0.36        | -0.21 | 0.19         | 0.24 | -0.06 | 1.15  | 0.29 | 0.01  |
| ROTATIONAL MANAGERS             |     |                |                  |               |        |       |       |              |       |              |      |       |       |      |       |
| Forstmann Leff                  | (A) | 57             | 85               | 1.49          | 0.88   | -0.72 | -0.04 | 0.29         | 0.37  | 0.35         | 1.26 | 0.51  | 0.87  | 0.93 | -0.25 |
|                                 | (B) | 1,455          | 70               | 1.22          | N.A.   | -0.16 | 0.15  | -0.21        | 0.08  | 0.15         | 0.46 | 0.06  | 0.66  | 0.46 | -0.01 |
| Hellman Jordan                  | (A) | 34             | 99               | 1.34          | 0.89   | -0.57 | -0.02 | 0.12         | 0.16  | -0.29        | 0.80 | 0.15  | -0.07 | 0.95 | 0.00  |
|                                 | (B) | N.A.           | 100              | 1.09          | N.A.   | 0.16  | 0.09  | N.A.         | -0.05 | 0.03         | 0.13 | -0.02 | 0.04  | 0.07 | -0.03 |
| IDS                             | (A) | 41             | 91               | 1.19          | 0.93   | -0.23 | 0.06  | 0.54         | 0.46  | 0.25         | 0.54 | 0.17  | 0.09  | 0.22 | -0.08 |
|                                 | (B) | N.A.           | 100              | 1.09          | N.A.   | 0.16  | 0.09  | N.A.         | -0.05 | 0.03         | 0.13 | -0.02 | 0.04  | 0.07 | -0.03 |
| IAI                             | (A) | 35             | 82               | 1.17          | 0.94   | -0.44 | -0.16 | 0.40         | 0.28  | 0.06         | 0.55 | -0.04 | -0.03 | 0.28 | -0.10 |
|                                 | (B) | N.A.           | 100              | 1.09          | N.A.   | 0.16  | 0.09  | N.A.         | -0.05 | 0.03         | 0.13 | -0.02 | 0.04  | 0.07 | -0.03 |
| VALUE MANAGERS                  |     |                |                  |               |        |       |       |              |       |              |      |       |       |      |       |
| Beutel Goodman                  | (A) | 22             | 90               | 1.20          | 0.89   | 0.16  | -0.41 | -0.79        | -0.67 | -0.28        | 0.22 | 0.54  | 0.23  | 0.07 | 0.28  |
|                                 | (B) | 412            | 95               | 1.18          | N.A.   | 0.04  | 0.04  | -0.56        | -0.38 | -0.15        | 0.17 | 0.13  | 0.99  | 0.04 | 0.10  |
| Peregrine Cap.                  | (A) | 202            | 90               | 1.18          | 0.79   | 0.56  | -0.06 | -1.28        | -0.75 | -0.52        | 0.09 | 0.27  | 0.62  | 0.17 | 0.22  |
|                                 | (B) | 1,206          | 90               | 1.13          | N.A.   | 0.17  | 0.05  | -0.69        | -0.49 | -0.17        | 0.09 | 0.13  | 0.76  | 0.17 | 0.05  |
| Composite External<br>Managers  |     | 554            | 91               | 1.25          | 0.96   | -0.26 | -0.02 | -0.01        | 0.05  | 0.01         | 0.58 | 0.19  | 0.24  | 0.43 | -0.01 |
| Index Fund Manager              |     | 1,344          | 99               | 1.09          | 0.97   | 0.16  | 0.09  | -0.26        | -0.05 | 0.03         | 0.13 | -0.02 | 0.04  | 0.07 | -0.03 |
| Composite All Basic<br>Managers |     | 1,495          | 96               | 1.14          | 0.97   | 0.03  | 0.06  | -0.08        | -0.02 | 0.02         | 0.26 | 0.04  | 0.10  | 0.18 | -0.03 |

# EXTERNAL EQUITY MANAGERS

## SECTOR WEIGHTINGS RELATIVE TO BENCHMARK PORTFOLIOS

### 1986 FISCAL YEAR END SECTOR WEIGHTINGS

| MANAGER                         |     | CAPITAL<br>GOODS | CONSUMER<br>DURABLES | CONSUMER<br>NONDURABLES | ENERGY | FINANCIAL | MAT. &<br>SERVICES | TECHNOLOGY | TRANS-<br>PORTATION | UTILITIES |
|---------------------------------|-----|------------------|----------------------|-------------------------|--------|-----------|--------------------|------------|---------------------|-----------|
| <b>GROWTH MANAGERS</b>          |     |                  |                      |                         |        |           |                    |            |                     |           |
| -----                           |     |                  |                      |                         |        |           |                    |            |                     |           |
| Fred Alger                      | (A) | 1.9%             | 7.5%                 | 52.9%                   | ---%   | 11.6%     | 6.2%               | 15.8%      | 4.0%                | ---%      |
|                                 | (B) | 2.9              | 2.0                  | 42.2                    | 0.6    | 9.2       | 16.7               | 21.8       | 3.7                 | 0.9       |
| Alliance                        | (A) | 2.3              | 3.6                  | 49.1                    | ---    | 28.1      | ---                | 9.8        | 7.1                 | ---       |
|                                 | (B) | 4.2              | 2.4                  | 33.0                    | 0.9    | 17.0      | 14.5               | 23.7       | 4.2                 | ---       |
| <b>SMALL GROWTH MANAGERS</b>    |     |                  |                      |                         |        |           |                    |            |                     |           |
| -----                           |     |                  |                      |                         |        |           |                    |            |                     |           |
| BMI Capital                     | (A) | 8.5              | 6.4                  | 43.4                    | ---    | 19.8      | 2.9                | 19.1       | ---                 | ---       |
|                                 | (B) | 5.3              | 4.6                  | 37.7                    | 1.6    | 6.9       | 17.8               | 21.4       | 4.2                 | 0.5       |
| Lieber & Company                | (A) | 1.7              | 7.3                  | 22.4                    | 3.1    | 41.8      | 10.3               | 7.5        | 3.7                 | 2.1       |
|                                 | (B) | 6.4              | 5.5                  | 26.2                    | 1.9    | 20.3      | 15.5               | 19.0       | 3.0                 | 2.1       |
| Waddell & Reed                  | (A) | 4.4              | 7.8                  | 26.0                    | 0.4    | 20.7      | 21.7               | 12.4       | 6.6                 | ---       |
|                                 | (B) | 5.1              | 3.6                  | 30.0                    | 4.6    | 14.9      | 11.2               | 9.3        | 2.9                 | 18.4      |
| <b>ROTATIONAL MANAGERS</b>      |     |                  |                      |                         |        |           |                    |            |                     |           |
| -----                           |     |                  |                      |                         |        |           |                    |            |                     |           |
| Forstmann Leff                  | (A) | 2.6              | 6.6                  | 25.2                    | ---    | 22.4      | 13.2               | 23.7       | 5.2                 | 1.1       |
|                                 | (B) | 3.8              | 3.6                  | 30.0                    | 4.3    | 17.4      | 14.4               | 13.5       | 4.1                 | 8.9       |
| Hellman Jordan                  | (A) | ---              | 9.3                  | 24.8                    | ---    | 32.7      | 10.7               | 20.1       | 2.4                 | ---       |
|                                 | (B) | 4.5              | 4.0                  | 28.8                    | 7.8    | 14.0      | 12.4               | 12.6       | 3.0                 | 12.9      |
| IDS                             | (A) | ---              | ---                  | 42.4                    | 3.1    | 16.4      | 15.8               | 6.5        | 5.0                 | 10.8      |
|                                 | (B) | 4.5              | 4.0                  | 28.8                    | 7.8    | 14.0      | 12.4               | 12.6       | 3.0                 | 12.9      |
| Investment Advisers             | (A) | 8.2              | ---                  | 33.0                    | 1.0    | 9.6       | 26.5               | 13.2       | 8.6                 | ---       |
|                                 | (B) | 4.5              | 4.0                  | 28.8                    | 7.8    | 14.0      | 12.4               | 12.6       | 3.0                 | 12.9      |
| <b>VALUE MANAGERS</b>           |     |                  |                      |                         |        |           |                    |            |                     |           |
| -----                           |     |                  |                      |                         |        |           |                    |            |                     |           |
| Beutel Goodman                  | (A) | 3.4              | 5.3                  | 9.3                     | 4.0    | 20.3      | 23.3               | 19.0       | 11.0                | 4.4       |
|                                 | (B) | 8.8              | 4.9                  | 25.5                    | 8.3    | 13.1      | 22.1               | 11.4       | 5.8                 | ---       |
| Peregrine Capital               | (A) | 8.0              | 6.7                  | 9.6                     | 15.2   | 8.1       | 15.7               | 13.6       | 5.0                 | 18.1      |
|                                 | (B) | 8.1              | 3.4                  | 17.8                    | 9.8    | 13.5      | 15.1               | 13.4       | 4.8                 | 14.2      |
| Composite External<br>Managers  |     | 3.2              | 5.0                  | 30.5                    | 4.7    | 19.2      | 12.0               | 14.4       | 5.6                 | 5.3       |
| Index Fund Manager              |     | 4.7              | 4.2                  | 28.8                    | 7.8    | 13.5      | 11.7               | 12.9       | 3.0                 | 13.4      |
| Composite All Basic<br>Managers |     | 4.2              | 4.5                  | 29.3                    | 6.9    | 15.2      | 11.8               | 13.3       | 3.8                 | 11.0      |
| Wilshire 5000                   |     | 4.5              | 4.0                  | 28.8                    | 7.8    | 14.0      | 12.4               | 12.6       | 3.0                 | 12.9      |

(A) - Actual Portfolio  
(B) - Benchmark Portfolio



# EXTERNAL EQUITY MANAGERS

## PERFORMANCE RELATIVE TO BENCHMARK PORTFOLIOS

| Managers<br>-----                   | Year Ending<br>6/30/86<br>----- |                     |
|-------------------------------------|---------------------------------|---------------------|
|                                     | Actual<br>Portfolio             | Normal<br>Portfolio |
| Fred Alger                          | 47.2%                           | 35.5%               |
| Alliance Capital                    | 43.9                            | 32.1                |
| Beutel Goodman                      | 16.3                            | 31.8                |
| BMI Capital                         | 36.7                            | 35.7                |
| Forstmann Leff                      | 44.1                            | 26.0                |
| Hellman Jordan                      | 29.5                            | 35.3                |
| IDS                                 | 41.9                            | 35.3                |
| Investment Advisers                 | 29.3                            | 35.3                |
| Lieber & Company                    | 42.1                            | 37.8                |
| Peregrine Capital                   | 20.1                            | 27.3                |
| Waddell & Reed                      | 28.5                            | 28.3                |
| Internal Manager                    | 18.6                            | 32.7                |
|                                     |                                 |                     |
| Total - External<br>Active Managers | 32.4                            | N.A.                |
|                                     |                                 |                     |
| Wilshire Associates<br>(Index Fund) | 34.4                            | N.A.                |
|                                     |                                 |                     |
| Performance Standards<br>-----      |                                 |                     |
| Wilshire 5000                       | 35.3                            | N.A.                |
| Inflation                           | 1.7                             | N.A.                |

# EXTERNAL EQUITY MANAGERS

## PORTFOLIO STATISTICS HISTORICAL SUMMARY

| MANAGER<br>NAME    | DATE     | QTR.<br>PORT.<br>T/O | EQUITY<br>ALLOC. | R2   | EQUITY<br>BETA | MVAR | EVAR  | REL<br>RET | P/B   | 5 YR<br>EARN | SIZE  | GROW  | E/P   | YIELD | FINL  |
|--------------------|----------|----------------------|------------------|------|----------------|------|-------|------------|-------|--------------|-------|-------|-------|-------|-------|
| AVG. EXT. MANAGERS | 6/30/86  | 25                   | 91               | 0.90 | 1.28           | 0.70 | 0.26  | 0.09       | 0.12  | 0.01         | 0.45  | 0.49  | -0.06 | -0.36 | -0.07 |
|                    | 3/31/86  | 29                   | 92               | 0.88 | 1.25           | 0.66 | 0.30  | -0.04      | 0.07  | 0.02         | 0.41  | 0.41  | -0.53 | -0.27 | 0.08  |
|                    | 12/31/85 | 29                   | 90               | 0.89 | 1.23           | 0.55 | 0.29  | 0.03       | 0.04  | -0.02        | 0.43  | 0.33  | -0.34 | -0.23 | 0.14  |
|                    | 9/30/85  | 27                   | 82               | 0.83 | 1.23           | 0.53 | 0.27  | -0.29      | 0.04  | 0.07         | 0.41  | 0.31  | -0.15 | -0.25 | 0.07  |
|                    | 6/30/85  | 24                   | 90               | 0.83 | 1.23           | 0.55 | 0.14  | -0.23      | 0.07  | 0.20         | 0.46  | 0.27  | -0.07 | -0.18 | -0.02 |
|                    | 3/31/85  | 33                   | 90               | 0.82 | 1.23           | 0.53 | 0.02  | -0.26      | 0.06  | 0.21         | 0.54  | 0.13  | -0.01 | -0.17 | 0.03  |
|                    | 12/31/84 | 24                   | 86               | 0.81 | 1.25           | 0.56 | 0.08  | -0.13      | 0.17  | 0.03         | 0.73  | 0.23  | -0.03 | -0.32 | 0.05  |
|                    | 9/30/84  | 33                   | 84               | 0.82 | 1.26           | 0.56 | 0.09  | -0.10      | 0.17  | 0.05         | 0.72  | 0.22  | -0.08 | -0.28 | 0.04  |
|                    | 6/30/84  | 27                   | 81               | 0.81 | 1.29           | 0.36 | 0.04  | -0.25      | 0.13  | 0.01         | 0.79  | 0.19  | -0.02 | -0.29 | 0.14  |
|                    | 3/31/84  | 25                   | 83               | 0.82 | 1.25           | 0.38 | 0.03  | -0.10      | 0.13  | 0.01         | 0.60  | 0.20  | -0.15 | -0.26 | 0.08  |
|                    | 12/31/83 | 36                   | 84               | 0.80 | 1.23           | 0.44 | 0.07  | -0.03      | 0.07  | -0.19        | 0.80  | 0.26  | -0.31 | -0.27 | 0.06  |
|                    | 9/30/83  | 32                   | 85               | 0.82 | 1.29           | 0.64 | 0.07  | 0.32       | 0.21  | -0.12        | 0.89  | 0.34  | -0.40 | -0.36 | -0.02 |
|                    | 6/30/83  | 27                   | 85               | 0.81 | 1.29           | 0.68 | 0.00  | 0.30       | 0.11  | -0.10        | 0.75  | 0.35  | -0.44 | -0.34 | 0.00  |
|                    |          |                      |                  |      |                |      |       |            |       |              |       |       |       |       |       |
| FRED ALGER         | 6/30/86  | 21                   | 94               | 0.92 | 1.31           | 0.88 | 0.35  | 0.74       | 0.40  | 0.09         | 0.02  | 0.39  | -0.04 | -0.56 | -0.01 |
|                    | 3/31/86  | 40                   | 98               | 0.91 | 1.29           | 0.94 | 0.48  | 0.31       | 0.23  | 0.12         | -0.17 | 0.45  | -0.40 | -0.54 | 0.19  |
|                    | 12/31/85 | 28                   | 95               | 0.90 | 1.25           | 0.69 | 0.45  | 0.11       | 0.13  | 0.25         | 0.14  | 0.19  | 0.02  | -0.45 | 0.25  |
|                    | 9/30/85  | 28                   | 95               | 0.83 | 1.23           | 0.64 | 0.33  | -0.07      | 0.16  | 0.31         | 0.32  | 0.33  | -0.17 | -0.42 | 0.08  |
|                    | 6/30/85  | 41                   | 92               | 0.79 | 1.23           | 0.77 | 0.39  | -0.07      | 0.32  | 0.48         | 0.26  | 0.53  | -0.05 | -0.55 | 0.05  |
|                    | 3/31/85  | 36                   | 96               | 0.85 | 1.27           | 0.84 | 0.24  | 0.03       | 0.39  | 0.69         | 0.05  | 0.38  | -0.23 | -0.64 | 0.08  |
|                    | 12/31/84 | 16                   | 95               | 0.86 | 1.19           | 0.48 | 0.05  | 0.03       | 0.35  | 0.10         | 0.26  | 0.10  | 0.03  | -0.47 | -0.09 |
|                    | 9/30/84  | 20                   | 94               | 0.86 | 1.22           | 0.44 | 0.14  | 0.10       | 0.34  | 0.00         | 0.42  | -0.01 | -0.04 | -0.44 | -0.08 |
|                    | 6/30/84  | 16                   | 93               | 0.86 | 1.22           | 0.11 | -0.01 | 0.06       | 0.06  | -0.21        | 0.45  | -0.13 | -0.21 | -0.31 | 0.07  |
|                    | 3/31/84  | 19                   | 91               | 0.86 | 1.19           | 0.14 | 0.04  | -0.13      | 0.08  | -0.34        | 0.46  | -0.12 | -0.40 | -0.32 | -0.00 |
|                    | 12/31/83 | 23                   | 95               | 0.88 | 1.18           | 0.38 | 0.08  | 0.26       | -0.04 | -0.37        | 0.31  | -0.05 | -0.50 | -0.32 | 0.05  |
|                    | 9/30/83  | 27                   | 91               | 0.88 | 1.24           | 0.75 | 0.22  | 0.44       | 0.20  | -0.23        | 0.43  | 0.03  | -0.46 | -0.32 | 0.15  |
|                    | 6/30/83  | 8                    | 94               | 0.88 | 1.33           | 1.29 | 0.30  | 0.51       | 0.23  | -0.37        | 0.74  | 0.35  | -0.76 | -0.46 | 0.22  |
|                    |          |                      |                  |      |                |      |       |            |       |              |       |       |       |       |       |

| MANAGER<br>NAME  | DATE     | QTR.<br>PORT.<br>T/O | EQUITY<br>ALLOC. | R2   | EQUITY<br>BETA | MVAR | EVAR  | REL<br>RET | P/B   | 5 YR<br>EARN | SIZE  | GROW  | E/P   | YIELD | FINL  |
|------------------|----------|----------------------|------------------|------|----------------|------|-------|------------|-------|--------------|-------|-------|-------|-------|-------|
| ALLIANCE CAPITAL | 6/30/86  | 11                   | 98               | 0.89 | 1.21           | 0.88 | 0.35  | 0.30       | 0.75  | 0.48         | -0.19 | 0.68  | -0.02 | -0.50 | -0.26 |
|                  | 3/31/86  | 17                   | 94               | 0.85 | 1.24           | 0.53 | 0.11  | 0.48       | 0.88  | 0.36         | -0.10 | 0.57  | -0.46 | -0.49 | 0.09  |
|                  | 12/31/85 | 7                    | 96               | 0.83 | 1.23           | 0.52 | 0.13  | 0.23       | 1.06  | 0.43         | -0.14 | 0.56  | -0.44 | -0.54 | 0.00  |
|                  | 9/30/85  | 15                   | 89               | 0.73 | 1.24           | 0.53 | 0.15  | 0.09       | 0.99  | 0.54         | -0.02 | 0.64  | -0.50 | -0.61 | -0.08 |
|                  | 6/30/85  | 7                    | 95               | 0.76 | 1.21           | 0.52 | 0.03  | 0.04       | 0.96  | 0.66         | 0.08  | 0.68  | -0.30 | -0.56 | -0.06 |
|                  | 3/31/85  | 10                   | 96               | 0.76 | 1.19           | 0.48 | -0.12 | 0.10       | 0.74  | 0.73         | 0.15  | 0.63  | -0.27 | -0.55 | -0.20 |
|                  | 12/31/84 | 8                    | 92               | 0.73 | 1.30           | 0.56 | 0.09  | 0.03       | 0.82  | 0.51         | 0.26  | 0.85  | -0.29 | -0.73 | -0.15 |
|                  | 9/30/84  | 13                   | 88               | 0.72 | 1.34           | 0.53 | 0.15  | -0.02      | 0.72  | 0.52         | 0.33  | 0.83  | -0.28 | -0.65 | -0.09 |
|                  | 6/30/84  | 8                    | 92               | 0.73 | 1.39           | 0.46 | 0.13  | -0.27      | 0.78  | 0.45         | 0.48  | 0.78  | -0.40 | -0.73 | -0.04 |
|                  | 3/31/84  | 12                   | 92               | 0.72 | 1.38           | 0.68 | 0.13  | 0.13       | 0.71  | 0.46         | 0.50  | 0.65  | -0.47 | -0.72 | -0.04 |
|                  | 12/31/83 | 14                   | 92               | 0.72 | 1.37           | 0.65 | 0.31  | 0.18       | 0.78  | 0.14         | 0.45  | 0.72  | -0.50 | -0.72 | 0.06  |
|                  | 9/30/83  | 22                   | 87               | 0.75 | 1.41           | 1.02 | 0.21  | 0.45       | 0.44  | 0.29         | 0.43  | 0.60  | -0.33 | -0.67 | 0.00  |
|                  | 6/30/83  | 17                   | 91               | 0.77 | 1.35           | 0.93 | 0.14  | 0.38       | 0.03  | 0.03         | 0.34  | 0.48  | -0.72 | -0.53 | -0.04 |
| BEUTEL GOODMAN   | 6/30/86  | 10                   | 90               | 0.89 | 1.20           | 0.22 | 0.54  | -0.79      | -0.67 | -0.28        | 0.23  | 0.07  | -0.41 | 0.10  | 0.28  |
|                  | 3/31/86  | 22                   | 87               | 0.85 | 1.15           | 0.37 | 0.64  | -0.66      | -0.64 | -0.33        | 0.19  | 0.23  | -0.94 | 0.06  | 0.12  |
|                  | 12/31/85 | 18                   | 89               | 0.83 | 1.22           | 0.30 | 0.58  | -0.58      | -0.61 | -0.74        | 0.63  | 0.13  | -0.88 | 0.25  | 0.35  |
|                  | 9/30/85  | 5                    | 99               | 0.81 | 1.26           | 0.47 | 0.47  | -0.40      | -0.32 | -0.52        | 0.90  | 0.12  | -0.73 | 0.09  | 0.26  |
|                  | 6/30/85  | 6                    | 94               | 0.83 | 1.24           | 0.55 | 0.22  | -0.27      | -0.26 | -0.64        | 0.96  | 0.27  | -0.55 | -0.02 | 0.37  |
|                  | 3/31/85  | 14                   | 93               | 0.83 | 1.18           | 0.38 | -0.25 | -0.38      | -0.25 | -0.71        | 1.19  | 0.14  | -0.43 | 0.06  | 0.24  |
|                  | 12/31/84 | 8                    | 94               | 0.81 | 1.19           | 0.27 | -0.15 | -0.41      | -0.42 | -0.87        | 1.14  | 0.04  | 0.21  | 0.06  | 0.63  |
|                  | 9/30/84  | 10                   | 93               | 0.81 | 1.21           | 0.31 | -0.17 | -0.10      | -0.41 | -0.81        | 1.28  | 0.10  | 0.23  | 0.08  | 0.59  |
|                  | 6/30/84  | 11                   | 92               | 0.79 | 1.18           | 0.05 | -0.29 | 0.19       | -0.44 | -0.89        | 1.32  | 0.07  | 0.02  | -0.05 | 0.58  |
|                  | 3/31/84  | 12                   | 98               | 0.79 | 1.16           | 0.16 | -0.19 | 0.27       | -0.41 | -0.85        | 1.34  | 0.01  | -0.42 | -0.04 | 0.37  |
|                  | 12/31/83 | 15                   | 95               | 0.74 | 1.08           | 0.21 | -0.08 | 0.22       | -0.42 | -0.61        | 1.18  | 0.03  | -0.72 | 0.05  | 0.24  |
|                  | 9/30/83  | 6                    | 99               | 0.75 | 1.14           | 0.35 | 0.03  | -0.17      | -0.50 | -0.75        | 1.16  | 0.04  | -0.91 | 0.05  | 0.25  |
|                  | 6/30/83  | 7                    | 79               | 0.75 | 1.07           | 0.49 | -0.00 | -0.41      | -0.43 | -0.39        | 0.92  | 0.11  | -0.15 | -0.02 | 0.34  |
| BMI CAPITAL      | 6/30/86  | 20                   | 95               | 0.90 | 1.37           | 1.10 | 0.31  | 0.23       | 0.23  | -0.14        | 1.60  | 0.95  | -0.08 | -0.84 | -0.17 |
|                  | 3/31/86  | 17                   | 97               | 0.86 | 1.33           | 0.98 | 0.43  | -0.13      | 0.37  | 0.03         | 1.48  | 0.96  | -1.06 | -0.59 | 0.08  |
|                  | 12/31/85 | 5                    | 95               | 0.85 | 1.27           | 0.74 | 0.35  | -0.30      | 0.22  | 0.13         | 1.14  | 0.59  | -0.80 | -0.40 | -0.01 |
|                  | 9/30/85  | 28                   | 28               | 0.72 | 1.40           | 0.89 | 0.32  | -0.78      | 0.48  | 0.67         | 1.47  | 0.74  | -0.42 | -0.71 | -0.25 |
|                  | 6/30/85  | 10                   | 98               | 0.75 | 1.22           | 0.80 | 0.17  | -0.52      | 0.80  | 1.06         | 1.42  | 0.63  | -0.14 | -0.56 | -0.38 |
|                  | 3/31/85  | 2                    | 99               | 0.55 | 1.26           | 0.84 | 0.10  | -0.66      | 1.13  | 1.04         | 1.49  | 0.23  | -0.20 | -0.61 | -0.33 |
|                  | 12/31/84 | 13                   | 87               | 0.74 | 1.33           | 0.78 | 0.34  | -0.20      | 1.05  | 0.56         | 1.41  | 0.11  | -0.24 | -0.57 | -0.18 |
|                  | 9/30/84  | 29                   | 82               | 0.75 | 1.33           | 0.78 | 0.17  | -0.44      | 0.83  | 0.63         | 1.17  | -0.05 | 0.01  | -0.44 | -0.23 |
|                  | 6/30/84  | 6                    | 99               | 0.79 | 1.33           | 0.63 | 0.17  | -0.37      | 0.67  | 0.32         | 1.51  | 0.22  | -0.24 | -0.48 | -0.16 |
|                  | 3/31/84  | 18                   | 95               | 0.80 | 1.32           | 0.77 | 0.20  | -0.53      | 0.72  | 0.31         | 1.86  | 0.36  | -0.40 | -0.47 | -0.14 |
|                  | 12/31/83 | 14                   | 98               | 0.81 | 1.29           | 1.02 | 0.26  | 0.26       | 0.58  | 0.08         | 1.60  | 0.48  | -0.52 | -0.49 | 0.01  |
|                  | 9/30/83  | 19                   | 99               | 0.81 | 1.34           | 1.04 | 0.20  | 0.54       | 0.64  | 0.09         | 1.66  | 0.50  | -0.34 | -0.48 | 0.01  |
|                  | 6/30/83  | 0                    | 96               | 0.80 | 1.31           | 1.14 | 0.02  | 0.55       | 0.28  | 0.10         | 1.61  | 0.43  | -0.25 | -0.41 | -0.07 |

| MANAGER<br>NAME | DATE     | QTR.<br>PORT. | EQUITY<br>ALLOC. | R2   | EQUITY<br>BETA | MVAR  | EVAR  | REL<br>RET | P/B   | 5 YR<br>EARN | SIZE  | GROW  | E/P   | YIELD | FINL  |
|-----------------|----------|---------------|------------------|------|----------------|-------|-------|------------|-------|--------------|-------|-------|-------|-------|-------|
|                 |          | T/O           |                  |      |                |       |       |            |       |              |       |       |       |       |       |
| FORSTMANN-LEFF  | 6/30/86  | 71            | 85               | 0.88 | 1.49           | 1.26  | 0.51  | 0.29       | 0.37  | 0.35         | 0.87  | 0.93  | -0.04 | -0.72 | -0.25 |
|                 | 3/31/86  | 83            | 89               | 0.88 | 1.37           | 0.91  | 0.35  | 0.16       | 0.10  | -0.35        | 0.64  | 0.59  | -0.77 | -0.39 | 0.27  |
|                 | 12/31/85 | 78            | 88               | 0.91 | 1.35           | 0.94  | 0.36  | 0.48       | 0.06  | -0.38        | 0.03  | 0.45  | -0.44 | -0.46 | 0.35  |
|                 | 9/30/85  | 108           | 70               | 0.88 | 1.27           | 0.64  | 0.24  | 0.13       | 0.10  | -0.42        | 0.00  | 0.25  | -0.48 | -0.43 | 0.25  |
|                 | 6/30/85  | 27            | 77               | 0.89 | 1.22           | 0.83  | 0.17  | 0.16       | 0.15  | 0.08         | -0.20 | 0.35  | -0.07 | -0.33 | 0.09  |
|                 | 3/31/85  | 55            | 69               | 0.89 | 1.19           | 0.67  | 0.07  | -0.15      | -0.04 | 0.13         | -0.03 | 0.16  | 0.14  | -0.18 | 0.02  |
|                 | 12/31/84 | 12            | 87               | 0.84 | 1.22           | 0.39  | -0.06 | -0.14      | -0.07 | -0.44        | 0.39  | -0.06 | -0.01 | -0.10 | 0.08  |
|                 | 9/30/84  | 40            | 83               | 0.86 | 1.26           | 0.49  | 0.03  | -0.20      | -0.25 | -0.43        | 0.25  | -0.17 | -0.23 | -0.09 | 0.14  |
|                 | 6/30/84  | 31            | 54               | 0.81 | 1.26           | 0.14  | 0.01  | -0.27      | -0.21 | -0.22        | 0.16  | 0.07  | -0.08 | -0.16 | 0.15  |
|                 | 3/31/84  | 34            | 71               | 0.82 | 1.17           | 0.13  | -0.04 | -0.11      | -0.14 | -0.21        | 0.17  | 0.05  | -0.18 | -0.10 | 0.15  |
|                 | 12/31/83 | 41            | 81               | 0.70 | 1.10           | 0.02  | -0.11 | -0.25      | -0.03 | -0.25        | -0.12 | -0.03 | -0.15 | -0.07 | 0.05  |
|                 | 9/30/83  | 46            | 83               | 0.72 | 1.14           | 0.10  | -0.12 | -0.09      | 0.09  | -0.34        | 0.03  | 0.19  | -0.45 | -0.21 | -0.12 |
|                 | 6/30/83  | 52            | 93               | 0.70 | 1.08           | 0.34  | -0.22 | -0.01      | 0.07  | -0.04        | 0.03  | 0.11  | -0.17 | -0.22 | -0.17 |
| HELLMAN JORDAN  | 6/30/86  | 15            | 99               | 0.89 | 1.34           | 0.80  | 0.15  | 0.12       | 0.16  | -0.29        | -0.07 | 0.95  | -0.02 | -0.57 | 0.00  |
|                 | 3/31/86  | 35            | 97               | 0.88 | 1.26           | 0.79  | 0.34  | 0.26       | 0.06  | 0.19         | -0.16 | 0.83  | -0.71 | -0.48 | 0.09  |
|                 | 12/31/85 | 36            | 95               | 0.93 | 1.14           | 0.32  | 0.23  | -0.13      | -0.17 | 0.04         | -0.13 | 0.39  | -0.22 | -0.22 | 0.25  |
|                 | 9/30/85  | 36            | 96               | 0.89 | 1.07           | 0.26  | 0.09  | -0.49      | -0.29 | -0.06        | -0.54 | 0.03  | 0.02  | 0.00  | 0.27  |
|                 | 6/30/85  | 38            | 89               | 0.89 | 1.10           | 0.29  | -0.04 | -0.27      | -0.21 | -0.12        | -0.47 | -0.07 | 0.18  | 0.15  | 0.07  |
|                 | 3/31/85  | 52            | 81               | 0.88 | 1.13           | 0.28  | -0.12 | -0.20      | -0.28 | -0.07        | -0.24 | 0.00  | -0.07 | 0.06  | 0.30  |
|                 | 12/31/84 | 36            | 82               | 0.86 | 1.21           | 0.59  | 0.25  | -0.36      | -0.35 | -0.36        | 0.15  | 0.12  | 0.14  | -0.09 | 0.30  |
|                 | 9/30/84  | 10            | 80               | 0.84 | 1.22           | 0.64  | 0.38  | -0.17      | -0.26 | -0.45        | 0.22  | 0.16  | -0.08 | 0.05  | 0.33  |
|                 | 6/30/84  | 34            | 61               | 0.87 | 1.25           | 0.28  | 0.21  | -0.34      | -0.29 | -0.33        | 0.10  | 0.10  | -0.10 | 0.16  | 0.52  |
|                 | 3/31/84  | 30            | 58               | 0.87 | 1.16           | 0.25  | 0.15  | 0.03       | -0.41 | -0.22        | 0.01  | 0.19  | -0.05 | 0.25  | 0.30  |
|                 | 12/31/83 | 43            | 51               | 0.74 | 1.23           | 0.16  | 0.09  | -0.19      | -0.23 | -0.26        | 0.25  | 0.18  | 0.07  | 0.45  | 0.26  |
|                 | 9/30/83  | 57            | 47               | 0.77 | 1.34           | -0.12 | 0.23  | 0.23       | -0.11 | -0.36        | 0.35  | 0.24  | -0.23 | 0.05  | 0.15  |
|                 | 6/30/83  | 38            | 56               | 0.77 | 1.30           | 0.79  | 0.20  | 0.63       | 0.16  | -0.36        | -0.27 | 0.42  | -0.94 | -0.44 | 0.24  |
| IDS ADVISORY    | 6/30/86  | 28            | 91               | 0.93 | 1.19           | 0.54  | 0.17  | 0.54       | 0.46  | 0.25         | 0.09  | 0.22  | 0.06  | -0.23 | -0.08 |
|                 | 3/31/86  | 16            | 92               | 0.91 | 1.20           | 0.53  | 0.21  | 0.44       | 0.50  | 0.34         | 0.11  | 0.29  | -0.11 | -0.22 | 0.11  |
|                 | 12/31/85 | 19            | 93               | 0.88 | 1.18           | 0.55  | 0.30  | 0.19       | 0.55  | 0.35         | 0.24  | 0.28  | -0.12 | -0.21 | 0.16  |
|                 | 9/30/85  | 21            | 98               | 0.86 | 1.15           | 0.37  | 0.28  | -0.02      | 0.30  | 0.34         | 0.07  | 0.22  | -0.17 | -0.15 | 0.06  |
|                 | 6/30/85  | 13            | 98               | 0.87 | 1.11           | 0.37  | 0.21  | 0.17       | 0.16  | 0.41         | -0.02 | 0.16  | 0.00  | 0.04  | 0.03  |
|                 | 3/31/85  | 39            | 87               | 0.85 | 1.08           | 0.24  | -0.06 | 0.10       | 0.07  | 0.43         | -0.09 | -0.06 | 0.18  | 0.18  | 0.10  |
|                 | 12/31/84 | 21            | 89               | 0.83 | 1.05           | 0.04  | -0.10 | 0.16       | 0.12  | 0.23         | -0.07 | -0.07 | 0.11  | 0.25  | 0.07  |
|                 | 9/30/84  | 40            | 92               | 0.89 | 1.08           | 0.17  | -0.12 | 0.17       | 0.28  | 0.31         | 0.08  | -0.04 | 0.19  | 0.23  | 0.03  |
|                 | 6/30/84  | 42            | 87               | 0.85 | 1.04           | -0.08 | -0.15 | 0.28       | 0.54  | 0.31         | 0.28  | -0.11 | 0.18  | 0.21  | 0.17  |
|                 | 3/31/84  | 41            | 82               | 0.80 | 1.09           | 0.11  | -0.01 | 0.23       | 0.15  | 0.19         | 0.17  | -0.13 | 0.28  | 0.14  | 0.04  |
|                 | 12/31/83 | 45            | 89               | 0.86 | 1.17           | 0.24  | 0.23  | 0.27       | 0.15  | -0.15        | 0.43  | 0.22  | -0.34 | -0.13 | 0.14  |
|                 | 9/30/83  | 79            | 86               | 0.86 | 1.24           | 0.64  | 0.20  | 0.29       | 0.26  | -0.06        | 0.60  | 0.43  | -0.46 | -0.40 | -0.10 |
|                 | 6/30/83  | 42            | 94               | 0.81 | 1.30           | -0.92 | -0.08 | -0.26      | 0.17  | -0.01        | 0.16  | 0.48  | -0.51 | -0.37 | -0.11 |

| MANAGER<br>NAME     | DATE     | QTR.<br>PORT.<br>T/O | EQUITY<br>ALLOC. | R2   | EQUITY<br>BETA | MVAR | EVAR  | REL<br>RET | P/B   | 5 YR<br>EARN | SIZE  | GROW  | E/P   | YIELD | FINL  |
|---------------------|----------|----------------------|------------------|------|----------------|------|-------|------------|-------|--------------|-------|-------|-------|-------|-------|
| INVESTMENT ADVISERS | 6/30/86  | 22                   | 82               | 0.94 | 1.17           | 0.55 | -0.04 | 0.40       | 0.28  | 0.06         | -0.03 | 0.28  | -0.16 | -0.44 | -0.10 |
|                     | 3/31/86  | 13                   | 84               | 0.95 | 1.12           | 0.48 | 0.10  | 0.07       | 0.02  | -0.03        | -0.11 | 0.40  | -0.57 | -0.29 | 0.02  |
|                     | 12/31/85 | 32                   | 83               | 0.93 | 1.14           | 0.39 | 0.18  | -0.22      | 0.04  | -0.01        | -0.12 | 0.29  | -0.27 | -0.24 | 0.02  |
|                     | 9/30/85  | 4                    | 95               | 0.92 | 1.15           | 0.45 | 0.18  | -0.40      | -0.12 | 0.07         | -0.02 | 0.28  | 0.02  | -0.25 | 0.03  |
|                     | 6/30/85  | 10                   | 90               | 0.90 | 1.17           | 0.60 | 0.10  | -0.33      | -0.26 | 0.14         | -0.17 | 0.12  | 0.18  | -0.19 | -0.08 |
|                     | 3/31/85  | 28                   | 89               | 0.91 | 1.17           | 0.51 | 0.05  | -0.33      | -0.26 | 0.16         | 0.08  | -0.02 | 0.43  | -0.11 | -0.06 |
|                     | 12/31/84 | 9                    | 97               | 0.88 | 1.19           | 0.39 | -0.12 | -0.20      | -0.34 | -0.15        | 0.09  | -0.08 | 0.43  | -0.01 | 0.04  |
|                     | 9/30/84  | 21                   | 88               | 0.86 | 1.21           | 0.40 | -0.13 | -0.21      | -0.23 | -0.00        | 0.12  | 0.02  | 0.45  | -0.02 | 0.06  |
|                     | 6/30/84  | 8                    | 98               | 0.89 | 1.21           | 0.11 | -0.23 | -0.28      | -0.22 | 0.09         | 0.08  | 0.02  | 0.48  | 0.00  | 0.21  |
|                     | 3/31/84  | 21                   | 92               | 0.89 | 1.17           | 0.05 | -0.22 | -0.36      | -0.17 | 0.14         | 0.14  | 0.07  | 0.25  | -0.14 | 0.22  |
|                     | 12/31/83 | 16                   | 89               | 0.86 | 1.13           | 0.06 | -0.15 | -0.30      | -0.16 | -0.05        | 0.01  | 0.15  | -0.09 | -0.17 | 0.17  |
|                     | 9/30/83  | 8                    | 89               | 0.87 | 1.13           | 0.16 | -0.15 | -0.20      | -0.03 | -0.03        | 0.03  | 0.19  | 0.01  | -0.20 | 0.09  |
|                     | 6/30/83  | 7                    | 78               | 0.89 | 1.08           | 0.28 | -0.16 | -0.12      | 0.01  | -0.13        | -0.10 | 0.17  | -0.38 | -0.09 | -0.01 |
|                     |          |                      |                  |      |                |      |       |            |       |              |       |       |       |       |       |
| LIEBER & COMPANY    | 6/30/86  | 7                    | 99               | 0.90 | 1.32           | 0.59 | 0.12  | 0.12       | 0.05  | 0.15         | 1.50  | 0.55  | 0.14  | -0.36 | -0.33 |
|                     | 3/31/86  | 14                   | 99               | 0.86 | 1.31           | 0.63 | 0.02  | -0.06      | 0.03  | 0.16         | 1.49  | 0.48  | 0.00  | -0.38 | -0.27 |
|                     | 12/31/85 | 12                   | 97               | 0.85 | 1.30           | 0.53 | 0.07  | -0.01      | 0.04  | 0.27         | 1.56  | 0.48  | 0.02  | -0.39 | -0.21 |
|                     | 9/30/85  | 6                    | 98               | 0.80 | 1.30           | 0.54 | 0.12  | -0.04      | 0.03  | 0.35         | 1.64  | 0.50  | -0.10 | -0.40 | -0.31 |
|                     | 6/30/85  | 14                   | 96               | 0.80 | 1.27           | 0.55 | 0.04  | -0.17      | 0.03  | 0.40         | 1.83  | 0.36  | -0.05 | -0.35 | -0.43 |
|                     | 3/31/85  | 19                   | 99               | 0.81 | 1.24           | 0.65 | 0.03  | 0.04       | 0.09  | 0.35         | 1.79  | 0.17  | -0.02 | -0.35 | -0.21 |
|                     | 12/31/84 | 14                   | 85               | 0.79 | 1.34           | 0.78 | 0.12  | -0.25      | 0.03  | 0.39         | 1.94  | 0.48  | -0.05 | -0.47 | -0.17 |
|                     | 9/30/84  | 17                   | 87               | 0.80 | 1.31           | 0.74 | 0.07  | -0.28      | 0.05  | 0.49         | 1.99  | 0.51  | 0.01  | -0.48 | -0.18 |
|                     | 6/30/84  | 10                   | 95               | 0.81 | 1.33           | 0.76 | 0.05  | -0.37      | 0.13  | 0.52         | 1.99  | 0.42  | -0.02 | -0.48 | -0.10 |
|                     | 3/31/84  | 0                    | 93               | 0.85 | 1.37           | 0.65 | 0.00  | -0.16      | 0.18  | 0.57         | 1.99  | 0.45  | 0.03  | -0.46 | -0.12 |
|                     | 12/31/83 | 9                    | 00               | 0.83 | 1.24           | 0.63 | -0.01 | 0.30       | -0.06 | 0.28         | 1.93  | 0.29  | 0.12  | -0.38 | -0.07 |
|                     | 9/30/83  | 9                    | 97               | 0.83 | 1.30           | 0.85 | -0.03 | 0.47       | -0.09 | 0.17         | 1.92  | 0.22  | 0.18  | -0.29 | -0.10 |
|                     | 6/30/83  | 2                    | 92               | 0.84 | 1.26           | 0.90 | -0.11 | 0.43       | -0.11 | -0.00        | 1.94  | 0.18  | 0.04  | -0.27 | -0.20 |
|                     |          |                      |                  |      |                |      |       |            |       |              |       |       |       |       |       |
|                     |          |                      |                  |      |                |      |       |            |       |              |       |       |       |       |       |
| PEREGRINE CAPITAL   | 6/30/86  | 37                   | 90               | 0.79 | 1.18           | 0.09 | 0.27  | -1.28      | -0.75 | -0.52        | 0.62  | 0.17  | -0.06 | 0.56  | 0.22  |
|                     | 3/31/86  | 47                   | 84               | 0.76 | 1.19           | 0.19 | 0.16  | -1.53      | -0.73 | -0.41        | 0.73  | 0.20  | -0.31 | 0.51  | 0.19  |
|                     | 12/31/85 | 53                   | 82               | 0.81 | 1.21           | 0.26 | 0.18  | -1.31      | -0.77 | -0.55        | 0.88  | 0.10  | -0.54 | 0.33  | 0.27  |
|                     | 9/30/85  | 9                    | 80               | 0.82 | 1.22           | 0.53 | 0.37  | -1.26      | -0.63 | -0.36        | 0.36  | 0.15  | -0.33 | 0.22  | 0.24  |
|                     | 6/30/85  | 58                   | 75               | 0.78 | 1.48           | 0.25 | 0.00  | -1.46      | -0.60 | -0.45        | 1.06  | 0.07  | -0.34 | 0.27  | -0.13 |
|                     | 3/31/85  | 49                   | 89               | 0.79 | 1.41           | 0.32 | 0.07  | -1.28      | -0.53 | -0.48        | 1.01  | -0.07 | -0.09 | 0.27  | 0.02  |
|                     | 12/31/84 | 37                   | 87               | 0.81 | 1.37           | 1.11 | 0.39  | -0.05      | 0.72  | 0.27         | 1.88  | 0.76  | -0.79 | -0.96 | -0.11 |
|                     | 9/30/84  | 61                   | 97               | 0.81 | 1.36           | 1.10 | 0.43  | 0.10       | 0.89  | 0.22         | 1.70  | 0.83  | -0.82 | -0.95 | -0.17 |
|                     | 6/30/84  | 26                   | 89               | 0.83 | 1.39           | 0.77 | 0.37  | -0.59      | 0.49  | 0.23         | 1.45  | 0.71  | -0.55 | -0.77 | -0.09 |
|                     | 3/31/84  | 66                   | 87               | 0.82 | 1.28           | 0.76 | 0.26  | -0.30      | 0.82  | 0.31         | 1.29  | 0.77  | -0.59 | -0.67 | -0.07 |
|                     | 12/31/83 | 92                   | 83               | 0.87 | 1.23           | 0.66 | 0.16  | 0.12       | 0.41  | 0.12         | 1.32  | 0.74  | -0.59 | -0.69 | -0.09 |
|                     | 9/30/83  | 56                   | 85               | 0.87 | 1.27           | 0.96 | 0.09  | 0.85       | 0.85  | 0.09         | 1.22  | 0.77  | -0.83 | -0.75 | -0.22 |
|                     | 6/30/83  | 95                   | 80               | 0.88 | 1.23           | 0.70 | -0.11 | 0.45       | 0.33  | 0.06         | 1.05  | 0.46  | -0.42 | -0.40 | -0.13 |
|                     |          |                      |                  |      |                |      |       |            |       |              |       |       |       |       |       |
|                     |          |                      |                  |      |                |      |       |            |       |              |       |       |       |       |       |

| MANAGER<br>NAME | DATE     | QTR.<br>PORT.<br>T/O | EQUITY<br>ALLOC. | R2   | EQUITY<br>BETA | MVAR | EVAR  | REL<br>RET | P/B   | 5 YR<br>EARN | SIZE | GROW  | E/P   | YIELD | FINL  |
|-----------------|----------|----------------------|------------------|------|----------------|------|-------|------------|-------|--------------|------|-------|-------|-------|-------|
| WADDELL & REED  | 6/30/86  | 35                   | 79               | 0.93 | 1.28           | 0.74 | 0.08  | 0.28       | 0.02  | -0.04        | 0.30 | 0.23  | -0.02 | -0.35 | -0.02 |
|                 | 3/31/86  | 20                   | 88               | 0.93 | 1.29           | 0.87 | 0.42  | 0.22       | -0.07 | -0.19        | 0.36 | 0.11  | -0.51 | -0.16 | 0.11  |
|                 | 12/31/85 | 36                   | 75               | 0.91 | 1.27           | 0.76 | 0.36  | 0.10       | -0.12 | 0.02         | 0.48 | 0.22  | -0.02 | -0.20 | 0.15  |
|                 | 9/30/85  | 41                   | 50               | 0.85 | 1.24           | 0.53 | 0.37  | -0.02      | -0.24 | -0.13        | 0.36 | 0.15  | 0.17  | -0.09 | 0.24  |
|                 | 6/30/85  | 34                   | 74               | 0.79 | 1.19           | 0.55 | 0.21  | 0.14       | -0.31 | 0.17         | 0.26 | -0.17 | 0.41  | 0.11  | 0.27  |
|                 | 3/31/85  | 51                   | 78               | 0.82 | 1.26           | 0.62 | 0.23  | -0.12      | -0.39 | 0.09         | 0.49 | -0.09 | 0.43  | 0.01  | 0.34  |
|                 | 12/31/84 | 39                   | 52               | 0.75 | 1.29           | 0.78 | 0.10  | 0.00       | -0.05 | 0.05         | 0.54 | 0.27  | 0.13  | -0.30 | 0.12  |
|                 | 9/30/84  | 76                   | 35               | 0.76 | 1.27           | 0.53 | 0.07  | -0.01      | -0.04 | 0.08         | 0.35 | 0.22  | 0.21  | -0.20 | 0.02  |
|                 | 6/30/84  | 81                   | 21               | 0.52 | 1.56           | 0.71 | 0.22  | -0.74      | -0.05 | -0.16        | 0.89 | -0.03 | 0.72  | -0.60 | 0.24  |
|                 | 3/31/84  | 35                   | 31               | 0.74 | 1.31           | 0.43 | 0.03  | -0.13      | -0.12 | -0.22        | 0.61 | -0.08 | 0.28  | -0.35 | 0.23  |
|                 | 12/31/83 | 103                  | 31               | 0.72 | 1.36           | 0.86 | 0.03  | -0.49      | -0.23 | -1.07        | 1.42 | 0.09  | -0.24 | -0.46 | -0.14 |
|                 | 9/30/83  | 9                    | 73               | 0.73 | 1.41           | 1.31 | -0.06 | 0.75       | 0.58  | -0.24        | 1.98 | 0.56  | -0.56 | -0.69 | -0.35 |
|                 | 6/30/83  | 38                   | 75               | 0.74 | 1.48           | 1.51 | 0.00  | 1.11       | 0.49  | -0.03        | 1.86 | 0.71  | -0.53 | -0.54 | -0.05 |

# EXTERNAL EQUITY MANAGERS

## SECTOR WEIGHTING HISTORICAL PROFILE

### EQUITY SECTOR WEIGHTS

| MANAGER<br>NAME    | DATE     | TOTAL<br>PORTFOLIO<br>MARKET<br>VALUE | CAP<br>GDS | CONS<br>DUR | CONS<br>NDUR | ENER | FINL | MAT<br>&<br>SERV | TECH | TRAN | UTIL |
|--------------------|----------|---------------------------------------|------------|-------------|--------------|------|------|------------------|------|------|------|
| AVG. EXT. MANAGERS | 6/30/86  | ---                                   | 3.7        | 5.5         | 30.7         | 2.4  | 21.0 | 13.3             | 14.6 | 5.3  | 3.3  |
|                    | 3/31/86  | ---                                   | 2.8        | 5.5         | 25.6         | 5.1  | 20.7 | 13.4             | 14.6 | 6.4  | 5.8  |
|                    | 12/31/85 | ---                                   | 3.0        | 6.2         | 24.1         | 7.4  | 19.1 | 13.0             | 14.5 | 7.4  | 5.3  |
|                    | 9/30/85  | ---                                   | 2.8        | 6.6         | 27.5         | 4.2  | 18.4 | 12.7             | 16.8 | 7.6  | 3.4  |
|                    | 6/30/85  | ---                                   | 2.2        | 6.6         | 29.3         | 3.1  | 20.0 | 10.9             | 17.3 | 7.6  | 3.0  |
|                    | 3/31/85  | ---                                   | 2.4        | 6.8         | 26.4         | 3.6  | 17.5 | 11.4             | 22.2 | 6.8  | 3.0  |
|                    | 12/31/84 | ---                                   | 2.4        | 8.0         | 26.4         | 2.3  | 15.5 | 11.2             | 23.9 | 6.6  | 4.0  |
|                    | 9/30/84  | ---                                   | 2.9        | 7.9         | 27.9         | 3.8  | 14.1 | 9.6              | 26.3 | 4.8  | 2.7  |
|                    | 6/30/84  | ---                                   | 4.0        | 7.6         | 28.6         | 4.2  | 12.5 | 10.9             | 23.4 | 5.4  | 3.4  |
|                    | 3/31/84  | ---                                   | 5.2        | 7.6         | 24.0         | 5.7  | 13.2 | 13.3             | 22.7 | 5.1  | 3.1  |
|                    | 12/31/83 | ---                                   | 6.0        | 6.4         | 23.5         | 3.0  | 12.2 | 15.1             | 24.0 | 6.3  | 3.5  |
|                    | 9/30/83  | ---                                   | 3.6        | 5.9         | 28.9         | 3.1  | 12.8 | 13.5             | 24.2 | 5.7  | 2.4  |
|                    | 6/30/83  | ---                                   | 3.7        | 6.1         | 30.2         | 3.6  | 15.1 | 11.7             | 21.2 | 5.8  | 2.5  |
|                    | 3/31/83  | ---                                   | 2.8        | 4.3         | 30.6         | 3.6  | 15.2 | 11.4             | 23.5 | 4.9  | 3.8  |
| FRED ALGER         | 6/30/86  | 112,733,180                           | 1.9        | 7.5         | 52.9         | ---  | 11.6 | 6.2              | 15.8 | 4.0  | ---  |
|                    | 3/31/86  | 103,958,164                           | 1.7        | 8.2         | 46.5         | ---  | 17.4 | 5.9              | 18.7 | 1.6  | ---  |
|                    | 12/31/85 | 86,744,768                            | 1.7        | 11.7        | 38.7         | ---  | 18.2 | 3.1              | 17.0 | 6.6  | 2.9  |
|                    | 9/30/85  | 73,092,544                            | ---        | 10.3        | 44.4         | 2.4  | 14.1 | 3.1              | 14.5 | 8.4  | 2.8  |
|                    | 6/30/85  | 63,144,042                            | ---        | 17.6        | 36.0         | 1.4  | 9.3  | 3.5              | 15.7 | 16.6 | ---  |
|                    | 3/31/85  | 57,886,615                            | 5.2        | 14.3        | 28.8         | 3.7  | 7.8  | 1.8              | 24.8 | 13.6 | ---  |
|                    | 12/31/84 | 54,018,782                            | 5.2        | 16.1        | 36.1         | ---  | 4.1  | 7.9              | 25.2 | 5.4  | ---  |
|                    | 9/30/84  | 53,908,974                            | 9.3        | 15.4        | 33.7         | ---  | 0.8  | 11.4             | 23.5 | 6.0  | ---  |
|                    | 6/30/84  | 49,936,760                            | 14.0       | 8.0         | 30.7         | ---  | 3.8  | 11.5             | 29.5 | 2.6  | ---  |
|                    | 3/31/84  | 51,737,228                            | 13.3       | 4.3         | 28.8         | ---  | 3.4  | 18.3             | 31.9 | ---  | ---  |
|                    | 12/31/83 | 55,644,200                            | 13.2       | 6.6         | 21.7         | ---  | 6.4  | 18.1             | 33.9 | ---  | ---  |
|                    | 9/30/83  | 56,169,879                            | 5.7        | 6.8         | 26.9         | ---  | 8.4  | 23.3             | 29.0 | ---  | ---  |
|                    | 6/30/83  | 58,138,999                            | 4.9        | 8.5         | 35.0         | 3.5  | 8.2  | 18.0             | 21.9 | ---  | ---  |
|                    | 3/31/83  | 51,420,548                            | 1.4        | 7.5         | 37.0         | ---  | 9.0  | 22.0             | 23.1 | ---  | ---  |

## EQUITY SECTOR WEIGHTS

| MANAGER<br>NAME  | DATE     | TOTAL<br>PORTFOLIO<br>MARKET<br>VALUE | CAP<br>GDS | CONS<br>DUR | CONS<br>NDUR | ENER | FINL | MAT<br>&<br>SERV | TECH | TRAN | UTIL |
|------------------|----------|---------------------------------------|------------|-------------|--------------|------|------|------------------|------|------|------|
| ALLIANCE CAPITAL | 6/30/86  | 110,202,737                           | 2.3        | 3.6         | 49.1         | ---  | 28.1 | ---              | 9.8  | 7.1  | ---  |
|                  | 3/31/86  | 104,093,860                           | 2.4        | 4.5         | 46.6         | ---  | 30.2 | 2.5              | 8.2  | 5.6  | ---  |
|                  | 12/31/85 | 87,252,311                            | ---        | 4.6         | 45.6         | ---  | 29.2 | ---              | 14.3 | 6.3  | ---  |
|                  | 9/30/85  | 74,094,296                            | ---        | 7.5         | 52.0         | ---  | 21.8 | ---              | 11.1 | 7.6  | ---  |
|                  | 6/30/85  | 65,072,829                            | ---        | 8.7         | 49.9         | 2.2  | 14.3 | ---              | 12.7 | 8.9  | 3.3  |
|                  | 3/31/85  | 58,738,405                            | ---        | 9.9         | 47.9         | 2.4  | 12.6 | ---              | 15.8 | 8.0  | 3.4  |
|                  | 12/31/84 | 52,332,767                            | ---        | 8.7         | 48.8         | ---  | 10.2 | ---              | 20.6 | 8.1  | 3.7  |
|                  | 9/30/84  | 51,653,441                            | ---        | 8.8         | 49.7         | ---  | 9.6  | ---              | 19.3 | 9.2  | 3.5  |
|                  | 6/30/84  | 48,457,996                            | ---        | 8.1         | 51.6         | ---  | 6.9  | ---              | 23.5 | 9.9  | ---  |
|                  | 3/31/84  | 47,427,119                            | ---        | 8.3         | 48.0         | 2.7  | 5.6  | ---              | 25.1 | 10.4 | ---  |
|                  | 12/31/83 | 52,725,699                            | 0.8        | 7.5         | 45.3         | ---  | 6.8  | 2.4              | 24.2 | 13.1 | ---  |
|                  | 9/30/83  | 52,945,082                            | 2.8        | 5.4         | 45.9         | ---  | 9.2  | ---              | 24.6 | 12.1 | ---  |
|                  | 6/30/83  | 57,538,354                            | 2.2        | 4.7         | 42.3         | ---  | 8.2  | 7.5              | 22.7 | 12.4 | ---  |
|                  | 3/31/83  | 51,037,067                            | ---        | 3.5         | 49.9         | 2.7  | 6.7  | 3.6              | 23.5 | 10.0 | ---  |
| BEUTEL GOODMAN   | 6/30/86  | 90,128,302                            | 3.4        | 5.3         | 9.3          | 4.0  | 20.3 | 23.3             | 19.0 | 11.0 | 4.4  |
|                  | 3/31/86  | 90,652,277                            | 4.2        | 4.2         | 9.2          | 3.8  | 18.6 | 22.9             | 20.9 | 11.5 | 4.6  |
|                  | 12/31/85 | 79,304,850                            | 3.9        | 3.8         | 9.0          | 2.8  | 28.2 | 22.1             | 18.2 | 12.0 | ---  |
|                  | 9/30/85  | 70,821,795                            | 2.7        | 3.7         | 15.7         | ---  | 26.0 | 24.0             | 16.6 | 11.3 | ---  |
|                  | 6/30/85  | 75,450,430                            | 2.8        | ---         | 12.8         | ---  | 30.4 | 23.1             | 19.1 | 11.7 | ---  |
|                  | 3/31/85  | 70,177,266                            | 2.1        | ---         | 19.2         | ---  | 28.4 | 33.1             | 13.6 | 3.6  | ---  |
|                  | 12/31/84 | 63,402,269                            | 8.8        | ---         | 13.8         | ---  | 32.2 | 33.8             | 11.4 | ---  | ---  |
|                  | 9/30/84  | 60,461,938                            | 6.5        | ---         | 14.0         | ---  | 37.1 | 35.6             | 6.8  | ---  | ---  |
|                  | 6/30/84  | 55,295,358                            | 9.3        | ---         | 21.1         | ---  | 30.4 | 32.4             | 6.7  | ---  | ---  |
|                  | 3/31/84  | 56,896,258                            | 8.9        | ---         | 18.6         | ---  | 27.2 | 39.3             | 6.0  | ---  | ---  |
|                  | 12/31/83 | 57,233,781                            | 9.8        | ---         | 20.2         | ---  | 11.2 | 46.2             | 5.4  | 7.2  | ---  |
|                  | 9/30/83  | 55,416,939                            | 8.8        | ---         | 22.0         | ---  | 13.1 | 43.5             | 4.7  | 8.0  | ---  |
|                  | 6/30/83  | 54,835,808                            | 11.0       | ---         | 18.5         | ---  | 17.4 | 42.4             | ---  | 10.6 | ---  |
|                  | 3/31/83  | 50,442,256                            | ---        | ---         | 15.7         | ---  | 15.4 | 52.1             | ---  | 16.8 | ---  |
| BMI CAPITAL      | 6/30/86  | 68,576,473                            | 8.5        | 6.4         | 43.4         | ---  | 19.8 | 2.9              | 19.1 | ---  | ---  |
|                  | 3/31/86  | 64,120,062                            | 6.8        | 7.7         | 38.4         | 4.6  | 20.9 | 3.6              | 18.0 | ---  | ---  |
|                  | 12/31/85 | 54,452,525                            | 9.9        | 4.0         | 32.2         | 14.6 | 19.3 | 4.3              | 12.3 | 3.4  | ---  |
|                  | 9/30/85  | 49,026,413                            | 10.4       | 3.4         | 37.8         | ---  | 6.0  | 4.0              | 28.9 | 9.6  | ---  |
|                  | 6/30/85  | 9,759,880                             | 5.4        | 9.7         | 34.9         | ---  | 5.7  | 4.0              | 30.3 | 9.9  | ---  |
|                  | 3/31/85  | 9,851,108                             | 7.1        | 9.0         | 37.6         | ---  | ---  | 6.8              | 35.9 | 3.7  | ---  |
|                  | 12/31/84 | 9,015,974                             | 6.5        | 5.8         | 40.0         | ---  | ---  | 7.4              | 35.9 | 4.4  | ---  |
|                  | 9/30/84  | 8,820,740                             | 4.6        | 13.4        | 42.6         | ---  | ---  | 4.1              | 31.3 | 3.9  | ---  |
|                  | 6/30/84  | 8,533,642                             | 3.2        | 16.4        | 37.4         | ---  | ---  | 11.5             | 31.5 | ---  | ---  |
|                  | 3/31/84  | 8,366,038                             | 4.3        | 12.7        | 39.3         | ---  | ---  | 17.8             | 25.9 | ---  | ---  |
|                  | 12/31/83 | 9,784,767                             | 7.4        | 12.1        | 28.4         | ---  | 6.6  | 19.0             | 26.4 | ---  | ---  |
|                  | 9/30/83  | 10,420,827                            | 7.6        | 11.2        | 37.1         | ---  | 6.4  | 18.6             | 19.2 | ---  | ---  |
|                  | 6/30/83  | 11,285,353                            | 7.9        | 12.7        | 44.2         | ---  | 9.8  | 15.9             | 9.5  | ---  | ---  |
|                  | 3/31/83  | 10,081,983                            | 10.6       | 8.1         | 35.3         | ---  | 12.3 | 22.0             | 11.8 | ---  | ---  |



## EQUITY SECTOR WEIGHTS

| MANAGER<br>NAME     | DATE     | TOTAL<br>PORTFOLIO<br>MARKET<br>VALUE | CAP<br>GDS | CONS<br>DUR | CONS<br>NDUR | ENER | FINL | MAT<br>&<br>SERV | TECH | TRAN | UTIL |
|---------------------|----------|---------------------------------------|------------|-------------|--------------|------|------|------------------|------|------|------|
| FORSTMANN-LEFF      | 6/30/86  | 95,703,997                            | 2.6        | 6.6         | 25.2         | ---  | 22.4 | 13.2             | 23.7 | 5.2  | 1.1  |
|                     | 3/31/86  | 87,886,861                            | 1.3        | 4.0         | 18.1         | ---  | 34.7 | 17.4             | 10.1 | 8.1  | 6.3  |
|                     | 12/31/85 | 73,996,082                            | 1.4        | 7.9         | 25.7         | 2.1  | 25.2 | 22.1             | 8.9  | 6.7  | ---  |
|                     | 9/30/85  | 63,626,068                            | ---        | 9.7         | 41.6         | 6.6  | 20.9 | 6.4              | 12.1 | 2.8  | ---  |
|                     | 6/30/85  | 66,383,632                            | 1.1        | 7.4         | 40.1         | ---  | 25.1 | 10.3             | 11.0 | 5.1  | ---  |
|                     | 3/31/85  | 61,436,421                            | 2.5        | 9.8         | 25.7         | ---  | 25.5 | 14.7             | 17.4 | 4.4  | ---  |
|                     | 12/31/84 | 55,396,358                            | 1.4        | 10.5        | 30.9         | ---  | 23.3 | 15.1             | 13.3 | 5.5  | ---  |
|                     | 9/30/84  | 53,550,733                            | 4.5        | 4.6         | 32.5         | ---  | 21.5 | 14.5             | 18.9 | 3.6  | ---  |
|                     | 6/30/84  | 51,218,131                            | 3.7        | 3.6         | 40.2         | ---  | 7.0  | 10.3             | 24.3 | 7.2  | 3.7  |
|                     | 3/31/84  | 52,083,507                            | 7.6        | 3.0         | 37.0         | ---  | 6.0  | 14.5             | 23.1 | 6.0  | 2.8  |
|                     | 12/31/83 | 55,421,154                            | 5.7        | 13.6        | 35.5         | 5.8  | 3.9  | 8.4              | 18.7 | 5.3  | 3.1  |
|                     | 9/30/83  | 55,775,736                            | ---        | 14.6        | 52.3         | 3.3  | 4.5  | 5.3              | 15.1 | 4.8  | ---  |
|                     | 6/30/83  | 56,471,479                            | ---        | 12.7        | 61.4         | ---  | 2.7  | 7.2              | 11.7 | 4.3  | ---  |
|                     | 3/31/83  | 51,390,160                            | 2.1        | 4.7         | 50.7         | 5.9  | 4.7  | 10.3             | 17.4 | 4.2  | ---  |
| HELLMAN JORDAN      | 6/30/86  | 83,097,338                            | ---        | 9.3         | 24.8         | ---  | 32.7 | 10.7             | 20.1 | 2.4  | ---  |
|                     | 3/31/86  | 82,829,526                            | ---        | 12.1        | 22.3         | 2.2  | 29.8 | 13.6             | 18.4 | 1.7  | ---  |
|                     | 12/31/85 | 71,819,754                            | ---        | 8.8         | 20.1         | 9.4  | 23.5 | 18.7             | 15.2 | 2.9  | 1.4  |
|                     | 9/30/85  | 60,551,842                            | ---        | 5.6         | 17.1         | 6.9  | 26.9 | 17.2             | 13.8 | 4.7  | 7.7  |
|                     | 6/30/85  | 64,181,384                            | 3.9        | 3.5         | 23.0         | 7.0  | 26.0 | 15.5             | 7.5  | 3.5  | 10.0 |
|                     | 3/31/85  | 59,732,797                            | 1.3        | ---         | 21.9         | 5.9  | 25.3 | 13.6             | 16.1 | 6.7  | 9.2  |
|                     | 12/31/84 | 54,923,168                            | 1.3        | 6.1         | 19.5         | 1.1  | 19.8 | 17.1             | 20.3 | 9.2  | 5.7  |
|                     | 9/30/84  | 52,497,049                            | 1.5        | 10.7        | 11.3         | 0.8  | 14.0 | 15.3             | 29.3 | 12.0 | 5.0  |
|                     | 6/30/84  | 47,929,367                            | 1.8        | 12.4        | 13.8         | 1.2  | 16.4 | 21.2             | 12.6 | 11.1 | 9.6  |
|                     | 3/31/84  | 49,895,127                            | ---        | 12.4        | 19.5         | 6.4  | 15.7 | 15.7             | 4.3  | 8.8  | 17.2 |
|                     | 12/31/83 | 50,182,761                            | ---        | 14.8        | 30.0         | 6.0  | 16.5 | 10.4             | 2.1  | 3.0  | 17.2 |
|                     | 9/30/83  | 50,713,576                            | ---        | 15.0        | 47.4         | ---  | 19.5 | 3.5              | 3.3  | 4.7  | 6.5  |
|                     | 6/30/83  | 52,402,164                            | ---        | 3.8         | 23.3         | ---  | 35.9 | ---              | 24.8 | ---  | 12.2 |
|                     | 3/31/83  | 49,541,253                            | ---        | ---         | 15.1         | ---  | 33.4 | 4.6              | 27.2 | ---  | 19.7 |
| INVESTMENT ADVISERS | 6/30/86  | 86,330,923                            | 8.2        | ---         | 33.0         | 1.0  | 9.6  | 26.5             | 13.2 | 8.6  | ---  |
|                     | 3/31/86  | 82,520,514                            | 5.6        | 3.3         | 20.6         | 2.3  | 9.6  | 23.8             | 18.8 | 13.4 | 2.6  |
|                     | 12/31/85 | 73,389,199                            | 4.0        | 6.6         | 15.7         | 3.0  | 12.6 | 18.5             | 24.4 | 12.2 | 2.9  |
|                     | 9/30/85  | 61,953,366                            | 3.2        | 6.5         | 8.3          | 2.9  | 15.9 | 20.2             | 28.3 | 12.8 | 1.8  |
|                     | 6/30/85  | 66,785,302                            | 3.4        | 8.8         | 6.5          | 3.2  | 18.8 | 17.1             | 29.0 | 13.2 | ---  |
|                     | 3/31/85  | 62,742,678                            | 3.4        | 6.0         | 6.1          | 2.8  | 16.3 | 19.9             | 32.9 | 12.6 | ---  |
|                     | 12/31/84 | 58,967,426                            | 3.3        | 6.4         | 13.6         | 5.9  | 20.5 | 19.2             | 19.9 | 10.8 | 0.6  |
|                     | 9/30/84  | 55,807,710                            | 3.7        | 7.2         | 21.5         | 6.9  | 21.0 | 13.1             | 20.2 | 5.6  | 0.8  |
|                     | 6/30/84  | 50,388,386                            | 5.5        | 5.9         | 26.3         | 6.2  | 18.8 | 9.1              | 20.6 | 3.7  | 3.9  |
|                     | 3/31/84  | 51,864,720                            | 5.8        | 5.4         | 30.2         | 8.9  | 21.5 | 7.7              | 15.6 | 3.9  | 1.0  |
|                     | 12/31/83 | 54,533,402                            | 6.3        | 6.3         | 25.0         | 5.8  | 21.9 | 9.7              | 15.7 | 6.1  | 3.2  |
|                     | 9/30/83  | 53,819,067                            | 5.8        | 6.2         | 30.6         | 6.0  | 13.4 | 9.1              | 18.3 | 7.1  | 3.5  |
|                     | 6/30/83  | 54,812,985                            | 6.5        | 6.6         | 24.7         | 11.7 | 9.7  | 9.8              | 16.9 | 10.3 | 3.9  |
|                     | 3/31/83  | 50,748,987                            | 6.5        | 9.1         | 26.0         | 10.2 | 7.3  | 15.0             | 17.7 | 5.0  | 3.2  |

## EQUITY SECTOR WEIGHTS

| MANAGER<br>NAME   | DATE     | TOTAL<br>PORTFOLIO<br>MARKET<br>VALUE | CAP<br>GDS | CONS<br>DUR | CONS<br>NDUR | ENER | FINL | MAT<br>&<br>SERV | TECH | TRAN | UTIL |
|-------------------|----------|---------------------------------------|------------|-------------|--------------|------|------|------------------|------|------|------|
| IDS ADVISORY      | 6/30/86  | 96,881,914                            | ---        | ---         | 42.4         | 3.1  | 16.4 | 15.8             | 6.5  | 5.0  | 10.8 |
|                   | 3/31/86  | 90,164,763                            | ---        | 1.7         | 32.6         | 1.1  | 17.7 | 15.6             | 8.9  | 12.1 | 10.2 |
|                   | 12/31/85 | 76,939,408                            | ---        | 1.9         | 31.7         | 2.6  | 14.9 | 10.4             | 13.9 | 13.2 | 11.4 |
|                   | 9/30/85  | 64,292,295                            | 3.0        | 2.2         | 27.1         | 5.1  | 13.6 | 12.7             | 13.9 | 12.7 | 9.7  |
|                   | 6/30/85  | 68,295,847                            | 3.0        | 4.8         | 27.7         | 8.4  | 13.4 | 7.2              | 11.7 | 8.5  | 15.1 |
|                   | 3/31/85  | 62,021,800                            | ---        | 5.2         | 27.5         | 9.8  | 11.0 | 7.3              | 14.0 | 7.7  | 17.6 |
|                   | 12/31/84 | 57,153,006                            | 1.8        | 4.6         | 29.5         | 3.7  | 7.6  | 3.7              | 16.9 | 7.2  | 25.0 |
|                   | 9/30/84  | 55,468,185                            | 3.4        | 6.6         | 25.4         | 7.6  | 7.9  | 5.6              | 19.6 | 4.6  | 19.4 |
|                   | 6/30/84  | 50,278,968                            | ---        | 5.3         | 27.6         | 8.1  | 6.8  | 7.6              | 19.2 | 4.8  | 20.6 |
|                   | 3/31/84  | 50,085,955                            | 4.8        | 10.1        | 12.4         | 9.6  | 8.7  | 14.3             | 15.2 | 9.5  | 15.4 |
|                   | 12/31/83 | 54,006,960                            | 4.9        | 7.6         | 18.0         | ---  | 8.8  | 19.0             | 26.1 | 6.0  | 9.6  |
|                   | 9/30/83  | 54,334,602                            | ---        | 4.1         | 24.3         | 3.4  | 6.0  | 19.7             | 33.8 | 5.4  | 3.4  |
|                   | 6/30/83  | 57,561,715                            | 4.2        | 12.0        | 30.5         | 4.5  | 4.2  | 6.7              | 33.7 | 4.3  | ---  |
|                   | 3/31/83  | 50,689,028                            | 5.4        | 9.2         | 30.7         | 5.4  | 9.8  | 6.4              | 26.3 | ---  | 6.6  |
| LIEBER & COMPANY  | 6/30/86  | 44,505,476                            | 1.7        | 7.3         | 22.4         | 3.1  | 41.8 | 10.3             | 7.5  | 3.7  | 2.1  |
|                   | 3/31/86  | 40,102,680                            | 2.1        | 7.4         | 21.4         | 3.5  | 38.4 | 12.3             | 9.0  | 4.0  | 2.0  |
|                   | 12/31/85 | 35,197,559                            | 1.8        | 8.7         | 20.1         | 3.5  | 34.3 | 11.9             | 12.2 | 5.4  | 2.0  |
|                   | 9/30/85  | 30,715,520                            | 1.6        | 7.0         | 21.9         | 4.5  | 32.6 | 14.3             | 11.8 | 5.1  | 1.2  |
|                   | 6/30/85  | 31,313,770                            | 2.1        | 7.8         | 21.4         | 4.6  | 30.3 | 16.0             | 11.0 | 5.5  | 1.2  |
|                   | 3/31/85  | 29,544,589                            | 2.9        | 8.0         | 25.3         | 6.1  | 28.9 | 15.1             | 8.9  | 3.5  | 1.3  |
|                   | 12/31/84 | 26,473,866                            | 3.2        | 5.3         | 27.0         | 3.2  | 24.2 | 18.4             | 15.3 | 3.4  | ---  |
|                   | 9/30/84  | 25,807,665                            | 2.9        | 3.8         | 33.0         | 4.1  | 22.4 | 16.8             | 14.8 | 2.2  | ---  |
|                   | 6/30/84  | 23,927,529                            | 2.6        | 3.3         | 34.8         | 3.5  | 21.1 | 16.7             | 15.3 | 1.8  | 0.8  |
|                   | 3/31/84  | 24,261,218                            | 3.6        | 6.4         | 32.3         | 4.9  | 17.3 | 16.8             | 16.3 | 1.8  | 0.7  |
|                   | 12/31/83 | 11,159,936                            | 7.7        | 4.5         | 33.7         | 3.5  | 16.7 | 22.3             | 6.1  | 5.6  | ---  |
|                   | 9/30/83  | 11,016,060                            | 6.5        | 3.5         | 31.0         | 4.7  | 18.0 | 25.4             | 5.4  | 5.5  | ---  |
|                   | 6/30/83  | 11,233,248                            | 6.4        | 5.0         | 33.3         | 5.0  | 16.5 | 23.9             | 3.3  | 6.6  | ---  |
|                   | 3/31/83  | 10,063,917                            | 8.3        | ---         | 23.1         | 3.9  | 11.6 | 41.0             | 5.6  | 6.4  | ---  |
| PEREGRINE CAPITAL | 6/30/86  | 89,051,403                            | 8.0        | 6.7         | 9.6          | 15.2 | 8.1  | 15.7             | 13.6 | 5.0  | 18.1 |
|                   | 3/31/86  | 87,406,272                            | 7.4        | 5.5         | 15.6         | 16.2 | 5.3  | 15.7             | 14.8 | 3.8  | 15.8 |
|                   | 12/31/85 | 82,085,372                            | 9.1        | 6.3         | 15.1         | 17.8 | 5.3  | 19.1             | 11.2 | 3.3  | 12.7 |
|                   | 9/30/85  | 72,758,648                            | 8.3        | 8.5         | 18.3         | 12.6 | 4.5  | 15.7             | 18.0 | 3.0  | 11.2 |
|                   | 6/30/85  | 29,610,673                            | 0.2        | ---         | 51.4         | 4.2  | 12.4 | 2.9              | 24.0 | 2.7  | 2.3  |
|                   | 3/31/85  | 27,145,424                            | ---        | 2.3         | 44.2         | 6.3  | 9.2  | 6.2              | 28.0 | 1.9  | 1.9  |
|                   | 12/31/84 | 25,188,312                            | ---        | 2.3         | 37.5         | 2.7  | 3.9  | 9.8              | 37.7 | 4.1  | 1.9  |
|                   | 9/30/84  | 25,685,954                            | ---        | 3.7         | 38.0         | 0.6  | 2.3  | 11.9             | 39.7 | 1.3  | 2.4  |
|                   | 6/30/84  | 24,546,941                            | 2.8        | 5.5         | 31.2         | 5.8  | 1.0  | 9.3              | 38.9 | 4.3  | 1.3  |
|                   | 3/31/84  | 10,385,041                            | 3.6        | 4.4         | 23.1         | 8.5  | 1.1  | 7.2              | 45.5 | 5.4  | 1.1  |
|                   | 12/31/83 | 11,215,761                            | 2.5        | 1.6         | 25.5         | 1.2  | 3.2  | 6.0              | 51.8 | 1.7  | 6.6  |
|                   | 9/30/83  | 11,816,270                            | 1.2        | ---         | 31.6         | 3.3  | 2.0  | 8.4              | 46.1 | 1.4  | 5.8  |
|                   | 6/30/83  | 12,126,921                            | 4.8        | ---         | 36.4         | 5.2  | 8.9  | 4.8              | 33.0 | 2.9  | 3.3  |
|                   | 3/31/83  | 10,417,512                            | 7.0        | 1.8         | 47.1         | 4.2  | 13.5 | ---              | 20.1 | 6.3  | ---  |

## EQUITY SECTOR WEIGHTS

| MANAGER<br>NAME | DATE     | TOTAL<br>PORTFOLIO<br>MARKET<br>VALUE | CAP<br>GDS | CONS<br>DUR | CONS<br>NDUR | ENER | FINL | MAT<br>&<br>SERV | TECH | TRAN | UTIL |
|-----------------|----------|---------------------------------------|------------|-------------|--------------|------|------|------------------|------|------|------|
| WADDELL & REED  | 6/30/86  | 97,376,898                            | 4.4        | 7.8         | 26.0         | 0.4  | 20.7 | 21.7             | 12.4 | 6.6  | ---  |
|                 | 3/31/86  | 95,498,169                            | 4.3        | 7.3         | 13.0         | 2.9  | 23.3 | 24.9             | 16.9 | 7.3  | ---  |
|                 | 12/31/85 | 82,027,227                            | 4.6        | 7.7         | 17.0         | 5.4  | 15.2 | 25.9             | 15.0 | 9.1  | ---  |
|                 | 9/30/85  | 74,328,144                            | 2.0        | 7.7         | 18.8         | 5.1  | 19.7 | 22.5             | 15.6 | 5.2  | 3.3  |
|                 | 6/30/85  | 29,531,769                            | ---        | 11.8        | 14.5         | 2.5  | 21.1 | 18.4             | 13.3 | 6.1  | 12.4 |
|                 | 3/31/85  | 27,604,382                            | ---        | 12.8        | 11.9         | 2.7  | 21.5 | 15.8             | 16.3 | 7.9  | 11.2 |
|                 | 12/31/84 | 26,234,116                            | ---        | 14.0        | 18.7         | ---  | 18.8 | 2.7              | 25.5 | 1.0  | 19.3 |
|                 | 9/30/84  | 25,856,251                            | 1.4        | 13.9        | 28.0         | 3.3  | 14.3 | 0.5              | 30.9 | 1.6  | 6.1  |
|                 | 6/30/84  | 25,495,564                            | ---        | 29.0        | 25.7         | ---  | 15.7 | ---              | 17.8 | 11.8 | ---  |
|                 | 3/31/84  | 25,833,644                            | 5.2        | 32.1        | 21.4         | ---  | 25.0 | ---              | 11.7 | 4.5  | ---  |
|                 | 12/31/83 | 11,409,742                            | 12.8       | 32.4        | ---          | ---  | 33.9 | ---              | 20.9 | ---  | ---  |
|                 | 9/30/83  | 12,042,511                            | 5.8        | 13.4        | 22.5         | ---  | 5.1  | ---              | 38.2 | 15.0 | ---  |
|                 | 6/30/83  | 12,464,478                            | 5.7        | 13.2        | 29.2         | 3.3  | 5.0  | ---              | 31.1 | 12.5 | ---  |
|                 | 3/31/83  | 10,013,713                            | 5.5        | 13.8        | 15.5         | 2.5  | 29.1 | ---              | 27.2 | 6.4  | ---  |
| WILSHIRE 5000   | 6/30/86  | ---                                   | 4.5        | 4.0         | 28.8         | 7.8  | 14.0 | 12.4             | 12.6 | 3.0  | 12.9 |
|                 | 3/31/86  | ---                                   | 4.8        | 4.7         | 27.0         | 8.0  | 14.1 | 11.8             | 13.4 | 3.3  | 12.9 |
|                 | 12/31/85 | ---                                   | 4.8        | 4.2         | 25.7         | 10.5 | 12.9 | 11.4             | 14.2 | 3.3  | 13.0 |
|                 | 9/30/85  | ---                                   | 4.7        | 4.1         | 26.2         | 10.6 | 12.3 | 11.4             | 14.0 | 3.4  | 13.3 |
|                 | 6/30/85  | ---                                   | 4.8        | 4.0         | 26.3         | 11.2 | 12.2 | 10.8             | 13.6 | 3.6  | 13.5 |
|                 | 3/31/85  | ---                                   | 4.9        | 3.9         | 25.3         | 13.0 | 11.4 | 10.9             | 14.4 | 3.3  | 12.9 |
|                 | 12/31/84 | ---                                   | 5.4        | 9.9         | 23.0         | 13.5 | 9.9  | 10.6             | 13.2 | 3.7  | 10.8 |
|                 | 9/30/84  | ---                                   | 5.2        | 4.3         | 24.9         | 13.2 | 10.3 | 11.5             | 15.5 | 2.9  | 12.2 |
|                 | 6/30/84  | ---                                   | 5.3        | 4.0         | 25.7         | 13.5 | 9.6  | 11.7             | 15.6 | 2.9  | 11.7 |
|                 | 3/31/84  | ---                                   | 5.4        | 3.9         | 23.6         | 16.1 | 9.8  | 12.1             | 15.3 | 2.9  | 11.1 |
|                 | 12/31/83 | ---                                   | 5.5        | 4.2         | 24.0         | 14.5 | 9.5  | 12.2             | 16.3 | 2.8  | 11.1 |
|                 | 9/30/83  | ---                                   | 5.2        | 4.0         | 24.3         | 14.8 | 9.4  | 11.8             | 16.3 | 2.9  | 11.3 |
|                 | 6/30/83  | ---                                   | 5.3        | 3.9         | 24.9         | 15.0 | 9.3  | 11.6             | 16.3 | 2.9  | 10.9 |
|                 | 3/31/83  | ---                                   | 5.1        | 3.5         | 25.2         | 14.6 | 9.8  | 12.3             | 14.9 | 2.9  | 11.8 |

# EXTERNAL EQUITY MANAGERS

## HISTORICAL PERFORMANCE SUMMARY

|                     | 2Q 86 | 1Q 86 | 4Q 85 | 3Q 85 | 2Q 85 | 1Q 85 | 4Q 84 | 3Q 84 | 2Q 84 | 1Q 84 | 4Q 83 | 3Q 83 | 2Q 83 |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| FRED ALGER          |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Equity              | 9.0%  | 21.2% | 20.0% | -4.7% | 10.1% | 7.3%  | 0.2%  | 8.3%  | -4.1% | -8.1% | -1.0% | -3.5% | 13.9% |
| Total Fund          | 8.5   | 19.8  | 18.7  | -4.6  | 9.1   | 7.2   | 0.2   | 8.0   | -3.5  | -7.0  | -0.9  | -3.4  | 13.1  |
| ALLIANCE CAPITAL    |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Equity              | 6.1   | 20.0  | 19.2  | -3.6  | 11.5  | 13.1  | 1.3   | 7.1   | 2.2   | -11.2 | -0.6  | -8.7  | 14.3  |
| Total Fund          | 5.9   | 19.3  | 17.8  | -3.3  | 10.8  | 12.2  | 1.3   | 6.6   | 2.2   | -10.1 | -0.4  | -8.0  | 12.7  |
| BEUTEL GOODMAN      |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Equity              | -0.9  | 15.7  | 12.5  | -9.0  | 8.1   | 12.1  | 5.1   | 10.1  | -2.8  | -0.7  | 3.5   | 3.4   | 13.9  |
| Total Fund          | -0.6  | 14.3  | 12.0  | -8.6  | 7.5   | 10.7  | 4.9   | 9.3   | -2.8  | -0.6  | 3.3   | 1.1   | 8.7   |
| BMI CAPITAL         |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Equity              | 7.2   | 18.6  | 19.4  | -9.9  | -0.7  | 10.5  | 2.3   | 3.6   | 2.1   | -14.4 | -6.0  | -7.8  | 14.4  |
| Total Fund          | 7.0   | 17.8  | 11.1  | -2.4  | -0.9  | 9.3   | 2.2   | 3.4   | 2.0   | -14.5 | -6.1  | -7.7  | 11.9  |
| FORSTMANN-LEFF      |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Equity              | 10.1  | 20.8  | 21.5  | -5.4  | 9.4   | 12.6  | 3.7   | 7.5   | -2.8  | -8.3  | -1.0  | -1.7  | 11.2  |
| Total Fund          | 8.9   | 18.8  | 16.3  | -4.2  | 8.1   | 10.9  | 3.4   | 4.6   | -1.7  | -6.0  | -0.6  | -1.2  | 9.9   |
| HELLMAN JORDAN      |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Equity              | 0.4   | 16.1  | 19.4  | -5.9  | 9.5   | 10.0  | 4.3   | 8.6   | -4.8  | -3.1  | -0.9  | -9.5  | 10.0  |
| Total Fund          | 0.3   | 15.3  | 18.6  | -5.6  | 7.5   | 8.7   | 4.6   | 9.5   | -3.9  | -0.6  | -1.0  | -3.2  | 5.8   |
| IDS ADVISORY        |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Equity              | 8.1   | 18.2  | 20.5  | -5.9  | 10.7  | 9.2   | 3.2   | 11.4  | 0.0   | -8.4  | -0.9  | -6.6  | 14.3  |
| Total Fund          | 7.5   | 17.2  | 19.7  | -5.9  | 10.1  | 8.5   | 3.0   | 10.3  | 0.4   | -7.3  | -0.6  | -5.6  | 13.6  |
| INVESTMENT ADVISERS |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Equity              | 5.3   | 14.7  | 20.5  | -7.8  | 7.1   | 6.6   | 5.8   | 11.3  | -3.0  | -5.8  | 1.5   | -2.9  | 11.6  |
| Total Fund          | 4.6   | 12.4  | 18.5  | -7.2  | 6.4   | 6.4   | 5.7   | 10.7  | -2.8  | -4.9  | 1.3   | -1.8  | 8.0   |
| LIEBER & COMPANY    |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Equity              | 11.8  | 13.8  | 15.2  | -1.7  | 6.3   | 13.8  | 2.9   | 8.9   | -1.3  | -10.2 | 1.7   | -2.4  | 16.6  |
| Total Fund          | 11.0  | 13.9  | 14.6  | -1.9  | 6.0   | 11.6  | 2.6   | 7.9   | -1.4  | -7.3  | 1.3   | -1.9  | 11.6  |
| PEREGRINE CAPITAL   |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Equity              | 2.1   | 7.7   | 15.5  | 0.4   | 10.7  | 9.5   | -2.1  | 5.3   | -3.2  | -8.8  | -6.0  | -3.6  | 19.6  |
| Total Fund          | 1.9   | 6.5   | 12.8  | -1.9  | 9.1   | 7.8   | -1.9  | 4.7   | -2.7  | -7.4  | -5.1  | -2.6  | 16.4  |
| WADDELL & REED      |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Equity              | 2.4   | 19.7  | 18.4  | -5.4  | 8.7   | 8.1   | 0.7   | -1.6  | -10.3 | -14.0 | -9.3  | -4.7  | 30.2  |
| Total Fund          | 2.0   | 16.4  | 10.4  | -2.0  | 7.0   | 5.2   | 1.5   | 1.4   | -1.3  | -2.2  | -5.3  | -3.0  | 24.0  |
| SBI AGGREGATE       |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Equity              | 5.0   | 16.6  | 17.7  | -5.7  | 8.8   | 9.5   | 2.4   | 8.0   | -2.7  | -7.5  | -1.5  | -5.6  | 12.1  |
| Total Fund          | 4.5   | 15.2  | 15.2  | -4.5  | 8.0   | 8.4   | 2.4   | 7.2   | -2.2  | -5.9  | -1.2  | -4.5  | 10.5  |
| MARKET INDICES      |       |       |       |       |       |       |       |       |       |       |       |       |       |
| Wilshire 5000       | 5.8   | 14.4  | 16.8  | -4.3  | 7.5   | 10.3  | 1.3   | 9.2   | -2.8  | -4.2  | -1.0  | -0.9  | 13.0  |
| S&P 500             | 6.0   | 14.1  | 17.3  | -4.1  | 7.4   | 9.2   | 1.8   | 9.7   | -2.5  | -2.4  | 0.4   | -0.1  | 11.1  |
| 91 Day T-Bills      | 1.6   | 1.8   | 1.8   | 1.9   | 1.9   | 2.1   | 2.3   | 2.7   | 2.6   | 2.4   | 2.3   | 2.4   | 2.2   |



## BOND MANAGER PORTFOLIO STATISTICS GLOSSARY

Like the preceding equity manager portfolio statistics glossary, this bond manager portfolio statistics glossary is designed to define terminology used in evaluating a bond manager's investment philosophy, risk characteristics and performance data.

- |                     |  |
|---------------------|--|
| Qtr. Port. Turnover | - the manager's total bond sales during the quarter divided by the average value of the manager's bond portfolio over the quarter.   |
| # of Issues         | - the number of different bond issues held in the manager's portfolio.   |
| Bond Allocation     | - the percent of the manager's total portfolio invested in bonds.  |
| Coupon              | - the annual interest payment received on the manager's total portfolio stated as a percent of the portfolio's face value.   |
| Current Yield       | - the annual interest payment produced by the manager's total portfolio stated as a percent of the portfolio's market value.   |
| Yield to Maturity   | - the compounded annualized return that the manager's total portfolio would produce if it were held to maturity and all cash flows were reinvested at an interest rate equal to the yield to maturity.   |
| Duration            | - a measure of the average life of the total portfolio. Duration is a weighted average maturity whereby the time in the future that each cash flow is received is weighted by the proportion that the present value of the cash flow contributes to the total present value (or price) of the total portfolio. |
| Term to Maturity    | - also a measure of the average life of the total portfolio. Term to maturity is the number of years remaining until the average bond in the portfolio makes its final cash payment.   |

Quality Weightings

- refers to the average rating given the total portfolio's securities by Moody's Corp. A security's rating indicates the financial strength of its issuer and other factors related to the likelihood of full and timely payment of interest and principal.

Sector Weightings

- refers to the sectors of the bond market in which the manager has positioned his/her bond portfolio.

TUCS Median

- the median manager within a subsample of the TUCS universe that is restricted to fixed income managers investing in portfolios with quality and duration characteristics similar to those that are required of the SBI's bond managers.

# EXTERNAL FIXED INCOME MANAGERS

## PORTFOLIO STATISTICS HISTORICAL SUMMARY

| MANAGER<br>NAME | DATE     | QUARTER<br>PORTFOLIO<br>T/O | # OF<br>BONDS | BOND<br>ALLOCATION | COUPON | CURRENT<br>YIELD | YIELD<br>TO MAT. | AVERAGE<br>QUALITY | DURATION | TERM<br>TO MAT. |
|-----------------|----------|-----------------------------|---------------|--------------------|--------|------------------|------------------|--------------------|----------|-----------------|
| AVG. EXT. MGRS. | 6/30/86  | 47                          | 40            | 96                 | 9.8    | 9.3              | 9.0              | AAA                | 4.6      | 10.0            |
|                 | 3/31/86  | 41                          | 39            | 96                 | 10.3   | 9.6              | 8.8              | AAA                | 4.5      | 12.3            |
|                 | 12/31/85 | 41                          | 33            | 95                 | 10.5   | 10.0             | 9.6              | AAA                | 4.4      | 8.7             |
|                 | 9/30/85  | 22                          | 34            | 96                 | 10.7   | 10.6             | 10.6             | AAA                | 4.3      | 8.7             |
|                 | 6/30/85  | 48                          | 29            | 95                 | 10.4   | 10.2             | 10.4             | AAA                | 4.5      | 8.5             |
|                 | 3/31/85  | 37                          | 25            | 91                 | 10.3   | 10.8             | 11.5             | AAA                | 4.2      | 8.2             |
|                 | 12/31/84 | 38                          | 22            | 93                 | 10.3   | 10.8             | 11.4             | AAA                | 4.5      | 8.8             |
|                 | 9/30/84  | 54                          | 29            | 88                 | 10.1   | 11.1             | 12.3             | AAA                | 4.3      | 8.8             |
| INVESTMENT ADV. | 6/30/86  | 9                           | 21            | 96                 | 9.6    | 8.8              | 8.3              | AAA                | 3.3      | 4.1             |
|                 | 3/31/86  | 17                          | 22            | 95                 | 9.9    | 8.9              | 8.2              | AAA                | 3.3      | 4.2             |
|                 | 12/31/85 | 10                          | 16            | 95                 | 9.4    | 8.8              | 8.7              | AAA                | 3.4      | 4.3             |
|                 | 9/30/85  | 30                          | 18            | 99                 | 9.7    | 9.3              | 9.9              | AAA                | 3.8      | 5.1             |
|                 | 6/30/85  | 50                          | 17            | 99                 | 8.4    | 8.1              | 10.1             | AAA                | 4.7      | 6.2             |
|                 | 3/31/85  | 19                          | 13            | 99                 | 8.7    | 9.3              | 11.7             | AAA                | 4.9      | 8.9             |
|                 | 12/31/84 | 25                          | 10            | 99                 | 8.4    | 9.3              | 11.5             | AAA                | 5.6      | 12.1            |
|                 | 9/30/84  | 10                          | 7             | 100                | 9.0    | 10.8             | 12.6             | AAA                | 6.4      | 15.2            |
| LEHMAN MGMT.    | 6/30/86  | 16                          | 48            | 97                 | 10.8   | 9.8              | 8.3              | AAA                | 4.0      | 8.1             |
|                 | 3/31/86  | 28                          | 54            | 97                 | 11.0   | 9.7              | 8.3              | AAA                | 4.0      | 8.5             |
|                 | 12/31/85 | 40                          | 32            | 89                 | 11.1   | 10.2             | 9.2              | AAA                | 3.7      | 6.5             |
|                 | 9/30/85  | 24                          | 35            | 95                 | 11.4   | 10.9             | 10.2             | AAA                | 3.9      | 6.6             |
|                 | 6/30/85  | 49                          | 27            | 92                 | 11.4   | 10.8             | 9.9              | AAA                | 3.8      | 6.3             |
|                 | 3/31/85  | 43                          | 24            | 85                 | 11.6   | 11.4             | 11.0             | AAA                | 3.6      | 5.6             |
|                 | 12/31/84 | 44                          | 19            | 85                 | 11.6   | 11.4             | 10.8             | AAA                | 3.3      | 5.3             |
|                 | 9/30/84  | 62                          | 15            | 82                 | 11.2   | 11.5             | 12.2             | AAA                | 3.7      | 6.5             |
| MILLER ANDERSON | 6/30/86  | 57                          | 60            | 97                 | 9.4    | 9.3              | 9.5              | AA                 | 5.2      | 11.6            |
|                 | 3/31/86  | 73                          | 37            | 92                 | 10.5   | 9.7              | 8.8              | AA                 | 4.4      | 11.4            |
|                 | 12/31/85 | 71                          | 42            | 99                 | 10.4   | 9.9              | 9.6              | AA                 | 5.3      | 9.6             |
|                 | 9/30/85  | 23                          | 52            | 98                 | 9.6    | 10.2             | 10.6             | AA                 | 5.0      | 9.7             |
|                 | 6/30/85  | 75                          | 48            | 95                 | 9.3    | 10.0             | 10.4             | AA                 | 4.6      | 9.3             |
|                 | 3/31/85  | 35                          | 41            | 92                 | 9.0    | 10.0             | 11.1             | AA                 | 3.7      | 7.4             |
|                 | 12/31/84 | 50                          | 43            | 99                 | 9.1    | 10.1             | 11.3             | AA                 | 3.9      | 7.3             |
|                 | 9/30/84  | 83                          | 59            | 71                 | 9.8    | 11.1             | 11.9             | AAA                | 3.3      | 6.7             |



| MANAGER<br>NAME | DATE     | QUARTER<br>PORTFOLIO<br>T/O | # OF<br>BONDS | BOND<br>ALLOCATION | COUPON | CURRENT<br>YIELD | YIELD<br>TO MAT. | AVERAGE<br>QUALITY | DURATION | TERM<br>TO MAT. |
|-----------------|----------|-----------------------------|---------------|--------------------|--------|------------------|------------------|--------------------|----------|-----------------|
| MORGAN STANLEY  | 6/30/86  | 89                          | 13            | 100                | 8.6    | 8.9              | 9.1              | AAA                | 5.4      | 10.8            |
|                 | 3/31/86  | 62                          | 20            | 100                | 9.4    | 9.0              | 8.7              | AAA                | 5.4      | 19.9            |
|                 | 12/31/85 | 58                          | 17            | 100                | 10.4   | 10.1             | 9.9              | AAA                | 5.0      | 10.6            |
|                 | 9/30/85  | 18                          | 20            | 100                | 11.2   | 11.1             | 11.0             | AAA                | 4.4      | 9.8             |
|                 | 6/30/85  | 38                          | 17            | 100                | 11.4   | 10.8             | 10.5             | AAA                | 5.0      | 9.7             |
|                 | 3/31/85  | 62                          | 16            | 85                 | 11.1   | 11.3             | 11.5             | AAA                | 3.8      | 7.3             |
|                 | 12/31/84 | 30                          | 12            | 100                | 11.5   | 11.5             | 11.5             | AAA                | 5.3      | 9.4             |
|                 | 9/30/84  | 105                         | 20            | 99                 | 8.6    | 8.9              | 12.5             | AAA                | 3.7      | 5.3             |
|                 |          |                             |               |                    |        |                  |                  |                    |          |                 |
| PEREGRINE       | 6/30/86  | 12                          | 51            | 97                 | 10.8   | 10.2             | 9.8              | AA                 | 4.3      | 9.7             |
|                 | 3/31/86  | 10                          | 54            | 98                 | 11.2   | 10.3             | 9.4              | AA                 | 4.1      | 11.0            |
|                 | 12/31/85 | 18                          | 51            | 98                 | 11.5   | 10.8             | 10.4             | AA                 | 3.7      | 9.3             |
|                 | 9/30/85  | 20                          | 43            | 96                 | 11.6   | 11.2             | 11.0             | AA                 | 3.3      | 7.8             |
|                 | 6/30/85  | 15                          | 35            | 98                 | 11.2   | 10.8             | 10.5             | AA                 | 3.4      | 7.6             |
|                 | 3/31/85  | 13                          | 28            | 100                | 11.1   | 11.3             | 11.5             | AA                 | 3.7      | 7.6             |
|                 | 12/31/84 | 39                          | 25            | 96                 | 10.5   | 10.9             | 11.3             | AA                 | 3.5      | 7.5             |
|                 | 9/30/84  | 17                          | 21            | 93                 | 10.6   | 11.7             | 12.5             | AA                 | 3.6      | 7.6             |
|                 |          |                             |               |                    |        |                  |                  |                    |          |                 |
| WESTERN ASSET   | 6/30/86  | 97                          | 48            | 90                 | 9.3    | 9.0              | 9.0              | AA                 | 5.6      | 15.7            |
|                 | 3/31/86  | 58                          | 48            | 95                 | 9.8    | 9.8              | 9.3              | AA                 | 5.5      | 18.9            |
|                 | 12/31/85 | 47                          | 40            | 87                 | 10.3   | 10.1             | 10.0             | AA                 | 5.2      | 11.9            |
|                 | 9/30/85  | 19                          | 34            | 89                 | 10.7   | 11.0             | 11.1             | AA                 | 5.6      | 13.0            |
|                 | 6/30/85  | 58                          | 29            | 84                 | 10.5   | 10.7             | 10.8             | AA                 | 5.4      | 12.1            |
|                 | 3/31/85  | 52                          | 28            | 87                 | 10.4   | 11.5             | 12.1             | AA                 | 5.3      | 12.2            |
|                 | 12/31/84 | 39                          | 24            | 80                 | 10.6   | 11.4             | 11.8             | AA                 | 5.2      | 11.3            |
|                 | 9/30/84  | 49                          | 19            | 80                 | 11.3   | 12.3             | 12.8             | AA                 | 4.8      | 11.3            |

# EXTERNAL FIXED INCOME MANAGERS

## SECTOR WEIGHTING HISTORICAL PROFILE

| MANAGER<br>NAME | DATE     | TOTAL<br>PORTFOLIO<br>MARKET<br>VALUE | QUALITY WEIGHTINGS |    |    |     |       | SECTOR WEIGHTINGS |      |      |     |      |     |      |      |      |      |
|-----------------|----------|---------------------------------------|--------------------|----|----|-----|-------|-------------------|------|------|-----|------|-----|------|------|------|------|
|                 |          |                                       | AAA                | AA | A  | BAA | OTHER | GOVT              | AGCY | ZERO | IND | UTIL | FIN | TRAN | MTGS | MISC | CASH |
| AVG. EXT. MGRS. | 6/30/86  | ---                                   | 78                 | 6  | 10 | 3   | 3     | 28                | 6    | 3    | 9   | 2    | 10  | 1    | 37   | 3    | 4    |
|                 | 3/31/86  | ---                                   | 79                 | 6  | 9  | 3   | 3     | 35                | 2    | 2    | 9   | 2    | 9   | 0    | 34   | 3    | 4    |
|                 | 12/31/85 | ---                                   | 80                 | 5  | 8  | 2   | 5     | 35                | 3    | 2    | 6   | 2    | 9   | 0    | 35   | 3    | 5    |
|                 | 9/30/85  | ---                                   | 81                 | 5  | 8  | 1   | 5     | 33                | 3    | 2    | 7   | 2    | 9   | 0    | 39   | 1    | 4    |
|                 | 6/30/85  | ---                                   | 81                 | 6  | 6  | 3   | 4     | 34                | 1    | 4    | 5   | 4    | 9   | 0    | 36   | 1    | 5    |
|                 | 3/31/85  | ---                                   | 78                 | 10 | 6  | 2   | 4     | 27                | 5    | 4    | 5   | 6    | 12  | 0    | 31   | 1    | 9    |
|                 | 12/31/84 | ---                                   | 77                 | 12 | 7  | 2   | 2     | 33                | 8    | 4    | 2   | 8    | 12  | 0    | 24   | 1    | 7    |
|                 | 9/30/84  | ---                                   | 79                 | 12 | 7  | 2   | 0     | 30                | 10   | 7    | 3   | 8    | 9   | 1    | 19   | 1    | 12   |
| INVESTMENT ADV. | 6/30/86  | 39,301,944                            | 81                 | 8  | 11 | 0   | 0     | 34                | 18   | 12   | 23  | 0    | 10  | 0    | 0    | 0    | 4    |
|                 | 3/31/86  | 38,938,391                            | 84                 | 8  | 8  | 0   | 0     | 52                | 0    | 12   | 25  | 0    | 6   | 0    | 0    | 0    | 5    |
|                 | 12/31/85 | 36,766,845                            | 96                 | 4  | 0  | 0   | 0     | 68                | 0    | 12   | 8   | 0    | 7   | 0    | 0    | 0    | 5    |
|                 | 9/30/85  | 34,573,707                            | 96                 | 4  | 0  | 0   | 0     | 70                | 0    | 13   | 9   | 0    | 7   | 0    | 0    | 0    | 1    |
|                 | 6/30/85  | 33,794,148                            | 96                 | 4  | 0  | 0   | 0     | 62                | 0    | 23   | 10  | 0    | 4   | 0    | 0    | 0    | 1    |
|                 | 3/31/85  | 30,942,776                            | 85                 | 15 | 0  | 0   | 0     | 53                | 0    | 18   | 11  | 13   | 4   | 0    | 0    | 0    | 1    |
|                 | 12/31/84 | 30,397,636                            | 74                 | 26 | 0  | 0   | 0     | 52                | 0    | 18   | 0   | 25   | 4   | 0    | 0    | 0    | 1    |
|                 | 9/30/84  | 27,932,974                            | 72                 | 28 | 0  | 0   | 0     | 59                | 0    | 10   | 0   | 31   | 0   | 0    | 0    | 0    | 0    |
| LEHMAN MGMT.    | 6/30/86  | 223,483,722                           | 89                 | 4  | 6  | 1   | 0     | 60                | 0    | 0    | 11  | 2    | 7   | 0    | 18   | 0    | 3    |
|                 | 3/31/86  | 220,998,995                           | 89                 | 4  | 6  | 1   | 0     | 65                | 2    | 0    | 9   | 0    | 6   | 0    | 15   | 0    | 3    |
|                 | 12/31/85 | 207,462,430                           | 89                 | 5  | 6  | 0   | 0     | 51                | 10   | 0    | 7   | 2    | 7   | 0    | 12   | 0    | 11   |
|                 | 9/30/85  | 194,774,253                           | 87                 | 6  | 7  | 0   | 0     | 54                | 12   | 0    | 9   | 2    | 7   | 0    | 11   | 0    | 5    |
|                 | 6/30/85  | 190,808,742                           | 91                 | 5  | 4  | 0   | 0     | 64                | 8    | 0    | 5   | 2    | 4   | 0    | 9    | 0    | 8    |
|                 | 3/31/85  | 177,383,853                           | 95                 | 3  | 2  | 0   | 0     | 65                | 13   | 0    | 2   | 0    | 2   | 0    | 3    | 0    | 15   |
|                 | 12/31/84 | 173,831,628                           | 98                 | 0  | 2  | 0   | 0     | 64                | 13   | 0    | 3   | 0    | 0   | 0    | 5    | 0    | 15   |
|                 | 9/30/84  | 162,737,117                           | 96                 | 1  | 2  | 0   | 0     | 60                | 13   | 5    | 4   | 0    | 0   | 0    | 0    | 0    | 18   |
| MILLER ANDERSON | 6/30/86  | 217,656,629                           | 71                 | 5  | 4  | 5   | 15    | 25                | 0    | 0    | 2   | 0    | 8   | 0    | 60   | 2    | 3    |
|                 | 3/31/86  | 217,291,031                           | 74                 | 0  | 5  | 5   | 16    | 45                | 0    | 0    | 2   | 0    | 8   | 0    | 37   | 0    | 8    |
|                 | 12/31/85 | 208,552,908                           | 71                 | 0  | 6  | 4   | 19    | 45                | 0    | 0    | 2   | 0    | 8   | 0    | 44   | 0    | 1    |
|                 | 9/30/85  | 191,849,284                           | 68                 | 1  | 9  | 4   | 18    | 24                | 0    | 0    | 5   | 0    | 9   | 0    | 60   | 0    | 2    |
|                 | 6/30/85  | 183,857,869                           | 69                 | 3  | 8  | 4   | 16    | 19                | 0    | 2    | 5   | 0    | 12  | 0    | 57   | 0    | 5    |
|                 | 3/31/85  | 173,961,916                           | 54                 | 13 | 11 | 2   | 20    | 2                 | 0    | 4    | 7   | 0    | 27  | 0    | 52   | 0    | 8    |
|                 | 12/31/84 | 169,696,156                           | 55                 | 17 | 14 | 5   | 9     | 0                 | 0    | 7    | 5   | 0    | 36  | 0    | 51   | 0    | 1    |
|                 | 9/30/84  | 159,574,376                           | 81                 | 12 | 5  | 2   | 0     | 0                 | 0    | 0    | 2   | 0    | 17  | 0    | 52   | 0    | 29   |

| MANAGER<br>NAME | DATE     | TOTAL<br>PORTFOLIO<br>MARKET | QUALITY WEIGHTINGS |    |    |     |       | SECTOR WEIGHTINGS |      |      |     |      |     |      |      |      |      |
|-----------------|----------|------------------------------|--------------------|----|----|-----|-------|-------------------|------|------|-----|------|-----|------|------|------|------|
|                 |          | VALUE                        | AAA                | AA | A  | BAA | OTHER | GOVT              | AGCY | ZERO | IND | UTIL | FIN | TRAN | MTGS | MISC | CASH |
| MORGAN STANLEY  | 6/30/86  | 222,763,940                  | 100                | 0  | 0  | 0   | 0     | 33                | 9    | 0    | 0   | 0    | 0   | 0    | 58   | 0    | 0    |
|                 | 3/31/86  | 225,686,690                  | 100                | 0  | 0  | 0   | 0     | 41                | 0    | 0    | 0   | 0    | 0   | 59   | 0    | 0    |      |
|                 | 12/31/85 | 208,381,895                  | 100                | 0  | 0  | 0   | 0     | 42                | 0    | 0    | 0   | 0    | 0   | 58   | 0    | 0    |      |
|                 | 9/30/85  | 193,513,567                  | 100                | 0  | 0  | 0   | 0     | 41                | 0    | 0    | 0   | 0    | 0   | 59   | 0    | 0    |      |
|                 | 6/30/85  | 188,907,479                  | 100                | 0  | 0  | 0   | 0     | 49                | 0    | 0    | 0   | 0    | 0   | 51   | 0    | 0    |      |
|                 | 3/31/85  | 173,106,782                  | 100                | 0  | 0  | 0   | 0     | 38                | 9    | 0    | 0   | 0    | 0   | 38   | 0    | 15   |      |
|                 | 12/31/84 | 170,547,941                  | 100                | 0  | 0  | 0   | 0     | 74                | 18   | 0    | 0   | 0    | 0   | 8    | 0    | 0    |      |
|                 | 9/30/84  | 159,109,110                  | 100                | 0  | 0  | 0   | 0     | 45                | 27   | 27   | 0   | 0    | 0   | 0    | 0    | 0    | 1    |
| PEREGRINE       | 6/30/86  | 104,606,143                  | 48                 | 19 | 31 | 0   | 2     | 0                 | 0    | 0    | 9   | 0    | 30  | 0    | 41   | 17   | 3    |
|                 | 3/31/86  | 104,370,666                  | 48                 | 18 | 32 | 0   | 2     | 0                 | 0    | 0    | 9   | 0    | 31  | 0    | 40   | 17   | 2    |
|                 | 12/31/85 | 100,139,659                  | 55                 | 13 | 29 | 0   | 3     | 0                 | 0    | 0    | 5   | 0    | 29  | 0    | 48   | 16   | 2    |
|                 | 9/30/85  | 95,186,493                   | 61                 | 12 | 25 | 0   | 2     | 0                 | 0    | 0    | 4   | 2    | 31  | 0    | 52   | 7    | 4    |
|                 | 6/30/85  | 92,417,709                   | 56                 | 15 | 20 | 7   | 2     | 0                 | 0    | 0    | 4   | 5    | 33  | 0    | 49   | 7    | 2    |
|                 | 3/31/85  | 86,259,088                   | 55                 | 23 | 19 | 3   | 0     | 3                 | 0    | 0    | 0   | 5    | 38  | 0    | 47   | 7    | 0    |
|                 | 12/31/84 | 84,387,890                   | 65                 | 13 | 18 | 4   | 0     | 6                 | 7    | 0    | 0   | 5    | 30  | 0    | 48   | 0    | 4    |
|                 | 9/30/84  | 79,887,650                   | 58                 | 14 | 24 | 4   | 0     | 12                | 7    | 0    | 10  | 0    | 31  | 0    | 33   | 0    | 7    |
| WESTERN ASSET   | 6/30/86  | 238,657,259                  | 80                 | 2  | 8  | 9   | 1     | 13                | 9    | 3    | 7   | 7    | 2   | 4    | 45   | 0    | 10   |
|                 | 3/31/86  | 235,514,306                  | 76                 | 4  | 5  | 14  | 1     | 7                 | 9    | 3    | 12  | 9    | 2   | 1    | 52   | 0    | 5    |
|                 | 12/31/85 | 220,363,561                  | 73                 | 5  | 8  | 7   | 7     | 5                 | 8    | 1    | 15  | 9    | 2   | 1    | 48   | 0    | 11   |
|                 | 9/30/85  | 201,666,058                  | 74                 | 6  | 5  | 4   | 11    | 11                | 3    | 0    | 14  | 10   | 0   | 1    | 49   | 0    | 12   |
|                 | 6/30/85  | 197,929,627                  | 73                 | 9  | 4  | 8   | 6     | 10                | 0    | 0    | 8   | 15   | 0   | 1    | 51   | 0    | 15   |
|                 | 3/31/85  | 181,426,695                  | 76                 | 9  | 4  | 7   | 4     | 4                 | 11   | 0    | 8   | 16   | 0   | 1    | 47   | 0    | 13   |
|                 | 12/31/84 | 177,328,832                  | 69                 | 15 | 7  | 5   | 4     | 3                 | 11   | 0    | 6   | 19   | 2   | 2    | 33   | 4    | 20   |
|                 | 9/30/84  | 165,957,816                  | 68                 | 15 | 9  | 5   | 3     | 4                 | 16   | 0    | 3   | 18   | 4   | 5    | 26   | 4    | 20   |

# EXTERNAL FIXED INCOME MANAGERS

## HISTORICAL PERFORMANCE SUMMARY

|                            | 2Q 1986 | 1Q 1986 | 4Q 1985 | 3Q 1985 | 2Q 1985 | 1Q 1985 | 4Q 1984 | 3Q 1984 |
|----------------------------|---------|---------|---------|---------|---------|---------|---------|---------|
| INVESTMENT ADVISERS        |         |         |         |         |         |         |         |         |
| Fixed Income               | 0.9%    | 6.2%    | 6.5%    | 2.5%    | 9.4%    | 1.9%    | 8.8%    | 11.8%   |
| Total Fund                 | 0.9     | 5.9     | 6.3     | 2.3     | 9.2     | 1.8     | 8.8     | 11.8    |
| LEHMAN MANAGEMENT          |         |         |         |         |         |         |         |         |
| Fixed Income               | 1.2     | 6.7     | 6.9     | 2.1     | 8.7     | 2.0     | 7.7     | 9.6     |
| Total Fund                 | 1.1     | 6.5     | 6.5     | 2.1     | 7.6     | 2.1     | 6.8     | 8.7     |
| MILLER ANDERSON            |         |         |         |         |         |         |         |         |
| Fixed Income               | 0.2     | 4.4     | 8.8     | 4.4     | 6.0     | 2.5     | 7.5     | 7.7     |
| Total Fund                 | 0.2     | 4.2     | 8.7     | 4.4     | 5.7     | 2.5     | 6.3     | 6.7     |
| MORGAN STANLEY             |         |         |         |         |         |         |         |         |
| Fixed Income               | -2.1    | 8.2     | 7.7     | 2.5     | 9.3     | 1.5     | 7.3     | 6.1     |
| Total Fund                 | -1.3    | 8.3     | 7.7     | 2.4     | 9.1     | 1.5     | 7.2     | 6.3     |
| PEREGRINE CAPITAL          |         |         |         |         |         |         |         |         |
| Fixed Income               | 0.2     | 4.3     | 5.4     | 3.1     | 7.3     | 2.3     | 6.0     | 7.7     |
| Total Fund                 | 0.2     | 4.2     | 5.2     | 3.0     | 7.1     | 2.2     | 5.6     | 6.9     |
| WESTERN ASSET              |         |         |         |         |         |         |         |         |
| Fixed Income               | 0.9     | 7.4     | 10.7    | 1.9     | 10.7    | 2.4     | 8.0     | 11.8    |
| Total Fund                 | 1.3     | 6.9     | 9.3     | 1.9     | 9.1     | 2.3     | 6.8     | 10.8    |
| SBI FIXED INCOME AGGREGATE |         |         |         |         |         |         |         |         |
| Fixed Income               | 1.7     | 6.4     | 8.1     | 2.8     | 8.5     | 2.1     | 7.5     | 8.8     |
| Total Fund                 | 0.4     | 6.2     | 7.7     | 2.7     | 7.8     | 2.1     | 6.8     | 8.1     |
| MARKET INDEX               |         |         |         |         |         |         |         |         |
| Salomon Broad Bond Index   | 1.1     | 7.9     | 7.8     | 2.0     | 8.9     | 2.2     | 7.5     | 8.6     |



## TIME-WEIGHTED RATE OF RETURN

In measuring the performance of a manager or fund whose investment objective is to maximize the total value of an investment portfolio, the proper measuring tool is the time-weighted total rate of return. This performance measure includes the effect of income earned as well as realized and unrealized portfolio market value changes. In addition, the time-weighted total rate of return nets out the influence of contributions made to and distributions taken from the manager or fund. These are variables over which the manager or fund generally has no control.

The calculation of a portfolio's true time-weighted return requires that the portfolio be valued every time that there is a capital flow in or out. Because most portfolios are not valued that frequently, it is usually necessary to estimate the time-weighted total rates of return by approximating the required valuations.

In 1968, the Bank Administration Institute (BAI) commissioned a study, conducted by the University of Chicago, which considered desirable methods of estimating time-weighted returns. The BAI report is considered to be the definitive work in the field of performance measurement because of the academic reputations and thorough scientific efforts of its authors.

When monthly data are available, the BAI study recommends employing a technique called the linked internal rate of return (LIRR). State Street Bank, the SBI's performance measurement consultant, calculates the LIRR by solving the following equation for R:

$$VB \cdot (1+R) + \sum_{i=1}^n C \cdot (1+R)^{t_i} = VE$$

Where:

VB = Value of the fund at the beginning of the month

VE = Value of the fund at the end of the month

C<sub>i</sub> = Net cash flow on the i<sup>th</sup> day of the month

n = Number of cash flows in the month

R = Internal rate of return

t<sub>i</sub> = Time from cash flow i to the end of the period,  
expressed as a percentage of the total number of  
days in the month

The internal rate of return, R, is a proxy for the true time-weighted return over the month. It approximates the interim valuations by assuming a uniform growth of the invested assets throughout the period.

The IRR's calculated for each month can be linked together to estimate the time-weighted return for a longer period. For example, given three consecutive monthly IRR's - R1, R2, and R3, the quarterly time-weighted return (TWRQ) is:

$$\text{TWRQ} = (1+R1)*(1+R2)*(1+R3) - 1$$

MINNESOTA STATE BOARD OF INVESTMENT  
COMMISSIONS AND TRADING VOLUME  
BY BROKER  
FISCAL YEAR 1986

| BROKER                    | EQUITY<br>DOLLAR VOLUME | EQUITY<br>COMMISSIONS | BOND<br>DOLLAR VOLUME | BOND<br>COMMISSIONS | SHORT TERM<br>DOLLAR VOLUME |
|---------------------------|-------------------------|-----------------------|-----------------------|---------------------|-----------------------------|
| ABEL/NOSER CORP.          | 3,663,478.50            | 7,500.00              | 0.00                  | 0.00                | 0.00                        |
| ALLISON-WILLIAMS          | 0.00                    | 0.00                  | 1,731,348.79          | 16,741.50           | 0.00                        |
| AMERICAN EXPRESS CREDIT   | 0.00                    | 0.00                  | 0.00                  | 0.00                | 37,608,000.00               |
| AMERICAN SECURITIES       | 226,875.00              | 1,550.00              | 0.00                  | 0.00                | 0.00                        |
| ASSOC CORP OF N AMER      | 0.00                    | 0.00                  | 0.00                  | 0.00                | 116,866,000.00              |
| AUTRANET                  | 3,624,490.00            | 9,148.00              | 0.00                  | 0.00                | 0.00                        |
| BANK OF AMERICA           | 0.00                    | 0.00                  | 0.00                  | 0.00                | 104,163,000.00              |
| BANKERS TRUST             | 0.00                    | 0.00                  | 0.00                  | 0.00                | 8,620,000.00                |
| BEAR STEARNS & CO         | 14,784,137.50           | 36,437.00             | 2,575,355.55          | 6,250.00            | 5,786,233,000.00            |
| BENEFICIAL CORP           | 0.00                    | 0.00                  | 0.00                  | 0.00                | 104,575,000.00              |
| BLYTH PAINE WEBBER        | 0.00                    | 0.00                  | 1,283,136.87          | 5,718.44            | 0.00                        |
| BOSTON INST. SERVICES     | 1,180,000.00            | 3,400.00              | 0.00                  | 0.00                | 0.00                        |
| BRANDT (ROBERT) & CO      | 11,814,750.00           | 22,165.00             | 0.00                  | 0.00                | 0.00                        |
| BRIGGS & SCHAEDEL         | 0.00                    | 0.00                  | 0.00                  | 0.00                | 6,000,000.00                |
| BROWN ALEX & SONS         | 1,470,345.00            | 3,112.50              | 0.00                  | 0.00                | 0.00                        |
| BURDGE DANIELS & CO.      | 0.00                    | 0.00                  | 1,527,637.28          | 4,132.00            | 0.00                        |
| CANTOR FITZGERALD         | 6,564,586.75            | 16,658.24             | 0.00                  | 0.00                | 0.00                        |
| CAPITAL INST. SERVICES    | 6,205,927.50            | 15,903.50             | 0.00                  | 0.00                | 0.00                        |
| CHASE MANHATTAN BANK      | 0.00                    | 0.00                  | 0.00                  | 0.00                | 223,089,000.00              |
| CHEMICAL BANK N.Y.        | 0.00                    | 0.00                  | 0.00                  | 0.00                | 26,854,370.30               |
| CHEVRON OIL FIN. CO.      | 0.00                    | 0.00                  | 0.00                  | 0.00                | 76,000,000.00               |
| CIT FINANCIAL CORP        | 0.00                    | 0.00                  | 0.00                  | 0.00                | 221,050,000.00              |
| CITIBANK                  | 0.00                    | 0.00                  | 0.00                  | 0.00                | 73,200,000.00               |
| COWEN&CO                  | 4,239,587.20            | 12,657.00             | 0.00                  | 0.00                | 0.00                        |
| CYRUS J. LAWRENCE         | 1,079,376.20            | 3,350.00              | 0.00                  | 0.00                | 0.00                        |
| DEAN WITTER REYNOLDS      | 31,594,981.00           | 86,855.00             | 0.00                  | 0.00                | 5,000,000.00                |
| DELAFIELD HAR. TABELL     | 2,211,747.44            | 5,044.00              | 0.00                  | 0.00                | 0.00                        |
| DONALDSON LUFKIN          | 22,684,646.70           | 45,274.00             | 0.00                  | 0.00                | 0.00                        |
| DREXEL BURNHAM LAMBERT    | 38,702,012.55           | 87,216.70             | 12,399,736.26         | 32,230.00           | 0.00                        |
| E F HUTTON AND CO         | 8,105,769.50            | 19,956.50             | 0.00                  | 0.00                | 0.00                        |
| EBERSTADT (F) & CO        | 1,014,212.50            | 2,696.75              | 0.00                  | 0.00                | 0.00                        |
| EDWARDS A.G. & SONS       | 0.00                    | 0.00                  | 1,079,010.00          | 2,500.00            | 0.00                        |
| FIRST BOSTON CORPORATION  | 25,546,156.99           | 56,933.00             | 55,079,485.75         | 132,333.86          | 17,236,990,000.00           |
| FIRST INTERSTATE BK CAL   | 0.00                    | 0.00                  | 0.00                  | 0.00                | 500,000.00                  |
| FIRST MANHATTAN COMPANY   | 17,628,678.80           | 39,311.75             | 0.00                  | 0.00                | 0.00                        |
| FIRST NATIONAL BANK CHI   | 0.00                    | 0.00                  | 0.00                  | 0.00                | 61,500,000.00               |
| FIRST NATIONAL BANK MPLS  | 0.00                    | 0.00                  | 0.00                  | 0.00                | 75,407,000.00               |
| FIRST NATIONAL BANK SP    | 0.00                    | 0.00                  | 0.00                  | 0.00                | 8,302,000.00                |
| FORD MOTOR CREDIT CO      | 0.00                    | 0.00                  | 0.00                  | 0.00                | 231,410,000.00              |
| FURMAN SELZ MAGER         | 8,044,615.10            | 12,499.00             | 0.00                  | 0.00                | 0.00                        |
| GENERAL ELEC. FIN. SERV.  | 0.00                    | 0.00                  | 0.00                  | 0.00                | 159,713,000.00              |
| GENERAL ELECTRIC CREDIT   | 0.00                    | 0.00                  | 0.00                  | 0.00                | 233,307,000.00              |
| GENERAL MOTORS ACCEPTANCE | 0.00                    | 0.00                  | 0.00                  | 0.00                | 271,791,000.00              |
| GOLDMAN SACHS & COMPANY   | 66,414,011.60           | 157,849.25            | 14,898,342.00         | 40,505.00           | 12,388,696,000.00           |
| HELLER FINANCIAL INC.     | 0.00                    | 0.00                  | 0.00                  | 0.00                | 294,777,000.00              |
| HOUSEHOLD FINANCE         | 0.00                    | 0.00                  | 0.00                  | 0.00                | 185,800,000.00              |
| INSTANET                  | 114,504,563.13          | 73,743.58             | 0.00                  | 0.00                | 0.00                        |
| JANNEY MONTGOMERY SCOTT   | 0.00                    | 0.00                  | 470,000.00            | 1,250.00            | 0.00                        |
| JEFFERIES & CO            | 51,571,095.75           | 144,444.50            | 0.00                  | 0.00                | 0.00                        |
| JOHNSON LANE SPACE & SMIT | 3,609,954.00            | 10,371.00             | 0.00                  | 0.00                | 0.00                        |
| JONES ASSOCIATES          | 6,457,103.34            | 22,854.00             | 0.00                  | 0.00                | 0.00                        |
| KEEFE BRUYETTE & WOOD     | 7,232,190.00            | 17,552.00             | 0.00                  | 0.00                | 0.00                        |
| KIDDER PEABODY            | 2,002,650.00            | 7,070.00              | 49,518,616.68         | 130,835.00          | 43,000,000.00               |
| KLEINWORT BENSON GOVT SEC | 0.00                    | 0.00                  | 0.00                  | 0.00                | 1,885,000.00                |
| L F ROTHSCHILD            | 0.00                    | 0.00                  | 17,381,861.00         | 47,645.00           | 0.00                        |



MINNESOTA STATE BOARD OF INVESTMENT  
COMMISSIONS AND TRADING VOLUME  
BY BROKER  
FISCAL YEAR 1986

| BROKER                    | EQUITY<br>DOLLAR VOLUME | EQUITY<br>COMMISSIONS | BOND<br>DOLLAR VOLUME | BOND<br>COMMISSIONS | SHORT TERM<br>DOLLAR VOLUME |
|---------------------------|-------------------------|-----------------------|-----------------------|---------------------|-----------------------------|
| LAZARD FRERES & CO        | 0.00                    | 0.00                  | 2,672,981.70          | 14,825.50           | 0.00                        |
| LEHMAN GOVT SECURITIES    | 0.00                    | 0.00                  | 0.00                  | 0.00                | 4,892,841,000.00            |
| LYNCH JONES & RYAN        | 3,775,387.50            | 8,921.00              | 0.00                  | 0.00                | 0.00                        |
| MANUFACTURERS HANOVER TRU | 0.00                    | 0.00                  | 0.00                  | 0.00                | 82,720,000.00               |
| MARQUETTE NATIONAL BANK   | 0.00                    | 0.00                  | 0.00                  | 0.00                | 45,507,000.00               |
| MCKINNEY SQUARE ALLSOPP S | 1,081,312.50            | 3,160.00              | 0.00                  | 0.00                | 0.00                        |
| MELLON BANK               | 0.00                    | 0.00                  | 0.00                  | 0.00                | 21,000,000.00               |
| MERRILL LYNCH P F & S (R) | 63,439,474.92           | 155,375.30            | 51,620,187.21         | 132,847.25          | 453,359,000.00              |
| MESIROW AND COMPANY       | 3,571,120.13            | 8,702.50              | 0.00                  | 0.00                | 0.00                        |
| MONTGOMERY SECURITIES     | 3,074,650.00            | 6,942.00              | 0.00                  | 0.00                | 0.00                        |
| MORGAN GUARANTY           | 0.00                    | 0.00                  | 0.00                  | 0.00                | 10,265,000.00               |
| MORGAN STANLEY & CO       | 36,574,481.30           | 92,704.00             | 39,859,520.74         | 96,218.75           | 0.00                        |
| MOSELEY HALLGARTER ESTABR | 52,875.00               | 470.00                | 0.00                  | 0.00                | 0.00                        |
| NEUBERGER & BERMAN        | 512,750.00              | 2,716.00              | 0.00                  | 0.00                | 0.00                        |
| NEW YORK & FOREIGN SEC    | 6,813,881.25            | 15,384.00             | 0.00                  | 0.00                | 0.00                        |
| NEWHARD COOKE & CO        | 238,162.50              | 1,044.00              | 0.00                  | 0.00                | 0.00                        |
| NOMURA SECURITIES INTL    | 494,000.00              | 2,080.00              | 0.00                  | 0.00                | 0.00                        |
| NORWEST BANK MPLS         | 0.00                    | 0.00                  | 0.00                  | 0.00                | 188,903,000.00              |
| OPPENHEIMER & CO          | 9,131,362.50            | 21,185.00             | 212,720.00            | 625.00              | 0.00                        |
| PAINE WEBBER J & C        | 23,737,510.55           | 61,902.00             | 0.00                  | 0.00                | 6,000,000.00                |
| PENNEY (J.C.) FINANCE     | 0.00                    | 0.00                  | 0.00                  | 0.00                | 133,812,000.00              |
| PIPER JAFFRAY & HOP B     | 0.00                    | 0.00                  | 838,759.62            | 2,235.00            | 0.00                        |
| PIPER JAFFRAY & HOP S     | 1,674,387.50            | 3,481.50              | 0.00                  | 0.00                | 0.00                        |
| PRUDENTIAL BACHE SECURITI | 39,729,383.22           | 86,456.00             | 0.00                  | 0.00                | 2,323,982,000.00            |
| REPUBLIC NATL. BANK N.Y.  | 0.00                    | 0.00                  | 0.00                  | 0.00                | 3,500,000.00                |
| ROBERT W. BAIRD & CO      | 280,800.00              | 1,248.00              | 0.00                  | 0.00                | 0.00                        |
| ROBINSON-HUMPHREY CO      | 1,345,937.50            | 3,285.00              | 0.00                  | 0.00                | 0.00                        |
| SALOMON BROTHERS          | 34,170,409.76           | 109,740.00            | 82,525,848.43         | 235,269.00          | 4,031,245,000.00            |
| SANFORD C. BERNSTEIN      | 41,580,589.38           | 93,098.00             | 0.00                  | 0.00                | 0.00                        |
| SEARS ROEBUCK ACCEPTANCE  | 0.00                    | 0.00                  | 0.00                  | 0.00                | 183,541,000.00              |
| SHEARSON LEHMAN (BONDSTAT | 0.00                    | 0.00                  | 31,113,200.00         | 67,375.00           | 0.00                        |
| SHEARSON LEHMAN AMER EXPR | 0.00                    | 0.00                  | 43,613,917.88         | 69,844.50           | 0.00                        |
| SHEARSON/AMERICAN EXPRESS | 16,779,629.50           | 86,502.50             | 0.00                  | 0.00                | 0.00                        |
| SLOWTE WIESMAN            | 1,034,737.50            | 2,562.50              | 0.00                  | 0.00                | 0.00                        |
| SMITH BARNEY & COMPANY    | 6,973,443.75            | 17,916.50             | 0.00                  | 0.00                | 0.00                        |
| STATE BOARD OF INVESTMENT | 0.00                    | 0.00                  | 0.00                  | 0.00                | 1,326,000.00                |
| SYNDICATION               | 5,000,000.00            | 0.00                  | 13,623,718.75         | 0.00                | 0.00                        |
| THOMSON & MCKINNON        | 257,500.00              | 1,000.00              | 6,298,675.07          | 14,670.59           | 0.00                        |
| TUCKER ANTHONY & R.L. DAY | 1,380,000.00            | 4,400.00              | 0.00                  | 0.00                | 0.00                        |
| UNION BANK OF L.A.        | 0.00                    | 0.00                  | 0.00                  | 0.00                | 14,925,000.00               |
| W.E. POLLOCK & COMPANY IN | 0.00                    | 0.00                  | 0.00                  | 0.00                | 75,635,000.00               |
| WEEDEN & COMPANY          | 21,968,680.38           | 58,984.25             | 0.00                  | 0.00                | 0.00                        |
| WELLINGTON & CO.          | 36,116,718.87           | 85,395.50             | 0.00                  | 0.00                | 0.00                        |
| WERTHEIM & COMPANY        | 5,691,800.00            | 20,215.00             | 0.00                  | 0.00                | 0.00                        |
| WESTINGHOUSE CREDIT       | 0.00                    | 0.00                  | 0.00                  | 0.00                | 188,062,000.00              |
| WILSHIRE ASSOCIATES       | 13,223,987.05           | 27,566.00             | 0.00                  | 0.00                | 0.00                        |
| WOOD GUNDY & COMPANY      | 567,825.00              | 1,921.00              | 0.00                  | 0.00                | 0.00                        |
| ALL BROKERS COMBINED      | 842,450,739.60          | 1,905,909.82          | 430,324,059.58        | 1,054,051.39        | 50,638,959,370.30           |

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**1986  
ANNUAL  
REPORT**

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**MINNESOTA STATE  
BOARD OF  
INVESTMENT**

**GOVERNOR RUDY PERPICH**

**STATE AUDITOR ARNE H. CARLSON**

**SECRETARY OF STATE JOAN ANDERSON GROWE**

**STATE TREASURER ROBERT W. MATTSON**

**ATTORNEY GENERAL HUBERT H. HUMPHREY**

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**PART TWO**

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## INVESTMENT ADVISORY COUNCIL

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Judith W. Mares, Chair, Director Benefit Finance, General Mills

Malcolm W. McDonald, Vice Chair, Director, Space Center

Harry H. Adams, Jr., Exec. Sec., Mpls. Teachers Retirement Fund

Verona D. Burton, Active Employee Representative

James R. Eckmann, Dir. of Investments & Banking, Dayton Hudson

Paul L. Groschen, Exec. Dir., Minnesota State Retirement System

Kenneth F. Gudorf, Sr., C.F.O. and V.P. of Finance, Carlson Cos.

James M. Hacking, Exec. Dir., Public Employees Retirement Assoc.

Richard B. Hume, Sr. Vice President, Marquette Bank Minneapolis

Peter J. Kiedrowski, Commissioner of Finance

Gary R. Norstrem, City Treasurer, St. Paul

Michael I. Rosen, President, Michael I. Rosen & Associates

Joseph T. Rukavina, Active Employee Representative

Harvey Schmidt, Exec. Dir., Teachers Retirement Association

Raymond B. Vecellio, Retiree Representative

Deborah W. Veverka, Manager, Pension Financial Planning, Honeywell

Jan Yeomans, Manager, Pension Fund, 3M Company

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## INVESTMENT DEPARTMENT PERSONNEL

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Howard J. Bicker  
Jeff Bailey  
Roger W. Henry

Executive Director  
Assistant Executive Director  
Equity and Fixed Income Manager

### COMMON STOCKS

Mark Edwards  
A. Arthur Kaese  
C. Robert Parsons  
Doug Gorence  
Harold L. Syverson

Senior Portfolio Manager  
Senior Portfolio Manager  
Investment Analyst, Senior  
Investment Analyst, Intermediate  
Head Security Trader

### ALT. EQUITY INVESTMENTS

John Griebenow  
Daralyn Peifer

Senior Portfolio Manager  
Investment Analyst, Intermediate

### FIXED INCOME

Grant A. Feldman  
John T. Kinne  
N. Robert Barman  
Arthur M. Blauzda

Fixed Income Manager, Short Term  
Senior Portfolio Manager  
Investment Analyst, Senior  
Investment Analyst, Senior

### ADMINISTRATIVE STAFF

L. Michael Schmitt  
Beth Lehman  
Mable E. Patrick  
Thomas L. Delmont  
Nancy Wold  
Deborah F. Griebenow  
Harriet Balian  
Kathy Leisz  
Charlene Olson  
Linda M. Nadeau  
Lavern Jagg

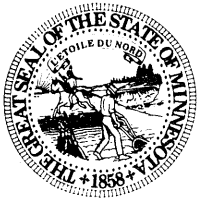
Administrative Director  
Assistant to the Executive Director  
Senior Accounting Officer  
Accounting Officer, Intermediate  
Accounting Officer  
Research Analyst, Intermediate  
Office Services Supervisor II  
Computer Operator  
Clerk Stenographer, Senior  
Clerk Typist II  
Clerk Typist I

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STATE OF MINNESOTA

OFFICE OF THE LEGISLATIVE AUDITOR

VETERANS SERVICE BUILDING, ST. PAUL, MN 55155 • 612/296-4708

JAMES R. NOBLES, LEGISLATIVE AUDITOR

The State Board of Investment  
and  
Howard J. Bicker, Executive Director

We have examined the financial statements for the Supplemental Retirement Fund, the Post Retirement Investment Fund, and the Variable Annuity Fund, which constitute the Investment Trust Funds of the State of Minnesota as of and for the year ended June 30, 1986, as shown on pages 2 to 9. Our examination was made in accordance with generally accepted auditing standards and included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

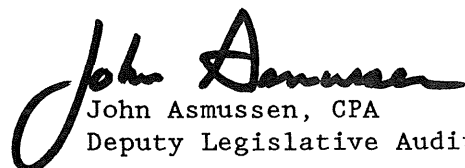
The financial statements present only the Investment Trust Funds of the State of Minnesota and are not intended to present fairly the financial position and results of operations of the State Board of Investment or the State of Minnesota in conformity with generally accepted accounting principles.

In our opinion, the financial statements referred to above present fairly the net assets and participation of the Investment Trust Funds of the State of Minnesota at June 30, 1986, and the results of their operations and changes in their net assets for the year then ended, in conformity with generally accepted accounting principles.

Our examination was made for the purpose of forming an opinion on the financial statements of the Investment Trust Funds of the State of Minnesota. The supporting schedules shown on pages 10 to 101 are presented for purposes of additional analysis and are not a required part of the aforementioned financial statements. Such information has been subjected to the auditing procedures applied in the examination of the aforementioned financial statements and, in our opinion, is fairly stated in all material respects in relation to the financial statements taken as a whole.

  
James R. Nobles  
Legislative Auditor

November 17, 1986

  
John Asmussen, CPA  
Deputy Legislative Auditor

STATE BOARD OF INVESTMENT  
INVESTMENT TRUST FUNDS  
STATEMENT OF ASSETS AND LIABILITIES  
JUNE 30, 1986

|                                   | SUPPLEMENTAL(5)<br>RETIREMENT<br>FUND TOTAL | POST RETIREMENT(6)<br>INVESTMENT<br>FUND | VARIABLE(7)<br>ANNUITY<br>FUND |
|-----------------------------------|---|--|--------------------------------|
| ASSETS:                           |   |  |                                |
| INVESTMENTS (at market value) (3) |   |  |                                |
| Common Stock                      | \$ 187,290,371                              | \$ 678,775,210                           | \$ 145,560,977                 |
| Alternative Equities              | -0-   | -0-                                      | -0-                            |
| Fixed Income Securities           | 72,111,058                                  | 2,403,093,984                            | -0-                            |
| Short Term Securities             | 84,785,216                                  | 517,334,147                              | 2,170,583                      |
| TOTAL INVESTMENTS(4)              | \$ 344,186,645                              | \$ 3,599,203,341                         | \$ 147,731,560                 |
| Cash                              | (83,578)                                    | 84,648                                   | (126,069)                      |
| Security Sales Receivable         | -0-   | -0-                                      | -0-                            |
| Accounts Receivable-Mortality     | -0-   | 17,475,512                               | -0-                            |
| Accounts Receivable-Participants  | -0-   | -0-                                      | -0-                            |
| Accrued Interest                  | 1,599,378                                   | 54,027,450                               | -0-                            |
| Accrued Dividends                 | -0-   | 2,220,057                                | -0-                            |
| Accrued Short Term Gain           | 436,157                                     | 2,671,552                                | 12,505                         |
| TOTAL ASSETS                      | \$ 346,138,602                              | \$ 3,675,682,560                         | \$ 147,617,996                 |
| LIABILITIES:                      |   |  |                                |
| Management Fees Payable           | 75,525                                      | 140,454                                  | 39,309                         |
| Security Purchases Payable        | -0-   | 494,080                                  | -0-                            |
| Accounts Payable-Participants     | -0-   | 42,197,405                               | 431,991                        |
| Options Premiums Received         | -0-   | -0-                                      | -0-                            |
| TOTAL LIABILITIES                 | \$ 75,525                                   | \$ 42,831,939                            | \$ 471,300                     |
| NET ASSETS AT JUNE 30, 1986       | \$ 346,063,077                              | \$ 3,632,850,621                         | \$ 147,146,696                 |

STATE BOARD OF INVESTMENT  
INVESTMENT TRUST FUNDS  
STATEMENT OF CHANGES IN NET ASSETS  
YEAR ENDED JUNE 30, 1986

|                                    | SUPPLEMENTAL<br>RETIREMENT<br>FUND TOTAL | POST RETIREMENT<br>INVESTMENT<br>FUND | VARIABLE<br>ANNUITY<br>FUND |
|------------------------------------|--|---------------------------------------|-----------------------------|
| FROM INVESTMENT ACTIVITY:          |  |                                       |                             |
| Net Investment Income              | \$ 36,509,315                            | \$ 260,160,881                        | \$ 19,240,820               |
| Realized Gains (Losses)            | 7,592,223                                | 116,681,663                           | 6,733,300                   |
| Unrealized Gains (Losses)          | <u>6,069,612</u>                         | <u>319,020,569</u>                    | <u>3,153,454</u>            |
| TOTAL INCOME                       | \$ 50,171,150                            | \$ 695,863,113                        | \$ 29,127,574               |
| Less Distribution to               |  |                                       |                             |
| Participant Accounts               | (48,924,493)                             | (126,011,116)                         | (31,822,293)                |
| Undistributed Dedicated Income     | <u>-0-</u>                               | <u>(246,917,998)</u>                  | <u>-0-</u>                  |
| NET CHANGE IN UNDISTRIBUTED INCOME | \$ 1,246,657                             | \$ 322,933,999                        | \$ (2,694,719)              |
| FROM PARTICIPANT TRANSACTION:      |  |                                       |                             |
| Additions to Participant Accounts  |  |                                       |                             |
| Participant Contributions          | 22,662,355                               | 458,720,788                           | -0-                         |
| Income Distribution                | 48,924,493                               | 126,011,116                           | 31,822,293                  |
| Income to be Distributed           | <u>-0-</u>                               | <u>246,917,998</u>                    | <u>-0-</u>                  |
| TOTAL ADDITIONS                    | \$ 71,586,848                            | \$ 831,649,902                        | \$ 31,822,293               |
| Deductions from                    |  |                                       |                             |
| Participant Accounts               |  |                                       |                             |
| Withdrawals                        | <u>14,100,904</u>                        | <u>252,460,446</u>                    | <u>1,200,213</u>            |
| TOTAL DEDUCTIONS                   | \$ 14,100,904                            | \$ 252,460,446                        | \$ 1,200,213                |
| NET CHANGE IN PARTICIPATION        | \$ 57,485,944                            | \$ 579,189,456                        | \$ 30,622,080               |
| TOTAL CHANGE IN ASSETS             | 58,732,601                               | 902,123,455                           | 27,927,361                  |
| NET ASSETS:                        |  |                                       |                             |
| Beginning of Period                | <u>287,330,476</u>                       | <u>2,730,727,166</u>                  | <u>119,219,335</u>          |
| End of Period                      | <u>\$ 346,063,077</u>                    | <u>\$ 3,632,850,621</u>               | <u>\$ 147,146,696</u>       |



STATE BOARD OF INVESTMENT  
INVESTMENT TRUST FUNDS  
STATEMENT OF OPERATIONS  
YEAR ENDED JUNE 30, 1986

|  | SUPPLEMENTAL<br>RETIREMENT<br>FUND TOTAL | POST RETIREMENT<br>INVESTMENT<br>FUND | VARIABLE<br>ANNUITY<br>FUND |
|--|--|---------------------------------------|-----------------------------|
| INVESTMENT INCOME:                                       |  |                                       |                             |
| Interest   | \$ 8,355,995                             | \$ 217,968,961                        | \$ 2,125                    |
| Dividends  | 23,543,543                               | 24,451,750                            | 19,111,866                  |
| Short Term Gains   | 4,751,192                                | 18,270,368                            | 199,377                     |
| INCOME BEFORE EXPENSES                                   | \$ 36,650,730                            | \$ 260,691,079                        | \$ 19,313,368               |
| Management Fees  | 141,415                                  | 530,198                               | 72,548                      |
| NET INCOME   | \$ 36,509,315                            | \$ 260,160,881                        | \$ 19,240,820               |
| REALIZED AND UNREALIZED GAIN<br>(LOSS) ON INVESTMENTS    |  |                                       |                             |
| Realized:  |  |                                       |                             |
| Proceeds from Sales                                      | \$ 227,042,904                           | \$ 693,661,770                        | \$ 113,180,408              |
| Cost of Securities Sold                                  | 219,450,681                              | 576,980,107                           | 106,447,108                 |
| NET REALIZED GAIN (LOSS)                                 | \$ 7,592,223                             | \$ 116,681,663                        | \$ 6,733,300                |
| Unrealized   |  |                                       |                             |
| Beginning of Period                                      | 18,087,828                               | 163,653,054                           | 11,103,356                  |
| End of Period  | 24,157,440                               | 482,673,623                           | 14,256,810                  |
| INCREASE (DECREASE) IN<br>UNREALIZED APPRECIATION        | \$ 6,069,612                             | \$ 319,020,569                        | \$ 3,153,454                |
| NET REALIZED AND UNREALIZED<br>GAIN (LOSS) ON INVESTMENT | \$ 13,661,835                            | \$ 435,702,232                        | \$ 9,886,754                |

NOTES TO THE FINANCIAL STATEMENTS  
JUNE 30, 1986

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Financial Reporting Entity and Basis of Presentation: This report includes financial statements for the Investment Trust Funds of the State of Minnesota, which are administered by the State Board of Investment under authority of Minnesota Statutes Chapter 11A. The Investment Trust Funds include the Supplemental Retirement Fund, the Post Retirement Investment Fund, and the Variable Annuity Fund.

The financial statements presented for these funds are based on the preferred accounting practices described in the American Institute of Certified Public Accountants audit guide, "Audits of Investment Companies". These practices, and the significant accounting policies which follow, conform with generally accepted accounting principles.

Security Valuation: All securities are valued at market except for U. S. Government short-term securities and commercial paper, which are valued at market less accrued interest. Accrued short-term interest is recognized as income as part of "Short-Term Gain". For long-term fixed income securities the State Board uses the Merrill Lynch valuation system. This pricing service is capable of providing prices for both actively traded and privately placed bonds. For equity securities the State Board uses a valuation service provided by Compensation and Capital.

Recognition of Security Transactions: Security transactions are accounted for on the date the securities are purchased or sold.

Income Recognition: Dividend income is recorded on the ex-dividend date. Interest and dividend income are accrued monthly. Short-term interest is accrued monthly and is presented as "Accrued Short-Term Gain".

Loaning Securities: Certain U.S. Government and Government Agency securities are loaned out by the State Board to banks and brokers for additional income. Collateral in the amount of 105% of the market value of the security loaned is required.

2. PORTFOLIO LISTING:

A listing of all securities held by these funds can be found starting on page 18 of this report. Fixed income and equity securities are presented at market value. Securities held as cash equivalents are not listed.

3. COST OF INVESTMENTS

At June 30, 1986, the cost of investments for the Investment Trust Funds was:

|                                 |                 |
|---------------------------------|-----------------|
| Supplemental Retirement Fund    | \$ 320,029,205  |
| Post Retirement Investment Fund | \$3,116,529,718 |
| Variable Annuity Fund           | \$ 133,474,750  |

4. LOANED SECURITIES

The market value of loaned securities outstanding at June 30, 1986 was:

|                                 |                |
|---------------------------------|----------------|
| Supplemental Retirement Fund    | \$ 22,250      |
| Post Retirement Investment Fund | \$ 428,353,016 |

5. SUPPLEMENTAL RETIREMENT FUND

The Supplemental Retirement Fund serves as an investment vehicle for the various state and locally administered pension plans. During Fiscal Year 1986 the fund included four separate accounts with different investment objectives. Financial information on the individual accounts is shown on pages 10 to 13 of this report. Participation in the Supplemental Retirement Fund accounts is determined in accordance with various statutory requirements.

6. POST RETIREMENT INVESTMENT FUND

The Post Retirement Fund serves as an investment vehicle for the Defined Benefit Pension Funds of the State of Minnesota. The fund invests amounts certified by the various pension funds as reserves required for the payment of retirement benefits.

Participation in the Post Retirement Investment Fund is equal to the actuarially determined required reserves for retirement benefits as of June 30, 1986. It includes a 5% assumed income distribution, in accordance with Minnesota Statutes Section 11A.18, and any mortality gains or losses as determined by an independent actuary hired by the State Legislature.

6. POST RETIREMENT FUND (cont.)

Pursuant to Minnesota Statutes Section 11A.18, Subdivision 9, a portion of Fiscal Year 1986 investment income of the Post Retirement Investment Fund is available for distribution as a benefit increase to pension fund participants in January 1987. This amount is increased by 2.5% from Fiscal Year 1987 income. The benefit increase is stated as a percentage of total required reserves. In accordance with statutory provisions, the amount available for the benefit increase is certified to each participating pension fund for distribution to eligible individuals. Annuitants and other individuals receiving benefits at June 30, 1985 are eligible to receive the January 1, 1987 benefit increase, which will be 9.792%. Past increases paid to retirees on January 1st have been:

|      |        |
|------|--------|
| 1981 | 3.209% |
| 1982 | 7.436% |
| 1983 | 6.853% |
| 1984 | 7.449% |
| 1985 | 6.905% |
| 1986 | 7.884% |

7. VARIABLE ANNUITY FUND:

Participation in the Variable Annuity Fund is restricted to members of the Teachers Retirement Fund.

The Admitted Value Increment for the Variable Annuity Fund totalled \$9,323,690 at June 30, 1986. This valuation is required by Minnesota Statutes Section 11A.19, Subdivision 5, and is the amount by which the recognized value of investments is above or below their book value. The admitted value is based on an average ratio of book value to market value of the securities calculated over a two year period. This calculation is used to determine the rate of return and the increase or decrease which will be credited to the individual member's account balances at the end of each fiscal year.

Laws of Minnesota 1978, Chapter 781, stated in part "Effective July 1, 1978 no future employee and employer contribution shall be credited to any account in the variable annuity division unless the member elects continued participation..." Very few members of the Teachers' Retirement Fund elected to continue in the variable annuity division. Previous contributions for all former and current participants in the variable annuity fund will remain in that fund until the participant retires or withdraws in accordance with the Teachers' Retirement Act. (Minnesota Statutes Chapter 354)

7. VARIABLE ANNUITY FUND (cont.)

VARIABLE ANNUITY FUND  
PARTICIPATION AT JUNE 30, 1986

|                             |                   |
|-----------------------------|-------------------|
| Net Assets                  | \$ 147,146,696    |
| Admitted Value Increment    | <u>9,323,690</u>  |
|                             | \$ 156,470,386    |
| Less: Unrealized Market     |                   |
| Appreciation (Depreciation) | <u>14,256,810</u> |
| Total Participation         | \$ 142,213,576    |

8. POOLED INVESTMENT ACCOUNTS

The State Board of Investment manages seven pooled investment accounts for the Investment Trust Funds and the Defined Benefit Pension Funds of the State of Minnesota. The assets of the pooled accounts are held by our master custodian, State Street Bank of Boston. Financial information on these pooled accounts is shown on pages 14 to 17 of this report.

9. SUBSEQUENT EVENTS

At its October 2, 1985 meeting the Minnesota State Board of Investment adopted a resolution relating to companies doing business in South Africa. The resolution calls for the divestment of companies not meeting predetermined guidelines in a four phased approach. The first three phases relate to individual companies signing and complying with the Sullivan Principles. The fourth phase, to be completed by August, 1989, calls for the divestment of any company with operations in South Africa.

The resolution also calls for the SBI to receive financial and legal advise at the completion of each phase to insure it is not violating its fiduciary responsibility. To date, no securities have been liquidated as a result of the resolution.

It can't be determined at this time what effect, if any, this resolution will have on the SBI's future investment flexibility.

STATE BOARD OF INVESTMENT  
MINNESOTA INVESTMENT TRUST FUNDS  
SCHEDULE OF PARTICIPATION  
JUNE 30, 1986

|                                  | SUPPLEMENTAL<br>RETIREMENT<br>FUND TOTAL | POST<br>RETIREMENT<br>FUND | VARIABLE<br>ANNUITY<br>FUND |
|----------------------------------|--|----------------------------|-----------------------------|
| Teacher's Retirement Fund        | \$ -0-                                   | \$ 1,244,936,000           | \$ 142,213,576              |
| Public Employees Retirement Fund | -0-                                      | 997,977,000                | -0-                         |
| State Employees Retirement Fund  | -0-                                      | 497,345,000                | -0-                         |
| Public Employees Police & Fire   | -0-                                      | 91,896,000                 | -0-                         |
| Highway Patrolmen's Retirement   | -0-                                      | 53,535,000                 | -0-                         |
| Legislators & Survivors Retire.  | -0-                                      | 6,950,000                  | -0-                         |
| Judges Retirement Fund           | -0-                                      | 10,620,000                 | -0-                         |
| Variable Annuity Fund            | -0-                                      | -0-                        | -0-                         |
| Income Share Account             | 179,267,510                              | -0-                        | -0-                         |
| Growth Share Account             | 78,666,143                               | -0-                        | -0-                         |
| Fixed Return Account             | 76,940,838                               | -0-                        | -0-                         |
| Bond Account                     | 10,209,579                               | -0-                        | -0-                         |
| TOTAL PARTICIPATION              | \$ 345,084,070                           | \$ 2,903,259,000           | \$ 142,213,576              |
| Adjustments                      |  |                            |                             |
| Admitted Value Increment         | -0-                                      | -0-                        | (9,323,690)                 |
| Unrealized Appreciation          |  |                            |                             |
| (Depreciation) of Investments    | 941,279                                  | 482,673,623                | 14,256,810                  |
| Undistributed Earnings           | 37,728                                   | 246,917,998                | -0-                         |
| NET ASSETS                       | \$ 346,063,077                           | \$ 3,632,850,621           | \$ 147,146,696              |

STATE BOARD OF INVESTMENT  
MINNESOTA SUPPLEMENTAL RETIREMENT FUND  
COMBINING STATEMENT OF ASSETS AND LIABILITIES  
JUNE 30, 1986

|  | INCOME<br>SHARE<br>ACCOUNT | GROWTH<br>SHARE<br>ACCOUNT | FIXED<br>RETURN<br>ACCOUNT | BOND<br>ACCOUNT      | SUPPLEMENTAL<br>RETIREMENT<br>FUND TOTAL |
|--|----------------------------|----------------------------|----------------------------|----------------------|--|
| <b>ASSETS:</b>   |                            |                            |                            |                      |  |
| INVESTMENTS (at market value)(1)                                       |                            |                            |                            |                      |  |
| Common Stock   | \$ 109,077,574             | \$ 78,212,797              | \$ -0-                     | \$ -0-               | \$ 187,290,371                           |
| Fixed Income Securities  | 61,340,722                 | -0-                        | -0-                        | 10,770,336           | 72,111,058                               |
| Short Term Securities  | <u>7,512,724</u>           | <u>531,469</u>             | <u>76,528,426</u>          | <u>212,597</u>       | <u>84,785,216</u>                        |
| TOTAL INVESTMENTS(2)   | \$ 177,931,020             | \$ 78,744,266              | \$ 76,528,426              | \$ 10,982,933        | \$ 344,186,645                           |
| Cash   | (24,399)                   | (59,181)                   | 1                          | 1                    | (83,578)                                 |
| Security Sales Receivable  | -0-                        | -0-                        | -0-                        | -0-                  | -0-                                      |
| Accounts Receivable-Mortality  | -0-                        | -0-                        | -0-                        | -0-                  | -0-                                      |
| Accounts Receivable-Participants                                       | -0-                        | -0-                        | -0-                        | -0-                  | -0-                                      |
| Accrued Interest   | 1,344,648                  | -0-                        | -0-                        | 254,730              | 1,599,378                                |
| Accrued Dividends  | -0-                        | -0-                        | -0-                        | -0-                  | -0-                                      |
| Accrued Short Term Gain  | <u>65,399</u>              | <u>2,867</u>               | <u>367,336</u>             | <u>555</u>           | <u>436,157</u>                           |
| TOTAL ASSETS   | \$ 179,316,668             | \$ 78,687,952              | \$ 76,895,763              | \$ 11,238,219        | \$ 346,138,602                           |
| <b>LIABILITIES:</b>  |                            |                            |                            |                      |  |
| Management Fees Payable  | 49,158                     | 21,809                     | 4,319                      | 239                  | 75,525                                   |
| Security Purchases Payable   | -0-                        | -0-                        | -0-                        | -0-                  | -0-                                      |
| Accounts Payable to Teachers   | -0-                        | -0-                        | -0-                        | -0-                  | -0-                                      |
| Options Premiums Received  | -0-                        | -0-                        | -0-                        | -0-                  | -0-                                      |
| TOTAL LIABILITIES  | \$ 49,158                  | \$ 21,809                  | \$ 4,319                   | \$ 239               | \$ 75,525                                |
| NET ASSETS AT JUNE 30, 1986  | <u>\$ 179,267,510</u>      | <u>\$ 78,666,143</u>       | <u>\$ 76,891,444</u>       | <u>\$ 11,237,980</u> | <u>\$ 346,063,077</u>                    |
| <br>(1)The cost of investments at June 30, was:                        |                            |                            |                            |                      |  |
| Common Stock   | \$ 97,934,863              | \$ 70,511,348              | \$ -0-                     | \$ -0-               | \$ 168,446,211                           |
| Fixed Income Securities  | 56,968,721                 | -0-                        | -0-                        | 9,829,057            | 66,797,778                               |
| Short Term Securities  | <u>7,512,724</u>           | <u>531,469</u>             | <u>76,528,426</u>          | <u>212,597</u>       | <u>84,785,216</u>                        |
| Total Investments at Cost  | <u>\$ 162,416,308</u>      | <u>\$ 71,042,817</u>       | <u>\$ 76,528,426</u>       | <u>\$ 10,041,654</u> | <u>\$ 320,029,205</u>                    |
| <br>(2)The market of loaned securities<br>outstanding at June 30, was: |                            |                            |                            |                      |  |
|  | \$ 22,250                  | \$ -0-                     | \$ -0-                     | \$ -0-               | \$ 22,250                                |

STATE BOARD OF INVESTMENT  
MINNESOTA SUPPLEMENTAL RETIREMENT FUND  
COMBINING STATEMENT OF CHANGES IN NET ASSETS  
YEAR ENDED JUNE 30, 1986

|  | INCOME<br>SHARE<br>ACCOUNT | GROWTH<br>SHARE<br>ACCOUNT | FIXED<br>RETURN<br>ACCOUNT | BOND<br>ACCOUNT | SUPPLEMENTAL<br>RETIREMENT<br>FUND TOTAL |
|--|----------------------------|----------------------------|----------------------------|-----------------|--|
| FROM INVESTMENT ACTIVITY:                    |                            |                            |                            |                 |  |
| Net Investment Income                        | \$ 19,322,245              | \$ 10,323,993              | \$ 5,989,767               | \$ 873,310      | \$ 36,509,315                            |
| Realized Gains (Losses)                      | 3,824,024                  | 3,716,025                  | 51,203                     | 971             | 7,592,223                                |
| Unrealized Gains (Losses)                    | 3,486,496                  | 1,820,382                  | 209,451                    | 553,283         | 6,069,612                                |
| TOTAL INCOME                                 | \$ 26,632,765              | \$ 15,860,400              | \$ 6,250,421               | \$ 1,427,564    | \$ 50,171,150                            |
| Less Distribution to<br>Participant Accounts | (26,632,765)               | (15,860,400)               | (5,581,478)                | (849,850)       | (48,924,493)                             |
| Undistributed Dedicated Income               | -0-                        | -0-                        | -0-                        | -0-             | -0-                                      |
| NET CHANGE IN UNDISTRIBUTED INCOME           | \$ -0-                     | \$ -0-                     | \$ 668,943                 | \$ 577,714      | \$ 1,246,657                             |
| FROM PARTICIPANT TRANSACTION:                |                            |                            |                            |                 |  |
| Additions to Participant Accounts            |                            |                            |                            |                 |  |
| Participant Contributions                    | 8,827,938                  | 1,761,894                  | 7,737,031                  | 4,335,492       | 22,662,355                               |
| Income Distribution                          | 26,632,765                 | 15,860,400                 | 5,581,478                  | 849,850         | 48,924,493                               |
| Income to be Distributed                     | -0-                        | -0-                        | -0-                        | -0-             | -0-                                      |
| TOTAL ADDITIONS                              | \$ 35,460,703              | \$ 17,622,294              | \$ 13,318,509              | \$ 5,185,342    | \$ 71,586,848                            |
| Deductions from<br>Participant Accounts      |                            |                            |                            |                 |  |
| Withdrawals                                  | 497,469                    | 6,051,564                  | 7,551,871                  | -0-             | 14,100,904                               |
| TOTAL DEDUCTIONS                             | \$ 497,469                 | \$ 6,051,564               | \$ 7,551,871               | \$ -0-          | \$ 14,100,904                            |
| NET CHANGE IN PARTICIPATION                  | \$ 34,963,234              | \$ 11,570,730              | \$ 5,766,638               | \$ 5,185,342    | \$ 57,485,944                            |
| TOTAL CHANGE IN ASSETS                       | 34,963,234                 | 11,570,730                 | 6,435,581                  | 5,763,056       | 58,732,601                               |
| NET ASSETS:                                  |                            |                            |                            |                 |  |
| Beginning of Period                          | 144,304,276                | 67,095,413                 | 70,455,863                 | 5,474,924       | 287,330,476                              |
| End of Period                                | \$ 179,267,510             | \$ 78,666,143              | \$ 76,891,444              | \$ 11,237,980   | \$ 346,063,077                           |



STATE BOARD OF INVESTMENT  
MINNESOTA SUPPLEMENTAL RETIREMENT FUND  
COMBINING STATEMENT OF OPERATIONS  
YEAR ENDED JUNE 30, 1986

|  | INCOME<br>SHARE<br>ACCOUNT | GROWTH<br>SHARE<br>ACCOUNT | FIXED<br>RETURN<br>ACCOUNT | BOND<br>ACCOUNT | SUPPLEMENTAL<br>RETIREMENT<br>FUND TOTAL |
|--|----------------------------|----------------------------|----------------------------|-----------------|--|
| INVESTMENT INCOME:                                       |                            |                            |                            |                 |  |
| Interest   | \$ 5,200,365               | \$ 1,250                   | \$ 2,362,240               | \$ 792,140      | \$ 8,355,995                             |
| Dividends  | 13,339,335                 | 10,204,208                 | -0-                        | -0-             | 23,543,543                               |
| Short Term Gains   | 861,929                    | 162,883                    | 3,643,872                  | 82,508          | 4,751,192                                |
| INCOME BEFORE EXPENSES                                   | \$ 19,401,629              | \$ 10,368,341              | \$ 6,006,112               | \$ 874,648      | \$ 36,650,730                            |
| Management Fees  | 79,384                     | 44,348                     | 16,345                     | 1,338           | 141,415                                  |
| NET INCOME   | \$ 19,322,245              | \$ 10,323,993              | \$ 5,989,767               | \$ 873,310      | \$ 36,509,315                            |
| REALIZED AND UNREALIZED GAIN<br>(LOSS) ON INVESTMENTS    |                            |                            |                            |                 |  |
| Realized:  |                            |                            |                            |                 |  |
| Proceeds from Sales                                      | \$ 105,178,963             | \$ 64,237,712              | \$ 56,721,539              | \$ 904,690      | \$ 227,042,904                           |
| Cost of Securities Sold                                  | 101,354,939                | 60,521,687                 | 56,670,336                 | 903,719         | 219,450,681                              |
| NET REALIZED GAIN (LOSS)                                 | \$ 3,824,024               | \$ 3,716,025               | \$ 51,203                  | \$ 971          | \$ 7,592,223                             |
| Unrealized   |                            |                            |                            |                 |  |
| Beginning of Period                                      | 12,028,216                 | 5,881,067                  | (209,451)                  | 387,996         | 18,087,828                               |
| End of period  | 15,514,712                 | 7,701,449                  | -0-                        | 941,279         | 24,157,440                               |
| INCREASE (DECREASE) IN<br>UNREALIZED APPRECIATION        | \$ 3,486,496               | \$ 1,820,382               | \$ 209,451                 | \$ 553,283      | \$ 6,069,612                             |
| NET REALIZED AND UNREALIZED<br>GAIN (LOSS) ON INVESTMENT | \$ 7,310,520               | \$ 5,536,407               | \$ 260,654                 | \$ 554,254      | \$ 13,661,835                            |

STATE BOARD OF INVESTMENT  
MINNESOTA SUPPLEMENTAL RETIREMENT FUND  
SCHEDULE OF PARTICIPATION  
JUNE 30, 1986

|                                   | INCOME<br>SHARE<br>ACCOUNT | GROWTH<br>SHARE<br>ACCOUNT | FIXED<br>RETURN<br>ACCOUNT | BOND<br>ACCOUNT | SUPPLEMENTAL<br>RETIREMENT<br>FUND TOTAL |
|-----------------------------------|----------------------------|----------------------------|----------------------------|-----------------|--|
| Albert Lea Firemen's Relief       | \$ 2,872,152               | \$ -0-                     | \$ 56,500                  | \$ 52,084       | \$ 2,980,736                             |
| Bloomington Fire Dept. Relief     | 8,446,615                  | 577,133                    | -0-                        | -0-             | 9,023,748                                |
| Bloomington Police Relief         | 906,620                    | -0-                        | -0-                        | -0-             | 906,620                                  |
| Buhl Police Relief                | -0-                        | -0-                        | -0-                        | 67,844          | 67,844                                   |
| Hennepin County Supplemental Ret. | 10,616,027                 | 8,909,132                  | 2,631,524                  | -0-             | 22,156,683                               |
| St. Paul Fire -General            | 306,405                    | 46,107                     | -0-                        | 114,646         | 467,158                                  |
| St. Paul Fire-Special             | 24,110,884                 | 5,594,378                  | 3,054,344                  | 9,880,307       | 42,639,913                               |
| St. Paul Police Relief            | 39,466,421                 | 4,682,702                  | -0-                        | -0-             | 44,149,123                               |
| MSRS Deferred Compensation        | 21,216,854                 | 17,892,261                 | 64,398,264                 | -0-             | 103,507,379                              |
| MSRS Unclassified Empl. Escrow    | 22,260,844                 | 8,587,960                  | 6,791,911                  | -0-             | 37,640,715                               |
| South St. Paul Policemen's Relief | 114,732                    | -0-                        | 8,295                      | 94,698          | 217,725                                  |
| Teacher's Supplemental Retirement | 48,648,110                 | 32,376,470                 | -0-                        | -0-             | 81,024,580                               |
| Winona Fire Dept. Relief          | 301,846                    | -0-                        | -0-                        | -0-             | 301,846                                  |
| TOTAL PARTICIPATION               | \$ 179,267,510             | \$ 78,666,143              | \$ 76,940,838              | \$ 10,209,579   | \$ 345,084,070                           |
| Adjustments                       |                            |                            |                            |                 |  |
| Unrealized Appreciation           |                            |                            |                            |                 |  |
| (Depreciation) of Investments     | -0-                        | -0-                        | -0-                        | 941,279         | 941,279                                  |
| Undistributed Earnings            | -0-                        | -0-                        | (49,394)                   | 87,122          | 37,728                                   |
| NET ASSETS                        | \$ 179,267,510             | \$ 78,666,143              | \$ 76,891,444              | \$ 11,237,980   | \$ 346,063,077                           |

STATE BOARD OF INVESTMENT  
MINNESOTA POOLED INVESTMENT ACCOUNTS  
SCHEDULE OF ASSETS AND LIABILITIES  
JUNE 30, 1986

|  | ACTIVE<br>EQUITY<br>ACCOUNT | PASSIVE<br>EQUITY<br>ACCOUNT | INTERNAL<br>EQUITY<br>ACCOUNT | REAL<br>ESTATE<br>ACCOUNT | RESOURCE<br>ACCOUNT | VENTURE<br>CAPITAL<br>ACCOUNT | BOND<br>MANAGERS<br>ACCOUNT |
|--|-----------------------------|------------------------------|-------------------------------|---------------------------|---------------------|-------------------------------|-----------------------------|
| <b>ASSETS:</b>   |                             |                              |                               |                           |                     |                               |                             |
| INVESTMENTS (at market value)(1)                                       |                             |                              |                               |                           |                     |                               |                             |
| Common Stock   | \$ 958,612,421              | \$ 1,977,353,380             | \$ 187,294,741                | \$ -0-                    | \$ -0-              | \$ -0-                        | \$ -0-                      |
| Alternative Equities   | -0-                         | -0-                          | -0-                           | 329,790,980               | 32,377,684          | 65,118,841                    | -0-                         |
| Fixed Income Securities  | 13,892,610                  | 101,917                      | -0-                           | -0-                       | -0-                 | -0-                           | 1,033,120,097               |
| Short Term Securities  | 88,425,157                  | 13,728,745                   | 14,139,998                    | 1,111,655                 | 4,562,123           | 322,793                       | 48,075,731                  |
| TOTAL INVESTMENTS(2)   | \$ 1,060,930,188            | \$ 1,991,184,042             | \$ 201,434,739                | \$ 330,902,635            | \$ 36,939,807       | \$ 65,441,634                 | \$ 1,081,195,828            |
| Cash With State Treasurer  | 4                           | -0-                          | 1                             | 1                         | 1                   | -0-                           | 4                           |
| Security Sales Receivable  | 23,579,727                  | 873,792                      | -0-                           | -0-                       | -0-                 | -0-                           | 5,714,520                   |
| Accounts Receivable-Mortality  | -0-                         | -0-                          | -0-                           | -0-                       | -0-                 | -0-                           | -0-                         |
| Accounts Receivable-Participants                                       | -0-                         | -0-                          | -0-                           | -0-                       | -0-                 | -0-                           | -0-                         |
| Accrued Interest   | 218,068                     | 178                          | -0-                           | -0-                       | -0-                 | -0-                           | 17,996,063                  |
| Accrued Dividends  | 2,075,745                   | 5,700,132                    | 587,323                       | 962,047                   | 20,425              | -0-                           | -0-                         |
| Accrued Short Term Gain  | 498,432                     | 65,290                       | 76,431                        | 56,205                    | 25,892              | 20,633                        | 502,456                     |
| TOTAL ASSETS   | \$ 1,087,302,164            | \$ 1,997,823,434             | \$ 202,098,494                | \$ 331,920,888            | \$ 36,986,125       | \$ 65,462,267                 | \$ 1,105,408,871            |
| <b>LIABILITIES:</b>  |                             |                              |                               |                           |                     |                               |                             |
| Management Fees Payable  | 1,128,102                   | 61,144                       | -0-                           | -0-                       | -0-                 | -0-                           | 488,571                     |
| Security Purchases Payable   | 23,271,419                  | 3,698,853                    | 121,045                       | -0-                       | -0-                 | -0-                           | 26,470,462                  |
| Accounts Payable to Teachers   | -0-                         | -0-                          | -0-                           | -0-                       | -0-                 | -0-                           | -0-                         |
| Options Premiums Received  | -0-                         | -0-                          | -0-                           | -0-                       | -0-                 | -0-                           | -0-                         |
| TOTAL LIABILITIES  | \$ 24,399,521               | \$ 3,759,997                 | \$ 121,045                    | \$ -0-                    | \$ -0-              | \$ -0-                        | \$ 26,959,033               |
| NET ASSETS AT JUNE 30, 1986  | \$ 1,062,902,643            | \$ 1,994,063,437             | \$ 201,977,449                | \$ 331,920,888            | \$ 36,986,125       | \$ 65,462,267                 | \$ 1,078,449,838            |
| <br>(1)The cost of investments<br>at June 30, was:                     |                             |                              |                               |                           |                     |                               |                             |
| Common Stock   | \$ 763,316,312              | \$ 1,389,861,607             | \$ 165,754,451                | \$ -0-                    | \$ -0-              | \$ -0-                        | \$ -0-                      |
| Alternative Equities   | -0-                         | -0-                          | -0-                           | 286,700,288               | 44,166,486          | 65,196,837                    | -0-                         |
| Fixed Income Securities  | 12,545,067                  | 19,653                       | -0-                           | -0-                       | -0-                 | -0-                           | 1,003,382,680               |
| Short Term Securities  | 88,425,157                  | 13,728,745                   | 14,139,998                    | 1,111,655                 | 4,562,123           | 322,793                       | 48,075,731                  |
| Total Investments at Cost  | \$ 864,286,536              | \$ 1,403,610,005             | \$ 179,894,449                | \$ 287,811,943            | \$ 48,728,609       | \$ 65,519,630                 | \$ 1,051,458,411            |
| <br>(2)The market of loaned securities<br>outstanding at June 30, was: |                             |                              |                               |                           |                     |                               |                             |
|  | \$ 36,571,101               | \$ 10,875,550                | \$ 6,602,419                  | \$ -0-                    | \$ -0-              | \$ -0-                        | \$ 7,381,590                |

STATE BOARD OF INVESTMENT  
MINNESOTA POOLED ACCOUNTS  
SCHEDULE OF CHANGES IN NET ASSETS  
YEAR ENDED JUNE 30, 1986

|  | ACTIVE<br>EQUITY<br>ACCOUNT | PASSIVE<br>EQUITY<br>ACCOUNT | INTERNAL<br>EQUITY<br>ACCOUNT | REAL<br>ESTATE<br>ACCOUNT | RESOURCE<br>ACCOUNT | VENTURE<br>CAPITAL<br>ACCOUNT | BOND<br>MANAGERS<br>ACCOUNT |
|--|-----------------------------|------------------------------|-------------------------------|---------------------------|---------------------|-------------------------------|-----------------------------|
| FROM INVESTMENT ACTIVITY:                    |                             |                              |                               |                           |                     |                               |                             |
| Net Investment Income                        | \$ 25,666,358               | \$ 62,949,822                | \$ 4,923,199                  | \$ 5,933,695              | \$ 1,767,074        | \$ 564,681                    | \$ 96,943,535               |
| Realized Gains (Losses)                      | 126,237,862                 | 71,197,793                   | 17,726,023                    | -0-                       | (2,461,040)         | (45,942)                      | 78,488,466                  |
| Unrealized Gains (Losses)                    | 107,217,012                 | 409,043,297                  | 21,540,290                    | 16,249,009                | (11,788,802)        | (85,854)                      | (13,493,131)                |
| TOTAL INCOME                                 | \$ 259,121,232              | \$ 543,190,912               | \$ 44,189,512                 | \$ 22,182,704             | \$ (12,482,768)     | \$ 432,885                    | \$ 161,938,870              |
| Less Distribution to<br>Participant Accounts | (151,856,972)               | (134,158,207)                | (22,649,222)                  | (5,306,041)               | 466,394             | (518,739)                     | (175,542,773)               |
| Undistributed Dedicated Income               | (47,248)                    | 10,592                       | -0-                           | (627,654)                 | 227,572             | -0-                           | 110,772                     |
| NET CHANGE IN UNDISTRIBUTED INCOME           | \$ 107,217,012              | \$ 409,043,297               | \$ 21,540,290                 | \$ 16,249,009             | \$ (11,788,802)     | \$ (85,854)                   | \$ (13,493,131)             |
| FROM PARTICIPANT TRANSACTION:                |                             |                              |                               |                           |                     |                               |                             |
| Additions to Participant Accounts            |                             |                              |                               |                           |                     |                               |                             |
| Participant Contributions                    | 640,441,500                 | 10,022,013                   | 160,851,562                   | 101,000,000               | 24,000,000          | 24,500,000                    | 5,659,055                   |
| Income Distribution                          | 151,856,972                 | 134,158,207                  | 22,649,222                    | 5,306,041                 | (466,394)           | 518,739                       | 175,542,773                 |
| Income to be Distributed                     | 47,248                      | (10,592)                     | -0-                           | 627,654                   | (227,572)           | -0-                           | (110,772)                   |
| TOTAL ADDITIONS                              | \$ 792,345,720              | \$ 144,169,628               | \$ 183,500,784                | \$ 106,933,695            | \$ 23,306,034       | \$ 25,018,739                 | \$ 181,091,056              |
| Deductions from<br>Participant Accounts      |                             |                              |                               |                           |                     |                               |                             |
| Withdrawals                                  | 526,559,056                 | 153,522,013                  | 3,063,625                     | -0-                       | -0-                 | -0-                           | 11,205,490                  |
| TOTAL DEDUCTIONS                             | \$ 526,559,056              | \$ 153,522,013               | \$ 3,063,625                  | \$ -0-                    | \$ -0-              | \$ -0-                        | \$ 11,205,490               |
| NET CHANGE IN PARTICIPATION                  | \$ 265,786,664              | \$ (9,352,385)               | \$ 180,437,159                | \$ 106,933,695            | \$ 23,306,034       | \$ 25,018,739                 | \$ 169,885,566              |
| TOTAL CHANGE IN ASSETS                       | \$ 373,003,676              | \$ 399,690,912               | \$ 201,977,449                | \$ 123,182,704            | \$ 11,517,232       | \$ 24,932,885                 | \$ 156,392,435              |
| NET ASSETS:                                  |                             |                              |                               |                           |                     |                               |                             |
| Beginning of Period                          | 689,898,967                 | 1,594,372,525                | -0-                           | 208,738,184               | 25,468,893          | 40,529,382                    | 922,057,403                 |
| End of Period                                | \$1,062,902,643             | \$1,994,063,437              | \$ 201,977,449                | \$ 331,920,888            | \$ 36,986,125       | \$ 65,462,267                 | \$1,078,449,838             |

STATE BOARD OF INVESTMENT  
MINNESOTA POOLED INVESTMENT ACCOUNTS  
SCHEDULE OF OPERATIONS  
YEAR ENDED JUNE 30, 1986

|  | ACTIVE<br>EQUITY<br>ACCOUNT | PASSIVE<br>EQUITY<br>ACCOUNT | INTERNAL<br>EQUITY<br>ACCOUNT | REAL<br>ESTATE<br>ACCOUNT | RESOURCE<br>ACCOUNT | VENTURE<br>CAPITAL<br>ACCOUNT | BOND<br>MANAGERS<br>ACCOUNT |
|--|-----------------------------|------------------------------|-------------------------------|---------------------------|---------------------|-------------------------------|-----------------------------|
| INVESTMENT INCOME:                                       |                             |                              |                               |                           |                     |                               |                             |
| Interest   | \$ 545,140                  | \$ 370,553                   | \$ 10,128                     | \$ -0-                    | \$ -0-              | \$ -0-                        | \$ 93,842,101               |
| Dividends  | 20,735,758                  | 61,538,858                   | 4,411,657                     | 5,355,089                 | 1,545,433           | 119,132                       | -0-                         |
| Short Term Gains   | 8,400,190                   | 1,367,819                    | 501,414                       | 578,606                   | 239,643             | 445,549                       | 4,968,634                   |
| INCOME BEFORE EXPENSES                                   | \$ 29,681,088               | \$ 63,277,230                | \$ 4,923,199                  | \$ 5,933,695              | \$ 1,785,076        | \$ 564,681                    | \$ 98,810,735               |
| Management Fees  | 4,014,730                   | 327,408                      | -0-                           | -0-                       | 18,002              | -0-                           | 1,867,200                   |
| NET INCOME   | \$ 25,666,358               | \$ 62,949,822                | \$ 4,923,199                  | \$ 5,933,695              | \$ 1,767,074        | \$ 564,681                    | \$ 96,943,535               |
| REALIZED AND UNREALIZED GAIN<br>(LOSS) ON INVESTMENTS    |                             |                              |                               |                           |                     |                               |                             |
| Realized:  |                             |                              |                               |                           |                     |                               |                             |
| Proceeds from Sales                                      | \$ 1,338,022,062            | \$ 316,270,648               | \$ 80,920,368                 | \$ -0-                    | \$ 899,169          | \$ 284,888                    | \$ 1,661,111,269            |
| Cost of Securities Sold                                  | 1,211,784,200               | 245,072,855                  | 63,194,345                    | -0-                       | 3,360,209           | 330,830                       | 1,582,622,803               |
| NET REALIZED GAIN (LOSS)                                 | \$ 126,237,862              | \$ 71,197,793                | \$ 17,726,023                 | \$ -0-                    | \$ (2,461,040)      | \$ (45,942)                   | \$ 78,488,466               |
| Unrealized   |                             |                              |                               |                           |                     |                               |                             |
| Beginning of Period                                      | 89,426,640                  | 178,530,740                  | -0-                           | 26,841,683                | -0-                 | 7,858                         | 43,230,548                  |
| End of Period  | 196,643,652                 | 587,574,037                  | 21,540,290                    | 43,090,692                | (11,788,802)        | (77,996)                      | 29,737,417                  |
| INCREASE (DECREASE) IN<br>UNREALIZED APPRECIATION        | \$ 107,217,012              | \$ 409,043,297               | \$ 21,540,290                 | \$ 16,249,009             | \$ (11,788,802)     | \$ (85,854)                   | \$ (13,493,131)             |
| NET REALIZED AND UNREALIZED<br>GAIN (LOSS) ON INVESTMENT | \$ 233,454,874              | \$ 480,241,090               | \$ 39,266,313                 | \$ 16,249,009             | \$ (14,249,842)     | \$ (131,796)                  | \$ 64,995,335               |

STATE BOARD OF INVESTMENT  
MINNESOTA POOLED ACCOUNTS  
SCHEDULE OF PARTICIPATION  
JUNE 30, 1986

|                                   | ACTIVE<br>EQUITY<br>ACCOUNT | PASSIVE<br>EQUITY<br>ACCOUNT | INTERNAL<br>EQUITY<br>ACCOUNT | REAL<br>ESTATE<br>ACCOUNT | RESOURCE<br>ACCOUNT | VENTURE<br>CAPITAL<br>ACCOUNT | BOND<br>MANAGERS<br>ACCOUNT | POOLED<br>ACCOUNT<br>TOTAL |
|-----------------------------------|-----------------------------|------------------------------|-------------------------------|---------------------------|---------------------|-------------------------------|-----------------------------|----------------------------|
| Teachers Retirement Fund          | \$ 384,198,681              | \$ 821,685,550               | \$ -0-                        | \$ 136,804,684            | \$ 15,280,016       | \$ 27,009,831                 | \$ 444,444,898              | \$ 1,829,423,660           |
| Public Employees Retirement Fund  | 263,400,393                 | 563,178,556                  | -0-                           | 93,815,724                | 10,400,234          | 18,492,558                    | 304,701,660                 | 1,253,989,125              |
| State Employees Retirement Fund   | 195,975,551                 | 419,430,459                  | -0-                           | 69,769,082                | 7,788,978           | 13,754,423                    | 226,708,387                 | 933,426,880                |
| Public Employees Police & Fire    | 73,521,489                  | 157,473,072                  | -0-                           | 26,167,577                | 2,918,526           | 5,150,709                     | 85,141,486                  | 350,372,859                |
| Highway Patrolmen's Retirement    | 14,116,009                  | 30,252,525                   | -0-                           | 5,023,637                 | 560,376             | 987,581                       | 16,347,029                  | 67,287,157                 |
| Judges Retirement Fund            | 955,379                     | 2,043,275                    | -0-                           | 340,184                   | 37,995              | 67,165                        | 1,106,378                   | 4,550,376                  |
| Supplemental Income Share Account | 12,732,298                  | -0-                          | 96,331,757                    | -0-                       | -0-                 | -0-                           | -0-                         | 109,064,055                |
| Supplemental Growth Share Account | 38,525,821                  | -0-                          | 39,646,086                    | -0-                       | -0-                 | -0-                           | -0-                         | 78,171,907                 |
| Variable Annuity Fund             | <u>79,477,022</u>           | <u>-0-</u>                   | <u>65,999,606</u>             | <u>-0-</u>                | <u>-0-</u>          | <u>-0-</u>                    | <u>-0-</u>                  | <u>145,476,628</u>         |
| TOTAL PARTICIPATION               | \$1,062,902,643             | \$1,994,063,437              | \$ 201,977,449                | \$ 331,920,888            | \$ 36,986,125       | \$ 65,462,267                 | \$1,078,449,838             | \$ 4,771,762,647           |

MINNESOTA STATE BOARD OF INVESTMENT  
POST RETIREMENT FUND  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 306,950          | ADVANCED MICRO DEV.       | \$ | 6,139,000       |
| 226,563          | ALLIED BANCSHARES INC.    |    | 3,568,367       |
| 143,100          | ALUMINUM CO. OF AMERICA   |    | 5,455,688       |
| 131,800          | AMER. GENERAL CORP.       |    | 5,552,075       |
| 225,100          | AMER. MEDICAL INT'L.      |    | 3,911,113       |
| 76,000           | AMERICAN STORES CO NEW    |    | 5,320,000       |
| 383,655          | ARCHER DANIELS MIDLAND CO |    | 7,001,704       |
| 169,050          | ATLANTIC RICHFIELD        |    | 8,790,600       |
| 263,300          | BANKAMERICA CORPORATION   |    | 4,114,063       |
| 117,600          | BANKERS TRUST NY CORP.    |    | 5,688,900       |
| 184,700          | BAXTER TRAVENOL LABS      |    | 3,486,213       |
| 83,700           | BOEING COMPANY            |    | 5,273,100       |
| 181,200          | BORG-WARNER               |    | 6,364,650       |
| 124,300          | BROWN GROUP               |    | 4,738,938       |
| 65,650           | BURROUGHS CORPORATION     |    | 4,037,475       |
| 321,700          | CANADIAN PACIFIC LTD      |    | 3,900,613       |
| 162,550          | CATERPILLAR INC.          |    | 8,086,863       |
| 100,900          | CHASE MANHATTAN CORP.     |    | 4,477,438       |
| 97,000           | CHEMICAL NEW YORK CORP    |    | 4,971,250       |
| 89,000           | CITICORP                  |    | 5,317,750       |
| 559,950          | CITY INVESTING LIQ. TRUST |    | 3,779,663       |
| 145,900          | CLARK EQUIP CO            |    | 3,209,800       |
| 181,700          | COMBUSTION ENGINEERING    |    | 5,519,138       |
| 332,400          | COMMONWEALTH EDISON CO.   |    | 10,678,350      |
| 106,500          | COMMUNICATIONS SATELLITE  |    | 3,647,625       |
| 161,300          | COMMUNITY PSYCHIATRIC CEN |    | 4,859,163       |
| 168,350          | CONTEL CORP               |    | 5,071,544       |
| 320,700          | CONTROL DATA CORP.        |    | 7,215,750       |
| 208,400          | COOPER TIRE & RUBBER      |    | 5,001,600       |
| 189,000          | DEERE & COMPANY           |    | 5,386,500       |
| 100,000          | DOVER CORP.               |    | 4,150,000       |
| 188,400          | DRESSER INDUSTRIES        |    | 3,508,950       |
| 189,600          | E-SYSTEMS                 |    | 6,636,000       |
| 153,300          | EMHART CORP VA            |    | 5,557,125       |
| 180,600          | ENGLEHARD CORP            |    | 5,056,800       |
| 172,750          | EXXON CORPORATION         |    | 10,516,156      |
| 82,600           | FIRST INTERSTATE BANCORP. |    | 5,121,200       |
| 135,000          | GENERAL DYNAMICS          |    | 10,327,500      |
| 60,900           | GENERAL ELECTRIC CO.      |    | 4,932,900       |
| 126,400          | GENERAL MOTORS CORP.      |    | 9,811,800       |
| 427,750          | GENRAD INC.               |    | 3,742,813       |
| 300,300          | GREYHOUND CORP.           |    | 10,585,575      |
| 97,550           | GTE CORP.                 |    | 5,279,894       |
| 383,400          | HALLIBURTON INC.          |    | 8,530,650       |
| 459,950          | HOME GROUP INC            |    | 12,016,194      |
| 76,000           | HONDA MOTORS NEW          |    | 5,453,000       |
| 62,500           | HONEYWELL INC.            |    | 4,734,375       |

MINNESOTA STATE BOARD OF INVESTMENT  
POST RETIREMENT FUND  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 150,800          | HOSPITAL CORP. OF AMER.   | \$ | 5,730,400       |
| 103,400          | HOUSEHOLD INTL.           |    | 4,484,975       |
| 153,850          | HOUSTON INDUSTRIES INC.   |    | 4,846,275       |
| 175,000          | INTEL CORP.               |    | 4,025,000       |
| 58,600           | INTL. BUSINESS MACHINES   |    | 8,584,900       |
| 117,400          | K MART CORPORATION        |    | 6,677,125       |
| 88,900           | LEAR SIEGLER INC.         |    | 4,856,163       |
| 111,800          | LITTON INDS INC.          |    | 9,055,800       |
| 208,030          | LOCKHEED AIRCRAFT CORP    |    | 11,597,673      |
| 299,600          | LONG ISLAND LTG CO        |    | 3,745,000       |
| 867,450          | LTV CORP                  |    | 4,445,681       |
| 97,000           | MANUFACTURERS HAN. CORP.  |    | 5,007,625       |
| 132,000          | MCDONNELL DOUGLAS CORP.   |    | 10,279,500      |
| 1,586,100        | MCI COMMUNICATION         |    | 16,455,788      |
| 254,000          | MCORP                     |    | 4,730,750       |
| 85,200           | MELLON BANK CORP          |    | 5,953,350       |
| 94,800           | MELVILLE CORPORATION      |    | 6,730,800       |
| 264,300          | MIDDLE SOUTH UTILS INC    |    | 3,435,900       |
| 162,850          | MOBIL CORPORATION         |    | 5,150,131       |
| 239,000          | NATL. MED. ENTER. INC.    |    | 5,586,625       |
| 465,000          | NATL. SEMICONDUCTOR       |    | 5,463,750       |
| 500,000          | NAVISTAR INTERNATIONAL CO |    | 4,562,500       |
| 106,250          | NCR CORP.                 |    | 5,458,594       |
| 243,400          | NETWORK SYSTEMS CORP.     |    | 3,133,775       |
| 270,300          | NORTHEAST UTILITIES       |    | 5,845,238       |
| 390,550          | NORTHERN IND PUB SVC CO   |    | 4,588,963       |
| 165,000          | NORTHERN TELECOM LTD.     |    | 4,908,750       |
| 94,600           | NORTHROP CORP             |    | 4,730,000       |
| 357,000          | OCEAN DRILLING & EXPL CO  |    | 4,239,375       |
| 250,650          | PHILADELPHIA ELEC. CO.    |    | 5,075,663       |
| 483,300          | PHILLIPS PETROLEUM CO.    |    | 4,651,763       |
| 113,400          | PIONEER HI-BRED INT'L.    |    | 4,621,050       |
| 80,200           | RAYTHEON COMPANY          |    | 5,102,725       |
| 308,400          | REPUBLIC BANK CORP        |    | 8,905,050       |
| 134,800          | REVCO D.S.                |    | 5,004,450       |
| 855,000          | ROWAN COMPANIES INC       |    | 4,702,500       |
| 63,350           | ROYAL DUTCH PET. GLDRS.   |    | 5,099,675       |
| 181,050          | RYDER SYSTEMS INC.        |    | 5,295,713       |
| 59,000           | SANDERS ASSOCIATES        |    | 3,171,250       |
| 549,200          | SCHLUMBERGER LTD          |    | 18,878,750      |
| 105,500          | SEA CONTAINERS LTD.       |    | 2,703,438       |
| 236,800          | SERVICE MERCHANDISE       |    | 2,900,800       |
| 124,300          | SHARED MED. SYSTEMS CORP. |    | 4,210,663       |
| 122,500          | SHELL TRANSPORT & TRADING |    | 6,063,750       |
| 261,500          | SONAT INC.                |    | 7,452,750       |
| 129,400          | SOUTHERN CO               |    | 3,073,250       |
| 92,600           | SOUTHLAND CORP.           |    | 5,069,850       |



MINNESOTA STATE BOARD OF INVESMENT  
 POST RETIREMENT FUND  
 ALPHABETICAL EQUITY HOLDINGS  
 JUNE 30 , 1986

| NO. OF<br>SHARES       | SECURITY                  |    | MARKET<br>VALUE |
|------------------------|---------------------------|----|-----------------|
| 86,000                 | SPERRY CORP.              | \$ | 6,514,500       |
| 169,450                | STANDARD OIL CO. OHIO     |    | 7,646,431       |
| 59,300                 | STERLING DRUG INC         |    | 2,876,050       |
| 120,850                | TENNECO INC.              |    | 4,803,788       |
| 210,400                | TERADYNE INC.             |    | 4,628,800       |
| 403,800                | TEXACO INC.               |    | 12,719,700      |
| 316,800                | TEXAS COMMERCE BANKSHARES |    | 6,890,400       |
| 147,500                | TEXAS EASTERN CORP.       |    | 5,365,313       |
| 176,100                | TOYS R US                 |    | 5,987,400       |
| 114,800                | TRACOR INC.               |    | 2,626,050       |
| 183,000                | TYCO LABS                 |    | 6,427,875       |
| 792,241                | U.S. STEEL                |    | 16,339,971      |
| 108,250                | UNITED TECHNOLOGIES CORP. |    | 5,358,375       |
| 181,750                | UNITED TELECOM. INC.      |    | 4,952,688       |
| 255,000                | UNOCAL CORP.              |    | 5,036,250       |
| 145,200                | US AIR GROUP              |    | 4,628,250       |
| 147,800                | US FIDELITY & GUAR. CO.   |    | 5,893,525       |
| 182,000                | USG CORP HOLDING CO.      |    | 7,439,250       |
| 337,650                | WANG LABS CL B            |    | 5,106,956       |
| 187,500                | WILLIAMS COS              |    | 4,406,250       |
| 18,120                 | YORK INTL CORP            |    | 308,040         |
| TOTAL EQUITY PORTFOLIO |                           | \$ | 678,775,210     |

MINNESOTA STATE BOARD OF INVESTMENT  
POST RETIREMENT FUND  
ALPHABETICAL BOND HOLDINGS  
JUNE 30 , 1986

| PAR<br>VALUE | SECURITY                  | MATURITY   | COUPON    | MARKET<br>VALUE |
|--------------|---------------------------|------------|-----------|-----------------|
| 100,000      | ALBERTA GOVT TEL COM      | 06/15/1994 | 8.000% \$ | 100,284         |
| 13,675,000   | AMERICAN CAN              | 10/15/1992 | 11.125%   | 14,839,563      |
| 1,000,000    | AMERICAN TELEPHONE & TELE | 08/01/2000 | 6.000%    | 789,910         |
| 809,000      | AMOCO CORP                | 07/15/2004 | 9.200%    | 813,045         |
| 13,477,000   | ARCHER DANIELS MIDLAND CO | 05/01/1992 | 0.000%    | 8,152,911       |
| 1,105,000    | ARISTAR INC.              | 05/15/1990 | 8.500%    | 1,112,017       |
| 6,000,000    | ASSOCIATES CORP. NORTH AM | 11/15/1992 | 11.450%   | 6,684,720       |
| 2,102,000    | ATLANTIC RICHFIELD        | 07/15/2005 | 10.875%   | 2,343,730       |
| 4,008,555    | ATLANTIC RICHFIELD CO.    | 07/15/1996 | 9.250%    | 4,167,495       |
| 2,689,618    | ATLANTIC RICHFIELD CO.    | 12/01/2001 | 8.750%    | 2,734,884       |
| 7,896,000    | AVCO FINANCIAL CORP       | 02/01/1990 | 11.125%   | 8,424,006       |
| 10,000,000   | BANKAMERICA CORP.         | 12/01/2003 | 7.875%    | 8,400,000       |
| 5,000,000    | BELL TEL CO OF PENNA      | 01/15/2019 | 9.250%    | 4,993,750       |
| 15,000,000   | BENEFICIAL CORP.          | 07/15/2002 | 7.500%    | 12,450,000      |
| 1,175,000    | BROOKLYN UNION GAS        | 04/01/1990 | 4.625%    | 1,020,781       |
| 1,715,126    | BURLINGTON NORTHERN       | 09/01/1993 | 8.750%    | 1,696,877       |
| 145,574      | BURLINGTON NORTHERN       | 07/03/1993 | 8.500%    | 143,322         |
| 1,656,000    | C.I.T. FINANCIAL          | 08/01/1988 | 13.625%   | 1,839,816       |
| 7,790,000    | C.I.T. FINANCIAL CORP.    | 04/01/2001 | 8.375%    | 7,166,800       |
| 3,000,000    | CANADIAN PACIFIC, LTD.    | 01/15/1992 | 8.625%    | 3,037,500       |
| 5,000,000    | CENTRAL POWER & LIGHT     | 06/01/2004 | 9.375%    | 4,924,850       |
| 750,000      | CERTIFICATES ACCRUAL TREA | 11/15/1998 | 0.000%    | 264,555         |
| 15,000,000   | CHESAPEAKE & POTOMAC TEL. | 04/15/2019 | 9.500%    | 15,000,000      |
| 1,104,000    | CHEVRON CAPITAL           | 11/01/1988 | 11.750%   | 1,193,700       |
| 18,140,000   | CHEVRON CORP.             | 07/01/2005 | 8.750%    | 17,233,000      |
| 7,904,000    | CHRYSLER CORP             | 03/01/1992 | 12.750%   | 9,119,240       |
| 15,000,000   | CHRYSLER CORPORATION      | 08/01/1992 | 11.040%   | 16,591,950      |
| 1,320,000    | CITICORP                  | 03/15/2007 | 8.450%    | 1,194,600       |
| 1,000,000    | CITIZENS UTILITIES        | 12/31/1991 | 4.800%    | 898,870         |
| 6,000,000    | COUPON TREASURY RCPT      | 02/15/1999 | 0.000%    | 2,035,080       |
| 1,734,375    | COUPON TREASURY RCPT      | 11/15/1993 | 0.000%    | 965,648         |
| 1,040,040    | COUPON TREASURY RCPT      | 02/15/1989 | 0.000%    | 857,253         |
| 250,000      | COUPON TREASURY RCPTS     | 08/15/1991 | 0.000%    | 168,483         |
| 4,821,000    | COUPON TREASURY RCPTS     | 11/15/2000 | 0.000%    | 1,407,587       |
| 1,320,000    | COUPON TREASURY RCPTS     | 08/15/1991 | 0.000%    | 889,588         |
| 945,000      | COUPON TREASURY RCPTS     | 11/15/1998 | 0.000%    | 331,374         |
| 1,656,250    | COUPON TREASURY RCPTS     | 11/15/1998 | 0.000%    | 580,781         |
| 668,990      | COUPON TREASURY RCPTS     | 11/15/1998 | 0.000%    | 234,588         |
| 166,875      | COUPON TREASURY RCPTS     | 08/15/1991 | 0.000%    | 112,462         |
| 1,650,000    | DEERE (JOHN) CREDIT       | 10/31/1990 | 5.000%    | 1,460,448       |
| 7,000,000    | DOW CHEMICAL COMPANY      | 07/15/2007 | 7.875%    | 6,020,000       |
| 4,000,000    | DU PONT (E.I.) DENEMOURS  | 12/01/2001 | 6.000%    | 3,130,000       |
| 1,177,000    | EXPORT DEVELOPMENT CORP   | 07/15/1987 | 14.375%   | 1,260,190       |
| 250,000      | FARRELL LINES, INC        | 06/29/1997 | 8.350%    | 237,635         |
| 40,000,000   | FEDERAL FARM CREDIT BANK  | 10/20/1997 | 11.900%   | 50,224,800      |
| 10,000,000   | FEDERAL FARM CREDIT BANK  | 10/21/1991 | 10.600%   | 11,031,200      |
| 12,000,000   | FEDERAL FARM CREDIT BANK  | 10/20/1993 | 11.800%   | 14,287,440      |

MINNESOTA STATE BOARD OF INVESTMENT  
POST RETIREMENT FUND  
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JUNE 30 , 1986

| PAR<br>VALUE | SECURITY                  | MATURITY   | COUPON     | MARKET<br>VALUE |
|--------------|---------------------------|------------|------------|-----------------|
| 5,000,000    | FEDERAL FARM CREDIT BANK  | 03/01/1994 | 12.350% \$ | 6,140,600       |
| 2,500,000    | FEDERAL FARM CREDIT BANK  | 09/01/1988 | 12.875%    | 2,765,625       |
| 15,000,000   | FEDERAL FARM CREDIT BANK  | 04/22/1991 | 14.100%    | 18,506,250      |
| 665,000      | FEDERAL FARM CREDIT BANK  | 12/02/1991 | 13.650%    | 819,613         |
| 4,250,000    | FEDERAL FARM CREDIT BANK  | 10/20/1986 | 10.750%    | 4,301,128       |
| 10,000,000   | FEDERAL HOME LOAN BANK    | 09/25/1991 | 11.750%    | 11,587,500      |
| 5,000,000    | FEDERAL HOME LOAN BANK    | 04/27/1992 | 11.700%    | 5,821,850       |
| 4,410,000    | FEDERAL HOME LOAN BANK    | 08/25/1987 | 12.625%    | 4,688,359       |
| 5,240,000    | FEDERAL HOME LOAN BANK    | 02/27/1989 | 15.100%    | 6,196,300       |
| 10,620,000   | FEDERAL HOME LOAN BANK    | 11/26/1990 | 13.700%    | 12,903,300      |
| 27,000,000   | FEDERAL HOME LOAN BANKS   | 07/26/1993 | 11.700%    | 32,062,500      |
| 2,515,000    | FEDERAL HOME LOAN BANKS   | 12/27/1993 | 12.150%    | 3,073,003       |
| 5,000,000    | FEDERAL HOME LOAN BANKS   | 09/25/1989 | 12.500%    | 5,687,500       |
| 6,470,000    | FEDERAL HOME LOAN BANKS   | 02/25/1992 | 11.450%    | 7,448,588       |
| 4,730,000    | FEDERAL NATIONAL MORTGAGE | 10/13/1987 | 12.550%    | 5,053,721       |
| 5,000,000    | FIRESTONE TIRE & RUBBER   | 12/01/2004 | 9.250%     | 4,756,250       |
| 5,650,000    | FMC CORP                  | 01/15/2000 | 9.500%     | 5,706,500       |
| 1,850,000    | FORD MOTOR COMPANY        | 07/15/1994 | 9.250%     | 1,887,000       |
| 5,800,000    | FORD MOTOR CREDIT CO      | 04/01/1999 | 8.700%     | 5,582,500       |
| 5,000,000    | GENERAL FOODS INC         | 06/15/2001 | 6.000%     | 3,830,400       |
| 5,000,000    | GENERAL MOTORS ACCEPT COR | 11/15/2006 | 8.250%     | 4,600,000       |
| 5,000,000    | GENERAL MOTORS ACCEPT COR | 06/15/2001 | 8.750%     | 4,818,750       |
| 8,500,000    | GENERAL MOTORS ACCEPT COR | 06/01/1999 | 8.875%     | 8,521,250       |
| 5,290,000    | GENERAL MOTORS ACCEPT COR | 04/15/1988 | 10.375%    | 5,534,663       |
| 261,000      | GENERAL MOTORS ACCEPT COR | 10/01/1986 | 12.000%    | 263,774         |
| 13,000,000   | GENERAL MOTORS ACCEPT COR | 04/01/2011 | 6.000%     | 9,408,750       |
| 1,000,000    | GENERAL TEL CO (FLA)      | 05/01/1993 | 4.500%     | 797,910         |
| 8,150,000    | GREYHOUND LEASING         | 04/01/1994 | 13.625%    | 9,270,625       |
| 200,000      | HARBOR TUG & BARGE        | 03/15/2001 | 8.150%     | 187,784         |
| 7,320,000    | HOUSEHOLD FINANCE CORP.   | 10/01/2003 | 8.375%     | 6,633,750       |
| 5,000,000    | INTL BK FOR RECON. & DEVL | 09/01/1992 | 13.625%    | 5,900,000       |
| 482,000      | INTL. BANK OF RECON & DEV | 08/01/1987 | 7.750%     | 483,354         |
| 4,950,000    | JEWEL CO'S INC.           | 12/01/1992 | 11.500%    | 5,270,661       |
| 3,600,000    | KMART                     | 03/01/2005 | 12.500%    | 4,023,036       |
| 1,039,000    | LACHMAR HULL 54 US        | 09/25/1988 | 14.000%    | 1,099,262       |
| 5,225,477    | LNM ACCEPTANCE CORP       | 12/01/1986 | 9.100%     | 5,249,671       |
| 1,000,000    | LONG ISLAND LIGHTING      | 04/01/1993 | 4.400%     | 835,620         |
| 2,466,500    | LOUISVILLE & NASHVILLE    | 10/20/1991 | 9.000%     | 2,476,168       |
| 65,477       | LOUISVILLE & NASHVILLE    | 04/20/1988 | 8.125%     | 65,168          |
| 50,000       | MACMILLAN BLOEDEL LTD.    | 07/15/1992 | 6.500%     | 43,740          |
| 5,440,000    | MANITOBA HYDRO ELEC BD    | 10/15/1997 | 7.650%     | 5,221,312       |
| 4,330,000    | MANITOBA PROVINCE OF      | 07/01/1991 | 14.750%    | 5,454,674       |
| 1,020,000    | MANITOBA, PROVINCE OF     | 04/01/1994 | 7.875%     | 1,003,904       |
| 800,000      | MARATHON OIL COMPANY      | 02/01/2000 | 8.500%     | 705,000         |
| 9,000,000    | MARTIN-MARIETTA CORP.     | 03/15/2011 | 7.000%     | 6,570,000       |
| 296,000      | MERRILL LYNCH & CO        | 10/15/1987 | 11.625%    | 308,580         |
| 5,000,000    | MINNESOTA POWER & L.      | 09/01/2006 | 8.700%     | 4,684,900       |

MINNESOTA STATE BOARD OF INVESTMENT  
POST RETIREMENT FUND  
ALPHABETICAL BOND HOLDINGS  
JUNE 30 , 1986

| PAR<br>VALUE | SECURITY                  | MATURITY   | COUPON     | MARKET<br>VALUE |
|--------------|---------------------------|------------|------------|-----------------|
| 1,195,735    | MISSOURI PACIFIC RR       | 06/01/1995 | 12.750% \$ | 1,487,482       |
| 1,846,994    | MISSOURI PACIFIC RR       | 06/01/1994 | 9.750%     | 1,966,920       |
| 2,150,000    | MOBIL CORP                | 06/15/1988 | 8.750%     | 2,150,000       |
| 250,000      | MONTGOMERY WARD CREDIT    | 09/15/1986 | 8.625%     | 249,995         |
| 1,228,000    | MOUNTAIN FUEL SUPPOB      | 09/01/1986 | 4.875%     | 1,221,516       |
| 7,000,000    | MOUNTAIN STATES TEL & TEL | 06/01/2013 | 7.750%     | 6,046,250       |
| 8,825,000    | MOUNTAIN STATES TEL & TEL | 04/01/2018 | 8.625%     | 8,306,531       |
| 3,125,000    | NORTHERN STATES POWER CO. | 01/01/2004 | 8.375%     | 2,954,438       |
| 8,500,000    | NORTHWESTERN BELL TEL. CO | 08/15/2016 | 9.500%     | 8,542,500       |
| 4,000,000    | NORWEST CORP              | 03/15/2003 | 7.750%     | 3,345,800       |
| 3,500,000    | NOVA SCOTIA POWER COMM    | 03/15/1997 | 7.750%     | 3,225,005       |
| 6,400,000    | NOVA SCOTIA POWER CORP    | 06/01/2008 | 9.625%     | 6,653,504       |
| 4,020,000    | ONTARIO HYDRO             | 03/15/1996 | 9.500%     | 3,907,882       |
| 1,000,000    | ONTARIO PROVINCE OF CANAD | 06/15/2005 | 9.125%     | 993,250         |
| 7,000,000    | ONTARIO, PROVINCE OF      | 06/01/2008 | 9.375%     | 7,073,920       |
| 6,920,000    | ONTARIO, PROVINCE OF      | 11/30/2008 | 9.375%     | 7,066,220       |
| 5,000,000    | PACIFIC TEL & TEL         | 04/01/2005 | 8.650%     | 4,762,500       |
| 5,000,000    | PACIFIC TEL & TEL         | 07/01/2003 | 6.500%     | 3,921,950       |
| 5,000,000    | PACIFIC TEL & TEL CO      | 10/01/2006 | 8.750%     | 4,781,250       |
| 30,000       | PACIFIC TELE & TELE       | 11/01/1990 | 4.625%     | 26,398          |
| 12,660,000   | PENNEY (J.C.) CO.         | 06/15/1990 | 10.750%    | 13,023,975      |
| 8,159,000    | PENNEY J.C.               | 05/01/1989 | 0.000%     | 6,513,819       |
| 7,930,000    | PENNEY J.C. CO.           | 05/01/2006 | 6.000%     | 5,833,387       |
| 355,000      | PHILADELPHIA ELECTRIC     | 08/01/2002 | 9.625%     | 339,913         |
| 2,777,000    | PHILADELPHIA ELECTRIC     | 03/15/2008 | 9.125%     | 2,520,128       |
| 5,000,000    | PHILLIPS PETE CO          | 03/15/1997 | 13.875%    | 5,393,750       |
| 511,000      | PRIVATE EXPORT FDG CORP   | 03/31/1987 | 7.700%     | 509,804         |
| 1,960,000    | PRIVATE EXPORT FUNDING    | 05/31/1988 | 10.250%    | 2,035,264       |
| 2,415,000    | PUBLIC SERV ELEC GAS      | 09/01/1994 | 4.625%     | 1,901,813       |
| 3,000,000    | PUBLIC SERVICE CO OF IND. | 09/01/1990 | 12.125%    | 3,060,000       |
| 1,700,000    | PUBLIC SERVICE ELEC & GAS | 07/01/2009 | 9.750%     | 1,725,500       |
| 7,000,000    | PUBLIC SERVICE ELECTRIC & | 06/01/2007 | 8.250%     | 6,230,000       |
| 1,110,000    | ROCHESTER TELEPHONE       | 09/01/1993 | 4.750%     | 907,969         |
| 7,000,000    | SASKATCH., PROVINCE OF    | 04/15/2008 | 9.250%     | 6,965,770       |
| 17,203,000   | SASKATCHEWAN PROVINCE OF  | 10/01/1991 | 16.375%    | 22,883,947      |
| 3,921,199    | SEABOARD COAST LINE RR    | 10/01/1992 | 8.250%     | 3,849,716       |
| 3,711,426    | SEABOARD COAST LINE RR    | 09/01/1993 | 9.625%     | 3,831,156       |
| 1,525,000    | SEARS ROEBUCK & CO        | 01/15/1988 | 10.250%    | 1,589,813       |
| 13,000,000   | SEARS ROEBUCK & CO.       | 05/01/2000 | 6.000%     | 10,293,790      |
| 5,000,000    | SOUTH CENTRAL BELL TEL    | 12/01/2004 | 8.250%     | 4,729,150       |
| 3,000,000    | SOUTH CENTRAL BELL TEL    | 11/01/2007 | 7.375%     | 2,578,260       |
| 6,000,000    | SOUTHERN BELL TEL & TEL   | 12/01/2019 | 10.900%    | 6,555,720       |
| 8,000,000    | SOUTHERN BELL TEL & TEL   | 03/15/2013 | 7.625%     | 6,928,240       |
| 200,000      | SOUTHWEST. INVESTMENT     | 10/15/1986 | 8.500%     | 200,088         |
| 5,000,000    | SOUTHWESTERN BELL TEL     | 08/01/2007 | 8.750%     | 4,747,050       |
| 3,100,000    | SOUTHWESTERN BELL TEL     | 06/01/2003 | 5.875%     | 2,287,521       |
| 5,000,000    | SOUTHWESTERN BELL TEL CO  | 03/15/2019 | 9.625%     | 5,000,000       |

MINNESOTA STATE BOARD OF INVESTMENT  
POST RETIREMENT FUND  
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JUNE 30 , 1986

| PAR<br>VALUE | SECURITY                  | MATURITY   | COUPON    | MARKET<br>VALUE |
|--------------|---------------------------|------------|-----------|-----------------|
| 450,000      | SPRAGUE ELECTRIC CO       | 09/01/1988 | 4.375% \$ | 413,870         |
| 1,013,950    | STANDARD OIL OF CALIF.    | 03/30/1997 | 7.700%    | 953,924         |
| 941,525      | STANDARD OIL OF CALIF.    | 03/02/1997 | 7.700%    | 876,738         |
| 941,525      | STANDARD OIL OF CALIF.    | 02/10/1997 | 7.700%    | 886,286         |
| 3,770,751    | STANDARD OIL OF CALIF.    | 07/02/1999 | 8.500%    | 3,727,048       |
| 545,000      | STATES STEAMSHIP CO       | 03/31/1993 | 5.100%    | 443,908         |
| 10,000,000   | STRPD U.S. TREAS. BONDS   | 05/15/2006 | 0.000%    | 1,968,100       |
| 5,000,000    | STUDEBAKER-WORTHINGTON    | 11/15/2003 | 9.350%    | 4,833,050       |
| 1,256,000    | TELEDYNE INC              | 06/01/2004 | 10.000%   | 1,249,720       |
| 11,385,000   | TENNECO INC               | 09/01/1992 | 13.700%   | 13,832,775      |
| 3,081,000    | TEXACO, INC.              | 12/01/2001 | 7.750%    | 2,557,230       |
| 3,000,000    | TEXAS POWER & LIGHT       | 01/01/2006 | 8.600%    | 2,725,500       |
| 2,500,000    | TEXAS POWER & LIGHT       | 02/01/2009 | 9.375%    | 2,381,950       |
| 250,000      | TREASURY INVT GROWTH RCPT | 02/15/1999 | 0.000%    | 85,310          |
| 1,400,000    | TREASURY INVT GROWTH RCPT | 02/15/1987 | 0.000%    | 1,343,090       |
| 1,619,000    | TREASURY INVT GROWTH RCPT | 11/15/2000 | 0.000%    | 571,086         |
| 43,000,000   | U.S.A. TREASURY BOND      | 11/15/2002 | 11.625%   | 57,270,410      |
| 30,129,000   | U.S.A. TREASURY BOND      | 11/15/2004 | 11.625%   | 40,674,150      |
| 29,475,000   | U.S.A. TREASURY BOND      | 02/15/2007 | 7.625%    | 29,143,406      |
| 60,000,000   | U.S.A. TREASURY BOND      | 02/15/2010 | 11.750%   | 81,900,000      |
| 40,000,000   | U.S.A. TREASURY BOND      | 02/15/1994 | 9.000%    | 43,250,000      |
| 18,375,000   | U.S.A. TREASURY BOND      | 05/15/2014 | 13.250%   | 28,446,705      |
| 40,000,000   | U.S.A. TREASURY BOND      | 02/15/2003 | 10.750%   | 50,324,800      |
| 37,100,000   | U.S.A. TREASURY BOND      | 05/15/1999 | 8.500%    | 39,024,377      |
| 40,000,000   | U.S.A. TREASURY BOND      | 08/15/2001 | 8.000%    | 41,024,800      |
| 12,200,000   | U.S.A. TREASURY BOND      | 08/15/2008 | 8.375%    | 12,901,500      |
| 38,050,000   | U.S.A. TREASURY BOND      | 05/15/2005 | 8.250%    | 39,595,591      |
| 72,500,000   | U.S.A. TREASURY BOND      | 05/15/1995 | 10.375%   | 85,187,500      |
| 40,000,000   | U.S.A. TREASURY BOND      | 11/15/2010 | 12.750%   | 58,600,000      |
| 60,000,000   | U.S.A. TREASURY BOND      | 11/15/1995 | 11.500%   | 75,112,200      |
| 40,000,000   | U.S.A. TREASURY BOND      | 02/15/2000 | 7.875%    | 40,574,800      |
| 35,800,000   | U.S.A. TREASURY BOND      | 02/15/2001 | 11.750%   | 47,636,196      |
| 21,295,000   | U.S.A. TREASURY BOND      | 08/15/2000 | 8.375%    | 22,346,334      |
| 40,000,000   | U.S.A. TREASURY BOND      | 02/15/1995 | 10.500%   | 47,124,800      |
| 40,000,000   | U.S.A. TREASURY BOND      | 05/15/1995 | 12.625%   | 52,500,000      |
| 28,326,000   | U.S.A. TREASURY BOND      | 08/15/2013 | 12.000%   | 40,028,037      |
| 65,000,000   | U.S.A. TREASURY BOND      | 05/15/2005 | 12.000%   | 90,268,750      |
| 127,500,000  | U.S.A. TREASURY BOND      | 08/15/2005 | 10.750%   | 162,562,500     |
| 10,000,000   | U.S.A. TREASURY BOND      | 02/15/2006 | 9.375%    | 11,575,000      |
| 12,500,000   | U.S.A. TREASURY BOND      | 05/15/2004 | 12.375%   | 17,648,375      |
| 18,000,000   | U.S.A. TREASURY BOND      | 05/15/2009 | 9.125%    | 20,283,660      |
| 14,900,000   | U.S.A. TREASURY BOND      | 11/15/2009 | 10.375%   | 18,438,750      |
| 948,000      | U.S.A. TREASURY COUPON    | 05/15/1987 | 0.000%    | 896,173         |
| 28,204,000   | U.S.A. TREASURY COUPON    | 08/15/1998 | 0.000%    | 10,645,600      |
| 448,000      | U.S.A. TREASURY COUPON    | 08/15/1986 | 0.000%    | 444,609         |
| 1,308,000    | U.S.A. TREASURY COUPON    | 02/15/1991 | 0.000%    | 932,630         |
| 1,610,000    | U.S.A. TREASURY COUPON    | 11/15/1993 | 0.000%    | 235,801         |

MINNESOTA STATE BOARD OF INVESTMENT  
POST RETIREMENT FUND  
ALPHABETICAL BOND HOLDINGS  
JUNE 30 , 1986

| PAR<br>VALUE         | SECURITY                  | MATURITY   | COUPON     | MARKET<br>VALUE |
|----------------------|---------------------------|------------|------------|-----------------|
| 6,430,000            | U.S.A. TREASURY NOTE      | 07/31/1986 | 12.625% \$ | 6,464,143       |
| 6,290,000            | U.S.A. TREASURY NOTE      | 04/15/1989 | 14.375%    | 7,396,663       |
| 8,400,000            | U.S.A. TREASURY NOTE      | 07/15/1989 | 14.500%    | 9,998,604       |
| 2,665,000            | U.S.A. TREASURY NOTE      | 09/30/1986 | 12.250%    | 2,703,296       |
| 10,000,000           | U.S.A. TREASURY NOTE      | 11/15/1994 | 11.625%    | 12,400,000      |
| 11,800,000           | U.S.A. TREASURY NOTE      | 01/15/1988 | 12.375%    | 12,740,342      |
| 10,140,000           | U.S.A. TREASURY NOTE      | 03/31/1987 | 10.250%    | 10,406,175      |
| 330,000              | U.S.A. TREASURY NOTE      | 12/31/1988 | 10.625%    | 355,677         |
| 5,000,000            | U.S.A. TREASURY NOTE      | 05/15/1991 | 14.500%    | 6,379,700       |
| 13,750,000           | U.S.A. TREASURY NOTE      | 01/15/1990 | 10.500%    | 15,034,800      |
| 6,680,000            | U.S.A. TREASURY NOTE      | 06/30/1987 | 10.500%    | 6,930,500       |
| 4,800,000            | U.S.A. TREASURY NOTE      | 07/15/1988 | 14.000%    | 5,430,000       |
| 420,000              | U.S.A. TREASURY NOTE      | 12/31/1986 | 10.000%    | 427,350         |
| 535,000              | U.S.A. TREASURY NOTE      | 04/15/1988 | 13.250%    | 591,341         |
| 5,265,000            | U.S.A. TREASURY NOTE      | 10/15/1988 | 15.375%    | 6,178,162       |
| 3,400,000            | U.S.A. TREASURY NOTE      | 01/15/1989 | 14.625%    | 3,974,804       |
| 115,000,000          | U.S.A. TREASURY NOTE      | 05/15/1995 | 11.250%    | 141,018,750     |
| 65,000,000           | U.S.A. TREASURY NOTE      | 08/15/1995 | 10.500%    | 77,065,300      |
| 11,250,000           | U.S.A. TREASURY NOTE      | 11/15/1990 | 13.000%    | 13,485,938      |
| 20,000,000           | U.S.A. TREASURY NOTE      | 11/15/1995 | 9.500%     | 22,587,400      |
| 4,000,000            | UNION TANK CAR            | 12/15/1995 | 9.500%     | 4,061,800       |
| 60,000               | VIRGINIA ELEC. & POWER    | 12/01/1987 | 4.500%     | 57,576          |
| 4,000,000            | WESTINGHOUSE CREDIT CORP. | 01/15/1989 | 10.750%    | 4,235,000       |
| 10,450,000           | WILLAMETTE INDUSTRIES INC | 04/15/1993 | 11.375%    | 11,329,681      |
| 4,555,000            | WISCONSIN ELECTRIC POWER  | 05/15/2008 | 8.875%     | 4,457,569       |
| TOTAL BOND PORTFOLIO |                           |            | \$         | 2,403,093,984   |

MINNESOTA STATE BOARD OF INVESMENT  
SUPPLEMENTAL RETIREMENT GROWTH SHARE ACCOUNT  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES       | SECURITY                  |    | MARKET<br>VALUE |
|------------------------|---------------------------|----|-----------------|
| 35,033                 | MINN INTERNAL POOLED FUND | \$ | 39,646,086      |
| 29,641                 | MN. EXT. ACTIVE MAN. POOL |    | 38,566,711      |
| TOTAL EQUITY PORTFOLIO |                           | \$ | 78,212,797      |

MINNESOTA STATE BOARD OF INVESMENT  
MINNESOTA VARIABLE ANNUITY FUND  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES       | SECURITY                  |    | MARKET<br>VALUE |
|------------------------|---------------------------|----|-----------------|
| 58,321                 | MINN INTERNAL POOLED FUND | \$ | 65,999,606      |
| 61,148                 | MN. EXT. ACTIVE MAN. POOL |    | 79,561,370      |
| TOTAL EQUITY PORTFOLIO |                           | \$ | 145,560,977     |



MINNESOTA STATE BOARD OF INVESMENT  
SUPPLEMENTAL RETIREMENT BOND ACCOUNT  
ALPHABETICAL BOND HOLDINGS  
JUNE 30 , 1986

| PAR<br>VALUE         | SECURITY                  | MATURITY   | COUPON     | MARKET<br>VALUE |
|----------------------|---------------------------|------------|------------|-----------------|
| 700,000              | AMERICAN CAN              | 10/15/1992 | 11.125% \$ | 759,612         |
| 350,000              | ASSOCIATES CORP. NORTH AM | 11/15/1992 | 11.450%    | 389,942         |
| 300,000              | FEDERAL FARM CREDIT BANK  | 01/20/1992 | 11.500%    | 343,311         |
| 200,000              | FEDERAL NATIONAL MORTGAGE | 10/13/1987 | 12.125%    | 212,624         |
| 1,000,000            | FEDERAL NATIONAL MORTGAGE | 04/10/1992 | 12.000%    | 1,178,120       |
| 1,290,000            | FEDERAL NATIONAL MORTGAGE | 06/10/1992 | 10.125%    | 1,417,388       |
| 1,200,000            | FORD MOTOR CREDIT CORP    | 08/15/1987 | 13.000%    | 1,269,684       |
| 200,000              | GENERAL MOTORS ACCEPT. CO | 10/15/1989 | 11.750%    | 207,750         |
| 600,000              | GULF & WESTERN INDUSTRIES | 04/01/1995 | 12.375%    | 701,166         |
| 300,000              | NEW YORK STATE ELEC. & GA | 04/01/1993 | 11.750%    | 324,618         |
| 600,000              | OCCIDENTAL PETE CORP      | 10/15/1994 | 9.650%     | 567,000         |
| 300,000              | PENNEY J.C.               | 02/01/1993 | 12.125%    | 345,774         |
| 480,000              | U.S.A. TREASURY NOTE      | 04/15/1989 | 14.375%    | 564,451         |
| 250,000              | U.S.A. TREASURY NOTE      | 11/15/1991 | 14.250%    | 322,030         |
| 250,000              | U.S.A. TREASURY NOTE      | 01/15/1989 | 14.625%    | 292,265         |
| 300,000              | U.S.A. TREASURY NOTE      | 01/15/1993 | 8.750%     | 319,125         |
| 500,000              | UNION OIL OF CALIFORNIA   | 03/01/1994 | 9.750%     | 484,750         |
| 730,000              | UNITED STATES TREAS SEC   | 11/15/1986 | 0.000%     | 712,947         |
| 330,000              | WILLAMETTE INDUSTRIES INC | 04/15/1993 | 11.375%    | 357,779         |
| TOTAL BOND PORTFOLIO |                           |            | \$         | 10,770,336      |

MINNESOTA STATE BOARD OF INVESMENT  
PERMANENT SCHOOL FUND  
ALPHABETICAL BOND HOLDINGS  
JUNE 30 , 1986

| PAR<br>VALUE | SECURITY                  | MATURITY   | COUPON    | MARKET<br>VALUE |
|--------------|---------------------------|------------|-----------|-----------------|
| 1,000,000    | ALUMINUM CO OF CANADA     | 03/01/1995 | 9.500% \$ | 990,000         |
| 1,700,000    | ASSOCIATES CORP NO. AMERI | 08/01/1990 | 11.000%   | 1,806,250       |
| 2,405,133    | ATLANTIC RICHFIELD CO.    | 07/15/1996 | 9.250%    | 2,500,497       |
| 1,793,079    | ATLANTIC RICHFIELD CO.    | 12/01/2001 | 8.750%    | 1,823,256       |
| 2,500,000    | BELL TELE. CO CANADA      | 09/01/1995 | 4.850%    | 2,001,825       |
| 900,000      | CANADIAN PACIFIC, LTD.    | 01/15/1992 | 8.625%    | 911,250         |
| 4,000,000    | CONSOLIDATED NATURAL GAS  | 06/01/1997 | 8.125%    | 3,830,000       |
| 625,000      | CONSTRUCTION AGGREGATE    | 06/01/1991 | 7.500%    | 614,906         |
| 665,000      | EAGLE TERMINAL TANKERS    | 06/01/1989 | 6.000%    | 629,270         |
| 132,000      | FARRELL LINES, INC        | 09/20/1998 | 9.000%    | 128,642         |
| 121,000      | FARRELL LINES, INC        | 06/29/1997 | 9.000%    | 118,127         |
| 124,000      | FARRELL LINES, INC        | 11/27/1997 | 9.000%    | 120,976         |
| 126,000      | FARRELL LINES, INC        | 02/28/1998 | 9.000%    | 122,879         |
| 286,000      | FARRELL LINES, INC        | 04/01/1988 | 8.050%    | 284,796         |
| 5,000,000    | FEDERAL FARM CREDIT BANK  | 10/21/1991 | 10.600%   | 5,515,600       |
| 100,000      | FEDERAL FARM CREDIT BANK  | 03/01/1994 | 12.350%   | 122,812         |
| 600,000      | FEDERAL FARM CREDIT BANK  | 07/20/1992 | 13.750%   | 753,750         |
| 5,000,000    | FEDERAL FARM CREDIT BANK  | 09/01/1988 | 12.875%   | 5,531,250       |
| 3,000,000    | FEDERAL FARM CREDIT BANKS | 10/23/1989 | 12.450%   | 3,393,750       |
| 7,000,000    | FEDERAL HOME LOAN BANK    | 03/25/1988 | 10.200%   | 7,354,340       |
| 3,000,000    | FEDERAL HOME LOAN BANK    | 04/27/1992 | 11.700%   | 3,493,110       |
| 3,000,000    | FEDERAL HOME LOAN BANKS   | 07/26/1993 | 11.700%   | 3,562,500       |
| 5,000,000    | FEDERAL HOME LOAN BANKS   | 09/25/1989 | 12.500%   | 5,687,500       |
| 3,000,000    | FEDERAL HOME LOAN MTG COR | 08/30/1991 | 11.850%   | 3,474,360       |
| 4,000,000    | FEDERAL NATIONAL MORTGAGE | 05/10/1990 | 10.300%   | 4,330,000       |
| 3,000,000    | FEDERAL NATIONAL MORTGAGE | 10/13/1987 | 12.550%   | 3,205,320       |
| 3,000,000    | FEDERAL NATIONAL MORTGAGE | 10/12/1992 | 10.600%   | 3,378,750       |
| 500,000      | FEDERAL NATIONAL MORTGAGE | 10/10/1988 | 9.500%    | 522,810         |
| 3,000,000    | FMC CORP                  | 01/15/2000 | 9.500%    | 3,030,000       |
| 2,052,410    | GNMA POOL # 00505         | 11/15/2001 | 6.500%    | 1,854,865       |
| 1,828,606    | GNMA POOL # 00506         | 12/15/2001 | 6.500%    | 1,652,603       |
| 2,179,651    | GNMA POOL # 02290         | 03/15/2003 | 6.500%    | 1,969,860       |
| 2,407,627    | GNMA POOL # 02291         | 04/15/2003 | 6.500%    | 2,175,893       |
| 2,278,587    | GNMA POOL # 02424         | 04/15/2003 | 6.500%    | 2,059,273       |
| 325,934      | GNMA POOL # 03627         | 07/15/2004 | 8.250%    | 307,192         |
| 962,918      | GNMA POOL # 03972         | 07/15/2004 | 8.250%    | 907,551         |
| 669,066      | GNMA POOL # 03974         | 11/15/2004 | 9.000%    | 649,830         |
| 415,963      | GNMA POOL # 03979         | 08/15/2004 | 8.250%    | 392,045         |
| 355,335      | GNMA POOL # 04004         | 08/15/2004 | 8.250%    | 334,903         |
| 1,063,693    | GNMA POOL # 04092         | 07/15/2004 | 8.250%    | 1,002,531       |
| 296,764      | GNMA POOL # 04145         | 08/15/2004 | 8.250%    | 279,700         |
| 452,773      | GNMA POOL # 04472         | 09/15/2004 | 9.000%    | 439,756         |
| 393,355      | GNMA POOL # 09680         | 06/15/2006 | 8.250%    | 370,737         |
| 607,675      | GNMA POOL # 10887         | 07/15/2006 | 8.250%    | 572,734         |
| 3,648,283    | GNMA POOL # 12383         | 02/15/2005 | 8.750%    | 3,510,342       |
| 318,073      | GNMA POOL # 17904         | 08/15/2007 | 8.000%    | 297,796         |
| 505,923      | GNMA POOL # 18017         | 07/15/2007 | 8.000%    | 473,671         |

MINNESOTA STATE BOARD OF INVESTMENT  
PERMANENT SCHOOL FUND  
ALPHABETICAL BOND HOLDINGS  
JUNE 30 , 1986

| PAR<br>VALUE | SECURITY                  | MATURITY   | COUPON    | MARKET<br>VALUE |
|--------------|---------------------------|------------|-----------|-----------------|
| 809,761      | GNMA POOL # 18058         | 07/15/2007 | 8.000% \$ | 758,138         |
| 325,855      | GNMA POOL # 18592         | 11/15/2007 | 8.000%    | 305,082         |
| 688,106      | GNMA POOL # 18768         | 08/15/2007 | 8.000%    | 644,239         |
| 631,631      | GNMA POOL # 18782         | 10/15/2007 | 8.000%    | 591,365         |
| 733,199      | GNMA POOL # 19105         | 07/15/2007 | 8.000%    | 686,458         |
| 633,996      | GNMA POOL # 19667         | 01/15/2008 | 8.000%    | 593,579         |
| 704,840      | GNMA POOL # 19740         | 10/15/2007 | 8.000%    | 659,907         |
| 3,950,467    | GNMA POOL # 19784         | 09/15/2007 | 8.000%    | 3,698,625       |
| 590,058      | GNMA POOL # 19997         | 10/15/2007 | 8.000%    | 552,442         |
| 44,798       | GNMA POOL # 20074         | 03/15/2007 | 8.000%    | 41,942          |
| 725,939      | GNMA POOL # 20263         | 11/15/2007 | 8.000%    | 679,660         |
| 739,225      | GNMA POOL # 20393         | 11/15/2007 | 8.000%    | 692,099         |
| 733,737      | GNMA POOL # 20495         | 11/15/2007 | 8.000%    | 686,962         |
| 847,256      | GNMA POOL # 21037         | 11/15/2007 | 8.000%    | 793,244         |
| 680,883      | GNMA POOL # 21480         | 01/15/2008 | 8.000%    | 637,477         |
| 782,191      | GNMA POOL # 21615         | 01/15/2008 | 8.000%    | 732,326         |
| 697,216      | GNMA POOL # 21930         | 03/15/2008 | 8.000%    | 652,769         |
| 832,070      | GNMA POOL # 22012         | 04/15/2008 | 8.000%    | 779,026         |
| 738,048      | GNMA POOL # 22820         | 12/15/2007 | 8.000%    | 690,998         |
| 811,032      | GNMA POOL # 24078         | 02/15/2008 | 8.000%    | 759,328         |
| 821,959      | GNMA POOL # 24417         | 03/15/2008 | 8.000%    | 769,559         |
| 3,769,653    | GNMA POOL # 27638         | 10/15/2008 | 9.000%    | 3,661,275       |
| 3,987,718    | GNMA POOL # 35014         | 02/15/2010 | 11.000%   | 4,192,089       |
| 1,905,100    | GNMA POOL # 40589         | 03/15/2010 | 11.000%   | 2,002,736       |
| 1,622,534    | GNMA POOL # 42691         | 08/15/2010 | 11.000%   | 1,705,689       |
| 2,128,163    | GNMA POOL # 43596         | 10/15/2010 | 11.500%   | 2,245,212       |
| 4,000,000    | KANSAS POWER & LIGHT      | 06/01/2007 | 8.125%    | 3,707,520       |
| 2,679,732    | LNM ACCEPTANCE CORP       | 12/01/1986 | 9.100%    | 2,692,139       |
| 984,000      | MATSON NAVIGATION CO      | 11/10/1994 | 7.500%    | 897,310         |
| 2,500,000    | MICHIGAN BELL TELEPHONE C | 06/01/2015 | 8.125%    | 2,250,000       |
| 12,794,992   | MN MTG. MARKETING CORP    | 06/01/2014 | 12.566%   | 13,494,878      |
| 7,972,411    | MN MTG. MARKETING CORP    | 09/01/2014 | 12.823%   | 8,432,419       |
| 3,337,163    | MN MTG. MARKETING CORP    | 02/01/2015 | 13.004%   | 3,539,395       |
| 2,566,000    | MOORE-MCCORMACK LEASING   | 07/15/2001 | 8.875%    | 2,539,647       |
| 252,000      | MOORE-MCCORMACK LINES     | 04/01/1987 | 5.750%    | 247,668         |
| 3,000,000    | MOUNTAIN STATES TEL & TEL | 06/01/2013 | 7.750%    | 2,591,250       |
| 2,500,000    | NORTHERN STATES POWER CO. | 01/01/2004 | 8.375%    | 2,363,550       |
| 1,714,400    | NORTON SIMON, INC.        | 06/01/2004 | 9.875%    | 1,878,828       |
| 1,500,000    | NORWEST CORP              | 03/15/2003 | 7.750%    | 1,254,675       |
| 3,000,000    | NORWEST CORP              | 09/15/1986 | 7.875%    | 2,985,000       |
| 1,500,000    | NORWEST CORP              | 10/15/1990 | 5.125%    | 1,333,230       |
| 1,543,000    | PACIFIC FAR EAST LINE     | 02/01/1997 | 8.750%    | 1,509,625       |
| 712,500      | PENN TANKER CO.           | 11/10/1989 | 6.000%    | 662,675         |
| 1,462,000    | PUGET SOUND TUG & BARG    | 02/15/2001 | 9.125%    | 1,441,474       |
| 4,833,955    | SBA POOL - MEEDA BONDS SE | 12/01/2004 | 11.700%   | 5,921,594       |
| 4,000,000    | SOUTHERN BELL TEL & TEL   | 03/15/2013 | 7.625%    | 3,464,120       |
| 1,000,000    | SPRAGUE ELECTRIC CO       | 09/01/1988 | 4.375%    | 919,710         |

MINNESOTA STATE BOARD OF INVESMENT  
PERMANENT SCHOOL FUND  
ALPHABETICAL BOND HOLDINGS  
JUNE 30 , 1986

| PAR<br>VALUE         | SECURITY               | MATURITY   | COUPON    | MARKET<br>VALUE |
|----------------------|------------------------|------------|-----------|-----------------|
| 744,970              | STANDARD OIL OF CALIF. | 09/07/1997 | 7.700% \$ | 699,795         |
| 744,970              | STANDARD OIL OF CALIF. | 09/08/1997 | 7.700%    | 699,787         |
| 744,970              | STANDARD OIL OF CALIF. | 11/06/1997 | 7.700%    | 699,415         |
| 762,000              | STATES STEAMSHIP CO    | 03/31/1993 | 5.100%    | 620,657         |
| 3,000,000            | TEXAS POWER & LIGHT    | 02/01/2009 | 9.375%    | 2,858,340       |
| 1,000,000            | U.S.A. TREASURY BOND   | 02/15/2007 | 7.625%    | 988,750         |
| 2,000,000            | U.S.A. TREASURY BOND   | 11/15/2010 | 12.750%   | 2,930,000       |
| 2,000,000            | U.S.A. TREASURY BOND   | 11/15/1995 | 11.500%   | 2,503,740       |
| 50,000               | U.S.A. TREASURY BOND   | 11/15/1998 | 3.500%    | 47,063          |
| 3,000,000            | U.S.A. TREASURY BOND   | 02/15/2001 | 11.750%   | 3,991,860       |
| 2,000,000            | U.S.A. TREASURY BOND   | 11/15/1993 | 8.625%    | 2,125,000       |
| 15,000,000           | U.S.A. TREASURY NOTE   | 10/15/1989 | 11.875%   | 16,917,150      |
| 40,000               | U.S.A. TREASURY NOTE   | 11/15/1987 | 7.625%    | 40,412          |
| 2,000,000            | U.S.A. TREASURY NOTE   | 02/15/1987 | 9.000%    | 2,028,740       |
| 40,000               | U.S.A. TREASURY NOTE   | 05/15/1987 | 12.000%   | 41,812          |
| 90,000               | U.S.A. TREASURY NOTE   | 08/15/1986 | 8.000%    | 90,197          |
| 10,000,000           | U.S.A. TREASURY NOTE   | 03/31/1988 | 7.125%    | 10,043,700      |
| 2,000,000            | U.S.A. TREASURY NOTE   | 11/15/1989 | 10.750%   | 2,195,620       |
| 1,734,754            | WESTERN CO OF NORTH AM | 06/11/1990 | 9.250%    | 1,824,649       |
| TOTAL BOND PORTFOLIO |                        |            | \$        | 234,175,425     |

MINNESOTA STATE BOARD OF INVESTMENT  
INTERNAL POOLED FUND  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 72,499           | ALLIED BANCSHARES INC.    | \$ | 1,141,859       |
| 35,000           | ALUMINUM CO. OF AMERICA   |    | 1,334,375       |
| 83,600           | AMDAHL CORP               |    | 1,463,000       |
| 35,100           | AMER. GENERAL CORP.       |    | 1,478,588       |
| 66,300           | AMER. MEDICAL INT'L.      |    | 1,151,963       |
| 77,400           | AMERADA HESS CORP.        |    | 1,548,000       |
| 24,000           | AMERICAN STORES CO NEW    |    | 1,680,000       |
| 45,000           | ARCHER DANIELS MIDLAND CO |    | 821,250         |
| 50,400           | ATLANTIC RICHFIELD        |    | 2,620,800       |
| 75,000           | BANKAMERICA CORPORATION   |    | 1,171,875       |
| 27,300           | BANKERS TRUST NY CORP.    |    | 1,320,638       |
| 24,225           | BOEING COMPANY            |    | 1,526,175       |
| 33,250           | BRITISH PETROLEUM         |    | 1,226,094       |
| 31,000           | BROWN GROUP               |    | 1,181,875       |
| 17,500           | BURROUGHS CORPORATION     |    | 1,076,250       |
| 101,800          | CANADIAN PACIFIC LTD      |    | 1,234,325       |
| 20,000           | CARPENTER TECHNOLOGY CORP |    | 702,500         |
| 44,950           | CATERPILLAR INC.          |    | 2,236,263       |
| 232,308          | CENTRONICS DATA COMPUTER  |    | 1,422,885       |
| 31,900           | CHASE MANHATTAN CORP.     |    | 1,415,563       |
| 24,600           | CHEMICAL NEW YORK CORP    |    | 1,260,750       |
| 68,100           | CLARK EQUIP CO            |    | 1,498,200       |
| 131,700          | CLEVELAND-CLIFFS INC      |    | 1,893,188       |
| 39,100           | COLLINS & AIKMAN CORP     |    | 1,534,675       |
| 166,800          | COMMODORE INTL LTD        |    | 1,021,650       |
| 37,150           | COMMONWEALTH EDISON CO.   |    | 1,193,444       |
| 30,200           | COMMUNICATIONS SATELLITE  |    | 1,034,350       |
| 46,700           | COMMUNITY PSYCHIATRIC CEN |    | 1,406,838       |
| 63,000           | COMPUTER VISION CORP.     |    | 874,125         |
| 46,150           | CONTEL CORP               |    | 1,390,269       |
| 75,000           | CONTROL DATA CORP.        |    | 1,687,500       |
| 145,000          | CONVERGENT TECH.          |    | 1,051,250       |
| 56,750           | COOPER TIRE & RUBBER      |    | 1,362,000       |
| 46,000           | DEERE & COMPANY           |    | 1,311,000       |
| 31,000           | DOVER CORP.               |    | 1,286,500       |
| 11,000           | DRESSER INDUSTRIES        |    | 204,875         |
| 39,100           | E-SYSTEMS                 |    | 1,368,500       |
| 37,500           | EMHART CORP VA            |    | 1,359,375       |
| 127,000          | EQUATORIAL COMMUNICATIONS |    | 968,375         |
| 43,850           | EXXON CORPORATION         |    | 2,669,369       |
| 22,200           | FIRST INTERSTATE BANCORP. |    | 1,376,400       |
| 28,950           | FUQUA INDS INC            |    | 1,465,594       |
| 223,800          | GEARHART INDS INC         |    | 503,550         |
| 35,400           | GENERAL DYNAMICS          |    | 2,708,100       |
| 17,500           | GENERAL ELECTRIC CO.      |    | 1,417,500       |
| 31,100           | GENERAL MOTORS CORP.      |    | 2,414,138       |
| 125,050          | GENRAD INC.               |    | 1,094,188       |

MINNESOTA STATE BOARD OF INVESMENT  
INTERNAL POOLED FUND  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 97,600           | GREYHOUND CORP.           | \$ | 3,440,400       |
| 24,900           | GTE CORP.                 |    | 1,347,713       |
| 109,000          | HALLIBURTON INC.          |    | 2,425,250       |
| 136,150          | HOME GROUP INC            |    | 3,556,919       |
| 17,600           | HONDA MOTORS NEW          |    | 1,262,800       |
| 15,600           | HONEYWELL INC.            |    | 1,181,700       |
| 35,200           | HOSPITAL CORP. OF AMER.   |    | 1,337,600       |
| 30,400           | HOUSEHOLD INTL.           |    | 1,318,600       |
| 46,150           | HOUSTON INDUSTRIES INC.   |    | 1,453,725       |
| 16,600           | INTL. BUSINESS MACHINES   |    | 2,431,900       |
| 29,900           | K MART CORPORATION        |    | 1,700,563       |
| 23,400           | LEAR SIEGLER INC.         |    | 1,278,225       |
| 13,750           | LITTON INDS INC.          |    | 1,113,750       |
| 46,950           | LOCKHEED AIRCRAFT CORP    |    | 2,617,463       |
| 111,500          | LONG ISLAND LTG CO        |    | 1,393,750       |
| 206,150          | LTV CORP                  |    | 1,056,519       |
| 25,000           | MANUFACTURERS HAN. CORP.  |    | 1,290,625       |
| 31,800           | MCDONNELL DOUGLAS CORP.   |    | 2,476,425       |
| 507,900          | MCI COMMUNICATION         |    | 5,269,463       |
| 66,100           | MCORP                     |    | 1,231,113       |
| 22,100           | MELLON BANK CORP          |    | 1,544,238       |
| 19,800           | MELVILLE CORPORATION      |    | 1,405,800       |
| 20,000           | MENTOR GRAPHICS CORP.     |    | 305,000         |
| 66,700           | MIDDLE SOUTH UTILS INC    |    | 867,100         |
| 44,700           | MOBIL CORPORATION         |    | 1,413,638       |
| 54,250           | NATL. MED. ENTER. INC.    |    | 1,268,094       |
| 180,000          | NATL. SEMICONDUCTOR       |    | 2,115,000       |
| 150,000          | NAVISTAR INTERNATIONAL CO |    | 1,368,750       |
| 29,800           | NCR CORP.                 |    | 1,530,975       |
| 145,350          | NORTHEAST UTILITIES       |    | 3,143,194       |
| 102,950          | NORTHERN IND PUB SVC CO   |    | 1,209,663       |
| 45,000           | NORTHERN TELECOM LTD.     |    | 1,338,750       |
| 27,400           | NORTHROP CORP             |    | 1,370,000       |
| 28,000           | PACCAR INC                |    | 1,610,000       |
| 69,300           | PHILADELPHIA ELEC. CO.    |    | 1,403,325       |
| 139,700          | PHILLIPS PETROLEUM CO.    |    | 1,344,613       |
| 31,600           | PIONEER HI-BRED INT'L.    |    | 1,287,700       |
| 22,300           | RAYTHEON COMPANY          |    | 1,418,838       |
| 101,250          | REPUBLIC BANK CORP        |    | 2,923,594       |
| 36,100           | REVCO D.S.                |    | 1,340,213       |
| 245,000          | ROWAN COMPANIES INC       |    | 1,347,500       |
| 50,550           | RYDER SYSTEMS INC.        |    | 1,478,588       |
| 17,000           | SANDERS ASSOCIATES        |    | 913,750         |
| 132,400          | SCHLUMBERGER LTD          |    | 4,551,250       |
| 39,600           | SEA CONTAINERS LTD.       |    | 1,014,750       |
| 73,600           | SEACO INC.                |    | 211,600         |
| 200,000          | SENSORMATIC ELECTRS CORP  |    | 1,875,000       |

MINNESOTA STATE BOARD OF INVESMENT  
INTERNAL POOLED FUND  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES       | SECURITY                  |    | MARKET<br>VALUE |
|------------------------|---------------------------|----|-----------------|
| 80,000                 | SERVICE MERCHANDISE       | \$ | 980,000         |
| 53,000                 | SERVICEMASTER INDS INC    |    | 1,391,250       |
| 30,600                 | SHARED MED. SYSTEMS CORP. |    | 1,036,575       |
| 26,800                 | SHELL TRANSPORT & TRADING |    | 1,326,600       |
| 80,700                 | SONAT INC.                |    | 2,299,950       |
| 37,400                 | SOUTHERN CO               |    | 888,250         |
| 22,700                 | SOUTHLAND CORP.           |    | 1,242,825       |
| 44,850                 | STANDARD OIL CO. OHIO     |    | 2,023,856       |
| 36,100                 | TENNECO INC.              |    | 1,434,975       |
| 77,000                 | TERADYNE INC.             |    | 1,694,000       |
| 100,600                | TEXACO INC.               |    | 3,168,900       |
| 98,250                 | TEXAS COMMERCE BANKSHARES |    | 2,136,938       |
| 42,500                 | TEXAS EASTERN CORP.       |    | 1,545,938       |
| 176,800                | TIE COMMUNICATIONS        |    | 1,060,800       |
| 40,650                 | TOYS R US                 |    | 1,382,100       |
| 33,200                 | TRACOR INC.               |    | 759,450         |
| 38,200                 | TYCO LABS                 |    | 1,341,775       |
| 168,172                | U.S. STEEL                |    | 3,468,548       |
| 183,000                | ULTRASYSTEMS INC          |    | 2,150,250       |
| 26,450                 | UNITED TECHNOLOGIES CORP. |    | 1,309,275       |
| 46,150                 | UNITED TELECOM. INC.      |    | 1,257,588       |
| 37,500                 | US AIR GROUP              |    | 1,195,313       |
| 40,200                 | USG CORP HOLDING CO.      |    | 1,643,175       |
| 125,350                | WANG LABS CL B            |    | 1,895,919       |
| 50,850                 | WILLIAMS COS              |    | 1,194,975       |
| 53,000                 | WORTHINGTON INDS INC      |    | 1,570,125       |
| TOTAL EQUITY PORTFOLIO |                           | \$ | 187,294,741     |

MINNESOTA STATE BOARD OF INVESMENT  
PASSIVE EQUITY FUND  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 100,800          | A & M FOOD SERVICES       | \$ | 1,512,000       |
| 39,000           | A G EDWARDS, INC          |    | 1,009,125       |
| 10,400           | AAR CORP                  |    | 249,600         |
| 10,000           | AARON RENTS INC           |    | 185,000         |
| 194,400          | ABBOTT LABS               |    | 10,449,000      |
| 34,200           | ACCO WORLD CORP           |    | 953,325         |
| 15,000           | ACME CLEVELAND CORP       |    | 178,125         |
| 5,400            | ACME STL CO DEL           |    | 0               |
| 10,500           | ADOBE RESOURCES           |    | 86,625          |
| 14,000           | ADOBE RESOURCES 12% PFD   |    | 271,250         |
| 12,600           | ADOBE RESOURCES CONV. PFD |    | 212,625         |
| 16,000           | ADT , INC.                |    | 470,000         |
| 46,800           | ADVANCED MICRO DEV.       |    | 936,000         |
| 9,200            | ADVANCED SEMI CONDUCTOR   |    | 80,500          |
| 90,800           | AETNA LIFE AND CASUALTY C |    | 5,504,750       |
| 12,000           | AFFILIATED PUBNS          |    | 697,500         |
| 10,000           | AFFILIATED BANKSHARES COL |    | 150,000         |
| 46,500           | AFG INDS INC              |    | 1,482,188       |
| 68,400           | AHMANSON H.F. CO.         |    | 1,889,550       |
| 47,600           | AIR PRODUCTS & CHEM. INC. |    | 1,666,000       |
| 21,000           | AIR WIS AVIATION INC      |    | 220,500         |
| 19,100           | AIRBORNE FGHT CORP        |    | 362,900         |
| 45,000           | ALASKA AIR GROUP          |    | 736,875         |
| 26,000           | ALBERTSONS INC            |    | 1,215,500       |
| 92,400           | ALCAN ALUMINUM LTD.       |    | 2,818,200       |
| 20,000           | ALCO STANDARD CORP.       |    | 850,000         |
| 100              | ALEX BROWN INC            |    | 3,050           |
| 26,500           | ALEXANDER & ALEXANDER     |    | 1,043,438       |
| 36,000           | ALEXANDER & BALDWIN INC   |    | 1,350,000       |
| 11,100           | ALEXANDERS INC            |    | 425,963         |
| 30,000           | ALFIN FRAGRANCES INC      |    | 716,250         |
| 8,323            | ALLEGHANY CORP            |    | 818,775         |
| 23,500           | ALLEGHENY & WESTN ENERGY  |    | 646,250         |
| 41,000           | ALLEGHENY BEVERAGE CORP   |    | 717,500         |
| 17,000           | ALLEGHENY INTERNATIONAL   |    | 348,500         |
| 34,100           | ALLEGHENY PWR SYS INC     |    | 1,508,925       |
| 25,250           | ALLEN GROUP INC           |    | 498,688         |
| 30,000           | ALLIED BANCSHARES INC.    |    | 472,500         |
| 30,000           | ALLIED STORES CORP        |    | 1,601,250       |
| 140,150          | ALLIED-SIGNAL INC.        |    | 6,289,231       |
| 16,000           | ALLTEL CORP               |    | 588,000         |
| 66,200           | ALUMINUM CO. OF AMERICA   |    | 2,523,875       |
| 58,000           | AMAX INC                  |    | 768,500         |
| 36,600           | AMDAHL CORP               |    | 640,500         |
| 25,700           | AMER. BANK. INS. GRP.     |    | 372,650         |
| 8,457            | AMER. ECOLOGY INC.        |    | 221,996         |
| 70,700           | AMER. GENERAL CORP.       |    | 2,978,238       |



MINNESOTA STATE BOARD OF INVESMENT  
PASSIVE EQUITY FUND  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  | MARKET<br>VALUE |
|------------------|---------------------------|-----------------|
| 28,900           | BARNETT BKS FLA           | \$ 1,654,525    |
| 26,000           | BARRY WRIGHT CORP         | 542,750         |
| 14,000           | BASSETT FURNITURE INDS IN | 644,000         |
| 36,400           | BATTLE MTN GOLD CL A      | 473,200         |
| 24,800           | BAUSCH & LOMB INC         | 967,200         |
| 173,605          | BAXTER TRAVENOL LABS      | 3,276,794       |
| 36,000           | BAYBANKS INC              | 1,836,000       |
| 35,700           | BAYLY CORP.               | 629,213         |
| 17,200           | BBDO INTL INC             | 490,200         |
| 35,200           | BCI HLDGS CORP PFD 15.25  | 888,800         |
| 50,110           | BEAR STEARNS COS INC      | 1,434,399       |
| 28,000           | BECOR WESTERN INC         | 364,000         |
| 32,500           | BECTON DICKINSON & CO     | 1,791,563       |
| 22,100           | BELL & HOWELL CO.         | 1,038,700       |
| 163,120          | BELL ATLANTIC CORP.       | 11,336,840      |
| 196,800          | BELL CANADA ENTERPRISES I | 5,461,200       |
| 244,980          | BELL SOUTH CORP           | 15,372,495      |
| 18,000           | BELO A H CORP             | 1,062,000       |
| 21,600           | BENEFICIAL CORPORATION    | 1,004,400       |
| 26,250           | BERGEN BRUNSWIG CORP.     | 636,563         |
| 17,200           | BEST PRODUCTS             | 238,650         |
| 35,100           | BETHLEHEM STEEL           | 517,725         |
| 6,600            | BETZ LABS INC             | 278,850         |
| 71,400           | BEVERLY ENTERPRISES       | 1,561,875       |
| 21,400           | BIG B INC                 | 363,800         |
| 25,000           | BIG THREE INDUSTRIES      | 646,875         |
| 15,000           | BIG V SUPERMARKETS INC    | 221,250         |
| 43,500           | BLACK & DECKER MFG CO     | 891,750         |
| 25,000           | BLACK HILLS CORP          | 587,500         |
| 47,800           | BLAIR JOHN & CO.          | 1,398,150       |
| 28,000           | BLOCK H & R INC.          | 1,116,500       |
| 16,400           | BLOUNT INC                | 241,900         |
| 5,950            | BOATMEN'S BANCSHARES      | 281,881         |
| 40,700           | BOB EVANS FARMS INC       | 1,119,250       |
| 128,525          | BOEING COMPANY            | 8,097,075       |
| 21,300           | BOISE CASCADE CORP        | 1,235,400       |
| 11,600           | BOLAR PHARMACY            | 363,950         |
| 75,150           | BORDEN INC.               | 3,710,531       |
| 64,100           | BORG-WARNER               | 2,251,513       |
| 20,800           | BOSTON EDISON CO          | 1,058,200       |
| 7,000            | BRANCH CORP               | 297,500         |
| 42,600           | BRASCAN LTD               | 766,800         |
| 8,600            | BRIGGS & STRATTON CORP    | 321,425         |
| 115,682          | BRISTOL-MYERS COMPANY     | 9,948,652       |
| 42,000           | BROOKLYN UN GAS CO.       | 1,144,500       |
| 9,700            | BROWN GROUP               | 369,813         |
| 59,700           | BROWNING FERRIS INDS INC  | 2,268,600       |

MINNESOTA STATE BOARD OF INVESTMENT  
PASSIVE EQUITY FUND  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  | MARKET<br>VALUE |
|------------------|---------------------------|-----------------|
| 34,000           | BRUNOS INC                | \$ 705,500      |
| 46,200           | BRUNSWICK CORP.           | 1,634,325       |
| 22,000           | BRUSH WELLMAN INC         | 693,000         |
| 10,000           | BSN CORP                  | 187,500         |
| 31,300           | BURLINGTON INDUSTRIES     | 1,224,613       |
| 56,900           | BURLINGTON NORTHERN INC.  | 3,627,375       |
| 33,000           | BURNDY CORP               | 420,750         |
| 5,000            | BURNUP & SIMS INC         | 30,000          |
| 38,800           | BURROUGHS CORPORATION     | 2,386,200       |
| 20,800           | C3 INC                    | 195,000         |
| 18,000           | CABOT CORP                | 526,500         |
| 33,000           | CALFED INC                | 1,258,125       |
| 14,081           | CALLAHAN MNG CORP         | 205,935         |
| 10,000           | CALMAT CO                 | 350,000         |
| 9,300            | CALNY FOOD SVCS INC       | 95,325          |
| 39,000           | CAMERON IRON WORKS INC    | 419,250         |
| 50,000           | CAMPBELL RED LAKES MINES  | 743,750         |
| 57,800           | CAMPBELL SOUP CO          | 3,749,775       |
| 30,000           | CANADIAN MARCONI CO       | 547,500         |
| 240,557          | CANADIAN PACIFIC LTD      | 2,916,754       |
| 1,000            | CANAL RANDOLPH LTD PARTNE | 7,000           |
| 12,300           | CAPITAL CITIES/ABC INC    | 3,154,950       |
| 47,800           | CAPITAL HOLDING CORP.     | 1,804,450       |
| 54,000           | CAREMARK                  | 945,000         |
| 33,000           | CARL KARCHER ENTERPRISES  | 589,875         |
| 16,800           | CARLISLE CORP             | 594,300         |
| 24,000           | CAROLINA FREIGHT CORP     | 867,000         |
| 46,800           | CAROLINA PWR & LT CO      | 1,597,050       |
| 17,900           | CARPENTER TECHNOLOGY CORP | 628,738         |
| 21,500           | CARSON PIRIE & CO.        | 752,500         |
| 29,800           | CARTER HAWLEY HALE STORES | 1,095,150       |
| 5,000            | CARTER WALLACE INC        | 352,500         |
| 83,600           | CATERPILLAR INC.          | 4,159,100       |
| 12,000           | CBI INDS INC              | 298,500         |
| 16,752           | CBS INCORPORATED          | 2,420,664       |
| 2,000            | CCB FINL CORP             | 82,500          |
| 11,800           | CELANESE CORPORATION      | 2,696,300       |
| 11,000           | CEN. BANKSHRS. SO.        | 338,250         |
| 41,835           | CENERGY CORP              | 256,239         |
| 21,000           | CENTEL CORP.              | 1,249,500       |
| 103,480          | CENTERIOR ENERGY CORP     | 2,625,805       |
| 12,000           | CENTERRE BANCORPORATION   | 612,000         |
| 19,000           | CENTEX CORP               | 657,875         |
| 74,000           | CENTRAL & SO WEST CORP.   | 2,312,500       |
| 8,100            | CENTRAL BANCORPORATION IN | 477,900         |
| 8,400            | CENTRAL HUDSON GAS & ELEC | 286,650         |
| 41,000           | CENTRAL ILL PUB SVC CO    | 1,096,750       |

MINNESOTA STATE BOARD OF INVESMENT  
PASSIVE EQUITY FUND  
ALPHABETICAL EQUITY HOLDINGS  
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| NO. OF<br>SHARES | SECURITY                  | MARKET<br>VALUE |
|------------------|---------------------------|-----------------|
| 5,900            | CENTRAL JERSEY BANCORP    | \$ 262,550      |
| 24,000           | CENTRAL LA ELEC CO        | 807,000         |
| 20,500           | CENTRAL ME PWR CO         | 369,000         |
| 19,700           | CENVILL INVS INC          | 357,063         |
| 31,400           | CERTAIN TEED PRODS CORP   | 1,138,250       |
| 49,000           | CETUS CORP                | 1,788,500       |
| 27,236           | CF & I STL CORP           | 194,057         |
| 73,765           | CHAMPION INTERNATIONAL    | 1,816,463       |
| 10,600           | CHAMPION SPARK PLUG CO    | 109,975         |
| 48,000           | CHARMING SHOPPES INC      | 1,662,000       |
| 48,000           | CHARTER MED CORP          | 1,038,000       |
| 64,100           | CHASE MANHATTAN CORP.     | 2,844,438       |
| 25,500           | CHEM-LAWN CORP.           | 490,875         |
| 21,000           | CHEMED CORPORATION        | 798,000         |
| 46,400           | CHEMICAL NEW YORK CORP    | 2,378,000       |
| 12,800           | CHESAPEAKE CORP VA        | 528,000         |
| 33,700           | CHESEBROUGH-PONDS INC.    | 1,748,188       |
| 267,800          | CHEVRON CORP              | 10,276,825      |
| 29,000           | CHI-CHIS INC              | 279,125         |
| 10,000           | CHICAGO PNEUMATIC TOOL    | 376,250         |
| 21,000           | CHIEFTAIN DEV LTD         | 133,875         |
| 23,000           | CHOCK FULL O NUTS CORP    | 276,000         |
| 47,000           | CHROMALLOY AMERN CORP DEL | 1,157,375       |
| 139,650          | CHRYSLER CORP.            | 5,324,156       |
| 26,025           | CHUBB CORPORATION         | 1,795,725       |
| 56,400           | CHURCHS FRIED CHICKEN     | 923,550         |
| 63,500           | CIGNA CORPORATION         | 4,024,313       |
| 32,000           | CILCORP INC               | 1,160,000       |
| 13,000           | CINCINNATI BELL INC       | 511,875         |
| 8,000            | CINCINNATI FINL CORP      | 588,000         |
| 10,500           | CINCINNATI MILACRON INC   | 221,813         |
| 38,300           | CIPHER DATA PRODS INC     | 579,288         |
| 32,100           | CIRCLE K CORP             | 1,115,475       |
| 105,600          | CITICORP                  | 6,309,600       |
| 53,360           | CITIZENS & SOUTHERN CORP. | 1,614,140       |
| 47,250           | CITIZENS FID CORP         | 1,547,438       |
| 10,000           | CITIZENS FIRST BANCORP IN | 222,500         |
| 25,562           | CITIZENS UTILS CO DEL     | 1,284,491       |
| 46,800           | CITY FED FINANCIAL CORP   | 830,700         |
| 34,400           | CLARK EQUIP CO            | 756,800         |
| 15,600           | CLEVELAND-CLIFFS INC      | 224,250         |
| 14,000           | CLOROX CO.                | 782,250         |
| 49,200           | CNA FINL CORP             | 3,179,550       |
| 50,300           | COACHMEN INDS INC         | 855,100         |
| 33,000           | COASTAL CORP              | 1,060,125       |
| 36,300           | COBE LABS INC             | 907,500         |
| 17,600           | COCA COLA BOTTLING CO CON | 976,800         |

MINNESOTA STATE BOARD OF INVESMENT  
PASSIVE EQUITY FUND  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  | MARKET<br>VALUE |
|------------------|---------------------------|-----------------|
| 106,500          | COCA COLA COMPANY         | \$ 13,365,750   |
| 7,000            | COLEMAN CO. INC.          | 305,375         |
| 60,145           | COLGATE PALMOLIVE         | 2,556,163       |
| 6,700            | COLLAGEN CORP.            | 159,125         |
| 35,200           | COLLINS & AIKMAN CORP     | 1,381,600       |
| 72,000           | COLLINS FOODS INTL.       | 1,305,000       |
| 24,700           | COLOR TILE INC            | 598,975         |
| 21,800           | COLT INDS INC DEL         | 1,523,275       |
| 27,900           | COLUMBIA GAS SYSTEM INC   | 1,206,675       |
| 18,600           | COMAIR INC                | 141,825         |
| 24,900           | COMBINED INTL CORP        | 1,506,450       |
| 25,100           | COMBUSTION ENGINEERING    | 762,413         |
| 20,000           | COMCAST CORP              | 557,500         |
| 36,000           | COMDATA NETWORK INC.      | 504,000         |
| 34,600           | COMDISCO INC.             | 756,875         |
| 23,000           | COMERICA INC              | 1,299,500       |
| 48,000           | COMINCO LTD               | 474,000         |
| 12,000           | COMMERCE CLEARING HOUSE I | 750,000         |
| 7,000            | COMMERCE UN CORP          | 212,625         |
| 34,666           | COMMERCIAL METALS CO      | 706,320         |
| 164,036          | COMMONWEALTH EDISON CO.   | 5,269,657       |
| 13,000           | COMMUNICATIONS SATELLITE  | 445,250         |
| 23,900           | COMMUNITY PSYCHIATRIC CEN | 719,988         |
| 15,000           | COMPAQ COMPUTER CORP      | 213,750         |
| 37,333           | COMPREHENSIVE CARE CORP   | 489,996         |
| 27,000           | COMPUGRAPHIC CORP         | 519,750         |
| 30,000           | COMPUTER ASSOC INTL INC   | 720,000         |
| 4,792            | COMPUTER CONSOLES         | 44,925          |
| 34,500           | COMPUTER SCIENCES CORP.   | 1,358,438       |
| 21,100           | COMPUTER VISION CORP.     | 292,763         |
| 35,000           | CONAGRA INC.              | 2,056,250       |
| 500              | CONCURRENT COMPUTER CORP  | 7,750           |
| 11,880           | CONRAC CORP               | 191,565         |
| 97,000           | CONSOL. EDISON OF N.Y.    | 4,280,125       |
| 35,400           | CONSOL. FREIGHTWAYS INC.  | 1,150,500       |
| 61,800           | CONSOL. NAT. GAS          | 1,915,800       |
| 12,000           | CONSOLIDATED PAPERS INC   | 693,000         |
| 6,800            | CONSUMERS WTR CO          | 239,700         |
| 50,800           | CONTEL CORP               | 1,530,350       |
| 28,665           | CONTINENTAL BANCORP INC P | 1,888,307       |
| 46,200           | CONTINENTAL CORP          | 2,223,375       |
| 16,200           | CONTROL DATA CORP.        | 364,500         |
| 56,000           | CONVERGENT TECH.          | 406,000         |
| 48,781           | COOPER DEVELOPMENT CO.    | 146,342         |
| 31,400           | COOPER INDS. INC.         | 1,279,550       |
| 37,000           | COOPER LASERSONICS INC    | 157,250         |
| 8,400            | COOPER TIRE & RUBBER      | 201,600         |

MINNESOTA STATE BOARD OF INVESTMENT  
PASSIVE EQUITY FUND  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 44,000           | COOPERVISION INC          | \$ | 1,056,000       |
| 19,600           | CORDURA CORP.             |    | 683,550         |
| 45,600           | CORESTATES FINL CORP      |    | 1,761,300       |
| 37,600           | CORNING GLASS WORKS       |    | 2,740,100       |
| 34,000           | CORROON & BLACK CORP      |    | 1,368,500       |
| 42,600           | CPC INTERNATIONAL INC.    |    | 3,109,800       |
| 53,000           | CPT CORP.                 |    | 218,625         |
| 26,260           | CRANE CO.                 |    | 820,625         |
| 23,200           | CRAY RESH INC             |    | 2,241,700       |
| 7,200            | CRONUS INDS INC           |    | 185,400         |
| 24,000           | CROSS & TRECKER           |    | 462,000         |
| 19,500           | CROSS A T CO              |    | 836,063         |
| 17,500           | CROWN CORK & SEAL         |    | 1,841,875       |
| 10,400           | CRYSTAL BRANDS INC        |    | 232,700         |
| 120,600          | CSX CORPORATION           |    | 3,949,650       |
| 9,500            | CUBIC CORP                |    | 172,188         |
| 4,000            | CULBRO CORP               |    | 200,000         |
| 17,000           | CULLEN FROST BANKERS INC  |    | 293,250         |
| 25,000           | CULLINET SOFTWARE INC.    |    | 321,875         |
| 12,000           | CULLUM COS INC            |    | 306,000         |
| 11,500           | CUMMINS ENGINE CO.        |    | 766,188         |
| 22,830           | CYPRUS MINERALS CORP      |    | 516,529         |
| 43,900           | DANA CORPORATION          |    | 1,443,213       |
| 24,150           | DANIEL INDS INC           |    | 169,050         |
| 132,000          | DART & KRAFT INC.         |    | 8,365,500       |
| 2,800            | DATA CARD CORP.           |    | 71,400          |
| 17,500           | DATA GENERAL CORP.        |    | 605,938         |
| 22,700           | DATA I O CORP             |    | 227,000         |
| 55,000           | DATA SWITCH CORP          |    | 357,500         |
| 19,000           | DATAPPOINT CORP           |    | 154,375         |
| 54,200           | DATAPRODUCTS CORP         |    | 758,800         |
| 10,000           | DAYCO CORP                |    | 188,750         |
| 77,600           | DAYTON-HUDSON CORP.       |    | 4,326,200       |
| 43,700           | DE LUXE CHECK PRINTERS IN |    | 3,168,250       |
| 24,000           | DEAN FOODS CO             |    | 777,000         |
| 10,400           | DECISION INDUSTRIES CORP. |    | 145,600         |
| 53,600           | DEERE & COMPANY           |    | 1,527,600       |
| 26,000           | DEKALB CORP               |    | 536,250         |
| 32,500           | DELMARVA PWR & LT CO      |    | 1,121,250       |
| 38,400           | DELTA AIR LINES INC.      |    | 1,593,600       |
| 19,000           | DENISON MINES LTD A       |    | 128,250         |
| 19,000           | DENISON MINES LTD B       |    | 125,875         |
| 112,000          | DETROIT EDISON CO         |    | 1,848,000       |
| 29,000           | DEXTER CORP               |    | 993,250         |
| 35,300           | DI GIORGIO CORP           |    | 917,800         |
| 13,500           | DIAMOND BATHURST INC      |    | 378,000         |
| 93,600           | DIAMOND SHAMROCK          |    | 1,017,900       |

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| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 4,471            | DIAMOND SHAMROCK OFFSHORE | \$ | 67,070          |
| 6,750            | DIBRELL BROS INC          |    | 166,219         |
| 35,850           | DIGITAL COMMUNICATIONS AS |    | 609,450         |
| 96,400           | DIGITAL EQUIPMENT CORP.   |    | 8,266,300       |
| 36,600           | DILLARD DEPT. STORES      |    | 1,532,625       |
| 110,200          | DISNEY WALT CORP          |    | 6,033,450       |
| 20,000           | DIVERSIFIED ENERGIES INC  |    | 545,000         |
| 41,400           | DOLLAR GEN CORP           |    | 874,575         |
| 72,000           | DOME MINES LTD            |    | 396,000         |
| 7,000            | DOMINION BANKSHARES CORP  |    | 349,125         |
| 66,300           | DOMINION RESOURCES        |    | 2,784,600       |
| 14,900           | DONALDSON INC             |    | 555,025         |
| 28,800           | DONNELLEY RR & SONS       |    | 2,242,800       |
| 35,800           | DOVER CORP.               |    | 1,485,700       |
| 158,800          | DOW CHEMICAL COMPANY      |    | 9,111,150       |
| 45,000           | DOW JONES & CO            |    | 2,525,625       |
| 19,800           | DOWNEY SVGS & LN ASSN     |    | 492,525         |
| 37,700           | DPL INC.                  |    | 890,663         |
| 58,500           | DRESSER INDUSTRIES        |    | 1,089,563       |
| 31,000           | DREYERS GRAND ICE CREAM I |    | 961,000         |
| 13,500           | DREYFUS CORP.             |    | 1,363,500       |
| 198,780          | DU PONT EI DENEMOURS      |    | 16,548,435      |
| 73,400           | DUKE POWER CO. NC         |    | 3,312,175       |
| 60,800           | DUN & BRADSTREET COS INC  |    | 7,204,800       |
| 5,000            | DUNKIN DOUGHNUT INC.      |    | 170,625         |
| 52,900           | DUQUESNE LT CO            |    | 727,375         |
| 17,742           | DURO TEST CORP            |    | 343,751         |
| 19,125           | DURR FILLAUER MED INC     |    | 306,000         |
| 7,300            | DYNATECH CORP             |    | 242,725         |
| 28,000           | E-SYSTEMS                 |    | 980,000         |
| 29,300           | E.F. HUTTON GROUP INC.    |    | 952,250         |
| 19,900           | EAGLE PICHER INDS INC     |    | 778,588         |
| 27,000           | EASTERN GAS & FUEL ASSOC  |    | 732,375         |
| 172,800          | EASTMAN KODAK COMPANY     |    | 10,130,400      |
| 32,200           | EATON CORP.               |    | 2,197,650       |
| 27,400           | ECHLIN INC.               |    | 527,450         |
| 33,300           | ECONOMICS LAB INC         |    | 1,943,888       |
| 7,400            | EDISON BROS STORES INC    |    | 308,950         |
| 14,000           | EDO CORP                  |    | 213,500         |
| 12,800           | EG & G INC                |    | 433,600         |
| 57,000           | EL PASO ELEC CO           |    | 912,000         |
| 23,000           | ELECTRO BIOLOGY INC       |    | 181,125         |
| 16,500           | ELECTRO CATHETER CORP     |    | 179,438         |
| 13,100           | ELECTRO NUCLEONICS INC    |    | 170,300         |
| 10,000           | ELECTROSPACE SYSTEMS      |    | 262,500         |
| 62,500           | EMERSON ELECTRIC          |    | 5,437,500       |
| 22,000           | EMERY AIR FREIGHT CORP.   |    | 321,750         |

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| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 25,300           | EMHART CORP VA            | \$ | 917,125         |
| 30,200           | EMULEX CORP               |    | 188,750         |
| 27,400           | ENGLEHARD CORP            |    | 767,200         |
| 9,600            | ENNIS BUSINESS FORMS INC  |    | 252,000         |
| 32,100           | ENRON CORP.               |    | 1,412,400       |
| 45,000           | ENSERCH CORP.             |    | 686,250         |
| 900              | ENSERCH EXPL PARTNERS LTD |    | 11,363          |
| 29,500           | ENTERRA CORP              |    | 243,375         |
| 36,000           | ENTEX                     |    | 697,500         |
| 10,000           | ENVIRONMENTAL SYS CO      |    | 233,750         |
| 34,800           | ENZO BIOCHEM INC          |    | 439,350         |
| 19,700           | EQUATORIAL COMMUNICATIONS |    | 150,213         |
| 8,000            | EQUITABLE BANCORPORATION  |    | 253,000         |
| 14,000           | EQUITABLE RES INC         |    | 624,750         |
| 23,000           | ESTERLINE CORP            |    | 385,250         |
| 123,200          | ETHYL CORP.               |    | 2,571,800       |
| 45,000           | EVANS & SUTHERLAND COMPUT |    | 990,000         |
| 19,000           | EX CELL O CORP            |    | 916,750         |
| 585,100          | EXXON CORPORATION         |    | 35,617,963      |
| 20,000           | FAIRFIELD COMMUN. INC.    |    | 212,500         |
| 50,000           | FALCONBRIDGE LTD          |    | 756,250         |
| 25,500           | FAMILY DLR STORES INC     |    | 643,875         |
| 5,033            | FARLEY NORTHWEST INDS INC |    | 117,017         |
| 35,700           | FARM FRESH INC            |    | 522,113         |
| 54,075           | FARM HOUSE FOODS CORP     |    | 277,134         |
| 56,600           | FARMERS GROUP INC.        |    | 2,377,200       |
| 11,700           | FAYS DRUG INC             |    | 124,313         |
| 42,000           | FEDERAL CO                |    | 1,475,250       |
| 42,100           | FEDERAL EXPRESS CORP.     |    | 2,410,225       |
| 63,700           | FEDERAL NATL. MTG.        |    | 2,508,188       |
| 32,000           | FEDERAL PAPER BRD INC     |    | 864,000         |
| 17,000           | FEDERAL-MOGUL CORP        |    | 726,750         |
| 41,800           | FEDERATED DEPT. STORES    |    | 3,714,975       |
| 10,000           | FERRO CORP                |    | 398,750         |
| 26,000           | FIDELCOR                  |    | 1,157,000       |
| 6,000            | FIFTH THIRD BANCORP       |    | 349,500         |
| 29,400           | FIRESTONE TIRE & RUBR CO  |    | 746,025         |
| 72,000           | FIRST ALA BANCSHARES INC  |    | 1,692,000       |
| 17,500           | FIRST AMERN CORP TENN     |    | 577,500         |
| 7,500            | FIRST AMERN SVGS F A ABIN |    | 178,125         |
| 25,600           | FIRST BANK SYSTEM         |    | 1,475,200       |
| 19,600           | FIRST BOSTON INC          |    | 1,004,500       |
| 45,300           | FIRST CHICAGO CORP        |    | 1,472,250       |
| 35,000           | FIRST CITY BANKCORP TEXAS |    | 280,000         |
| 3,300            | FIRST EASTN CORP PA       |    | 212,850         |
| 47,600           | FIRST EXECUTIVE CORP DEL  |    | 1,320,900       |
| 2,380            | FIRST EXECUTIVE CORP DEL  |    | 16,660          |

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| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 42,300           | FIRST FED MICH DETROIT    | \$ | 1,253,138       |
| 31,400           | FIRST FIDELITY BANCORP    |    | 1,244,225       |
| 17,100           | FIRST FINL CORP WIC       |    | 312,075         |
| 10,000           | FIRST FLA BKS INC.        |    | 372,500         |
| 37,600           | FIRST INTERSTATE BANCORP. |    | 2,331,200       |
| 7,000            | FIRST JERSEY NAT'L. CO.   |    | 396,375         |
| 40,275           | FIRST KY NATL CORP        |    | 1,238,456       |
| 14,000           | FIRST NATL CINCINNATI COR |    | 661,500         |
| 30,000           | FIRST PA CORP             |    | 251,250         |
| 16,000           | FIRST RR & BKG CO GA      |    | 474,000         |
| 29,000           | FIRST SEC CORP DEL        |    | 804,750         |
| 39,300           | FIRST TENN NATL CORP      |    | 1,404,975       |
| 65,800           | FIRST UN CORP             |    | 1,883,525       |
| 52,700           | FIRST WACHOVIA CORP       |    | 2,391,263       |
| 10,000           | FIRST WIS CORP            |    | 325,000         |
| 7,200            | FISCHBACH CORP            |    | 189,000         |
| 6,500            | FISHER FOODS INC          |    | 106,438         |
| 16,000           | FLEET FINANCIAL GROUP INC |    | 870,000         |
| 28,300           | FLEETWOOD ENTER. INC.     |    | 650,900         |
| 17,700           | FLEMING COS.              |    | 694,725         |
| 34,500           | FLIGHTSAFETY INTL INC     |    | 858,188         |
| 23,000           | FLOATING POINT SYS INC    |    | 871,125         |
| 31,300           | FLORIDA FED. S & L        |    | 606,438         |
| 28,500           | FLORIDA NATL BKS FLA INC  |    | 1,592,438       |
| 35,000           | FLORIDA PROGRESS CORP     |    | 1,378,125       |
| 5,000            | FLORIDA ROCK INDUSTRIES   |    | 322,500         |
| 52,500           | FLOWERS INDUSTRIES        |    | 1,489,688       |
| 15,015           | FLUKE JOHN MFG.           |    | 373,498         |
| 51,700           | FLUOR CORP                |    | 840,125         |
| 25,000           | FMC CORP NEW              |    | 496,875         |
| 51,000           | FOOD LION CORP            |    | 867,000         |
| 111,900          | FOOD LION INC CL A        |    | 1,454,700       |
| 223,275          | FORD MOTOR CO.            |    | 12,308,034      |
| 27,000           | FOREST OIL CORP           |    | 303,750         |
| 56,500           | FORT HOWARD PAPER CO.     |    | 3,390,000       |
| 22,600           | FOSTER WHEELER CORP       |    | 305,100         |
| 5,032            | FOTOMAT CORP              |    | 8,806           |
| 19,000           | FOXBORO CO                |    | 579,500         |
| 104,800          | FPL GROUP INC.            |    | 3,327,400       |
| 2,483            | FREEPORT MCMORAN ENERGY   |    | 37,871          |
| 2,483            | FREEPORT MCMORAN GOLD CO  |    | 18,620          |
| 80,000           | FREEPORT-MCMORAN INC      |    | 1,390,000       |
| 24,000           | FREMONT GEN CORP          |    | 666,000         |
| 6,000            | FRISCHS RESTAURANTS INC   |    | 228,000         |
| 6,500            | FRUEHAUF CORP.            |    | 320,938         |
| 3,500            | FUDDRUCKERS INC           |    | 14,000          |
| 24,000           | FUQUA INDS INC            |    | 1,215,000       |



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| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 46,400           | GAF CORP                  | \$ | 1,600,800       |
| 64,600           | GANNETT INC.              |    | 5,523,300       |
| 27,100           | GATX                      |    | 894,300         |
| 1,300            | GEARHART INDS INC         |    | 2,925           |
| 14,400           | GEICO CORP.               |    | 1,350,000       |
| 16,500           | GELCO CORPORATION         |    | 257,813         |
| 21,224           | GENCORP                   |    | 1,586,494       |
| 29,900           | GENENTECH INC             |    | 2,694,738       |
| 20,800           | GENERAL CINEMA CORP       |    | 1,183,000       |
| 63,300           | GENERAL DATACOMM INDS INC |    | 775,425         |
| 33,700           | GENERAL DYNAMICS          |    | 2,578,050       |
| 362,500          | GENERAL ELECTRIC CO.      |    | 29,362,500      |
| 70,137           | GENERAL HOST CORP         |    | 1,753,425       |
| 23,800           | GENERAL INSTRUMENT CORP   |    | 514,675         |
| 43,200           | GENERAL MILLS INC.        |    | 3,585,600       |
| 52,520           | GENERAL MOTORS (H)        |    | 2,186,145       |
| 55,260           | GENERAL MOTORS CORP CL E  |    | 2,693,925       |
| 251,600          | GENERAL MOTORS CORP.      |    | 19,530,450      |
| 57,000           | GENERAL NUTRITION INC     |    | 320,625         |
| 61,700           | GENERAL PUBLIC UTILITIES  |    | 1,295,700       |
| 72,800           | GENERAL RE CORP.          |    | 4,550,000       |
| 24,900           | GENERAL SIGNAL CORP.      |    | 1,179,638       |
| 29,500           | GENRAD INC.               |    | 258,125         |
| 8,400            | GENSTAR LTD.              |    | 347,550         |
| 39,800           | GENUINE PARTS COMPANY     |    | 1,825,825       |
| 28,400           | GEORGE A HORMEL & CO      |    | 976,250         |
| 86,300           | GEORGIA PACIFIC CORP.     |    | 2,707,663       |
| 26,050           | GERBER PRODS CO           |    | 1,237,375       |
| 10,000           | GIFFORD HILL & CO INC     |    | 235,000         |
| 46,000           | GILLETTE COMPANY          |    | 2,259,750       |
| 7,000            | GODFREY COMPANY           |    | 238,875         |
| 13,333           | GOLDEN ENTERPRISES        |    | 188,329         |
| 31,500           | GOLDEN WEST FINANCIAL     |    | 1,334,813       |
| 8,900            | GOODRICH (B.F.)           |    | 387,150         |
| 89,000           | GOODYEAR TIRE & RUBBER    |    | 2,937,000       |
| 38,400           | GOULD INC.                |    | 840,000         |
| 35,000           | GOULDS PUMPS INC          |    | 586,250         |
| 15,000           | GR. AMER. FIRST SVGS BK S |    | 348,750         |
| 31,800           | GR. WESTERN FINANCIAL     |    | 1,518,450       |
| 42,700           | GRACE W R & CO            |    | 2,300,463       |
| 21,300           | GRAINGER W W INC          |    | 953,175         |
| 16,200           | GREAT ATLANTIC & PAC TEA  |    | 425,250         |
| 7,000            | GREAT LAKES CHEMICAL CORP |    | 266,875         |
| 19,000           | GREAT NORTHN NEKOOSA CORP |    | 945,250         |
| 18,700           | GREENMAN BROS INC         |    | 458,150         |
| 17,900           | GREENTREE ACCEPT. INC.    |    | 1,038,200       |
| 34,600           | GREYHOUND CORP.           |    | 1,219,650       |

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| NO. OF<br>SHARES | SECURITY                  | MARKET<br>VALUE |
|------------------|---------------------------|-----------------|
| 55,652           | GROW CHEM CORP            | \$ 639,998      |
| 24,600           | GRUMMAN CORP.             | 722,625         |
| 169,900          | GTE CORP.                 | 9,195,838       |
| 5,000            | GUILFORD MILLS            | 180,625         |
| 51,300           | GULF & WESTERN INC.       | 3,648,713       |
| 100,800          | GULF BROADCASTING         | 12,600          |
| 16,400           | GULF CDA CORP             | 176,300         |
| 63,000           | GULF CDA CORP PFD         | 204,750         |
| 12,000           | GULF RES & CHEM CORP      | 154,500         |
| 69,200           | GULF STS UTILS CO         | 614,150         |
| 29,500           | HALL FRANK B & CO INC     | 744,875         |
| 94,100           | HALLIBURTON INC.          | 2,093,725       |
| 44,000           | HAMILTON OIL CORP         | 467,500         |
| 21,000           | HAMMERMILL PAPER CO       | 887,250         |
| 38,000           | HANDY & HARMAN            | 660,250         |
| 3,750            | HANDYMAN CORP             | 118,594         |
| 18,000           | HANNAFORD BROS CO         | 643,500         |
| 19,000           | HANOVER INS. CO           | 1,178,000       |
| 38,100           | HARCOURT BRACE JOVAN.     | 1,381,125       |
| 24,100           | HARLAND JOHN H CO         | 1,159,813       |
| 2,500            | HARPER GROUP              | 85,625          |
| 13,150           | HARPER ROW PUBLISHERS INC | 290,944         |
| 30,900           | HARRIS CORP.              | 1,027,425       |
| 20,900           | HARSCO CORP               | 574,750         |
| 17,500           | HARTFORD NATL CORP        | 824,688         |
| 31,500           | HARTMARX CORP             | 901,688         |
| 10,500           | HARVERTY FURNITURE COS IN | 139,125         |
| 5,000            | HASBRO INDS. INC.         | 290,000         |
| 10,500           | HAVERTY FURN. COS CL A    | 141,750         |
| 19,800           | HAWAIIAN ELEC INDS INC    | 621,225         |
| 10,000           | HAZELTINE CORP            | 202,500         |
| 13,000           | HB FULLER CO              | 360,750         |
| 30,000           | HBO & CO                  | 453,750         |
| 25,000           | HEALTHCARE USA INC        | 312,500         |
| 17,800           | HECKS INC                 | 229,175         |
| 25,000           | HECLA INC.                | 259,375         |
| 120,300          | HEINZ H.J. & CO.          | 5,563,875       |
| 40,000           | HEIZER DEP. REC.          | 35,000          |
| 25,000           | HELMERICH & PAYNE INC     | 506,250         |
| 45,038           | HENLEY GROUP INC          | 866,972         |
| 42,400           | HERCULES INCORPORATED     | 2,252,500       |
| 29,100           | HERSHEY FOODS CORP        | 2,346,188       |
| 205,600          | HEWLETT PACKARD CO.       | 8,429,600       |
| 32,000           | HILLENBRAND INDS INC      | 1,404,000       |
| 21,500           | HILTON HOTELS CORP        | 1,542,625       |
| 22,200           | HM FED SVG&LN ASSN S.D.CA | 832,500         |
| 30,000           | HOGAN SYSTEMS             | 315,000         |

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|------------------|---------------------------|----|-----------------|
| 24,200           | HOLIDAY CORP              | \$ | 1,433,850       |
| 37,267           | HOLLY CORP                |    | 736,023         |
| 1                | HOLLY CORP (NEW)          |    | 10              |
| 4,700            | HOLLY SUGAR CORP          |    | 531,100         |
| 6,500            | HOLMES D.H. & CO.         |    | 178,750         |
| 16,000           | HOME DEPOT INC.           |    | 348,000         |
| 45,500           | HOME GROUP INC            |    | 1,188,688       |
| 52,250           | HOMESTAKE MNG CO          |    | 1,136,438       |
| 36,400           | HONEYWELL INC.            |    | 2,757,300       |
| 1,500            | HORIZON BANCORP           |    | 78,750          |
| 71,800           | HOSPITAL CORP. OF AMER.   |    | 2,728,400       |
| 4,000            | HOUGHTON MIFFLIN CO.      |    | 233,000         |
| 15,000           | HOUSE OF FABRICS INC.     |    | 315,000         |
| 35,800           | HOUSEHOLD INTL.           |    | 1,552,825       |
| 90,300           | HOUSTON INDUSTRIES INC.   |    | 2,844,450       |
| 10,300           | HOWARD SVGS BK LIVINGSTON |    | 495,688         |
| 28,000           | HRE PROPERTIES            |    | 710,500         |
| 41,500           | HUBBELL INC.              |    | 1,307,250       |
| 10,000           | HUDSON FOODS INC          |    | 188,750         |
| 42,900           | HUGHES TOOL               |    | 418,275         |
| 74,940           | HUMANA INC.               |    | 1,901,603       |
| 10,000           | HUNTINGTON BANCSHARES INC |    | 362,500         |
| 30,000           | HUSKY OIL LTD             |    | 176,250         |
| 21,000           | I C H                     |    | 653,625         |
| 40,986           | I C INDUSTRIES            |    | 2,008,314       |
| 46,000           | I M S INTL INC            |    | 1,144,250       |
| 36,800           | IDAHO PWR CO              |    | 1,030,400       |
| 5,672            | IDC SVCS INC              |    | 65,937          |
| 52,700           | ILLINOIS POWER CORP       |    | 1,416,313       |
| 24,000           | ILLINOIS TOOL WKS INC     |    | 1,005,000       |
| 36,200           | IMPERIAL OIL CO. LTD.     |    | 995,500         |
| 88,900           | INCO INC.                 |    | 1,144,588       |
| 7,500            | INDIANA NATL CORP         |    | 345,000         |
| 20,200           | INGERSOLL RAND            |    | 1,156,450       |
| 30,500           | INLAND STEEL IND. INC.    |    | 606,188         |
| 21,500           | INSILCO CORP.             |    | 462,250         |
| 28,000           | INSTINET CORP             |    | 217,000         |
| 30,000           | INTEGRATED RESOURCES INC. |    | 716,250         |
| 92,800           | INTEL CORP.               |    | 2,134,400       |
| 35,000           | INTELLIGENT SYS CORP      |    | 192,500         |
| 20,900           | INTELOGIC TRACE INC       |    | 342,238         |
| 17,000           | INTERCO                   |    | 1,604,375       |
| 52,500           | INTERFIRST CORP.          |    | 380,625         |
| 44,900           | INTERGRAPH CORP.          |    | 1,167,400       |
| 5,400            | INTERLAKE INC             |    | 373,950         |
| 1,116            | INTERNATIONAL CAP EQUIP.  |    | 6,975           |
| 19,000           | INTERNATIONAL CTLS CORP   |    | 524,875         |

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| NO. OF<br>SHARES | SECURITY                  | MARKET<br>VALUE |
|------------------|---------------------------|-----------------|
| 20,000           | INTERNATIONAL GAME TECHNO | \$ 220,000      |
| 26,000           | INTERNATIONAL MULTIFOODS  | 1,196,000       |
| 44,000           | INTERPUBLIC GROUP         | 1,276,000       |
| 10,900           | INTERSTATE BAKERIES CORP  | 361,063         |
| 11,000           | INTERSTATE PWR CO         | 295,625         |
| 491,363          | INTL. BUSINESS MACHINES   | 71,984,680      |
| 37,200           | INTL. FLAVORS & FRAG.     | 1,771,650       |
| 26,700           | INTL. MINERALS & CHEM.    | 884,438         |
| 43,500           | INTL. PAPER CO.           | 2,735,063       |
| 10,000           | IONICS INC                | 212,500         |
| 30,800           | IOWA ELEC LT & PWR CO     | 723,800         |
| 26,000           | IOWA ILL GAS & ELEC CO    | 1,075,750       |
| 48,000           | IOWA RESOURCES INC.       | 1,116,000       |
| 22,000           | IPALCO ENTERPRISES        | 1,089,000       |
| 28,000           | IRVING BK CORP            | 1,522,500       |
| 44,000           | ISC SYS CORP              | 693,000         |
| 114,400          | ITT CORP                  | 6,220,500       |
| 18,900           | IU INTL CORP              | 290,588         |
| 59,391           | JAMES RIV CORP VA         | 2,464,727       |
| 7,000            | JAMESWAY CORP.            | 200,375         |
| 30,000           | JB'S RESTAURANTS          | 202,500         |
| 38,850           | JEFFERSON PILOT CORP.     | 1,573,425       |
| 2,000            | JEFFRIES GROUP            | 30,000          |
| 50,400           | JERRICO INC               | 1,171,800       |
| 153,100          | JOHNSON & JOHNSON         | 11,118,888      |
| 9,290            | JOHNSON CONTROLS          | 594,560         |
| 8,000            | JORGENSEN EARLE M CO DEL  | 211,000         |
| 36,000           | JOSTENS INC               | 1,309,500       |
| 17,000           | JOY MFG CO                | 414,375         |
| 10,000           | JUSTIN INDS INC           | 172,500         |
| 24,750           | JWT GROUP INC.            | 996,188         |
| 98,800           | K MART CORPORATION        | 5,619,250       |
| 16,700           | K N ENERGY INC.           | 336,088         |
| 17,200           | KAISER ALUM & CHEM CORP   | 316,050         |
| 54,000           | KANEB SERVICES            | 202,500         |
| 35,000           | KANSAS CITY PWR & LT CO   | 857,500         |
| 6,100            | KANSAS CITY SO. IND.      | 372,863         |
| 16,400           | KANSAS PWR & LT CO        | 856,900         |
| 20,000           | KASLER CORP.              | 197,500         |
| 13,500           | KATY INDS INC             | 236,250         |
| 40,500           | KAUFMAN & BROAD INC       | 1,032,750       |
| 54,000           | KAYDON CORP               | 830,250         |
| 130,000          | KELLOGG CO                | 7,475,000       |
| 41,835           | KEMPER CORP.              | 1,349,179       |
| 19,000           | KENNAMETAL INC            | 437,000         |
| 15,600           | KENNER PARKER TOYS INC    | 343,200         |
| 5,000            | KENTUCKY CENT LIFE INS CO | 287,500         |

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| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 29,000           | KENTUCKY UTILS CO         | \$ | 1,152,750       |
| 8,800            | KERR GLASS MFG CORP       |    | 145,200         |
| 37,000           | KERR MCGEE CORP.          |    | 1,012,875       |
| 26,722           | KEYSTONE INTL INC         |    | 410,851         |
| 2,300            | KEYTRONIC INC.            |    | 24,150          |
| 19,500           | KIDDE INC.                |    | 641,063         |
| 35,000           | KIMBERLY CLARK CORP       |    | 3,206,875       |
| 14,666           | KINDER CARE LRNG. CTR.    |    | 207,157         |
| 39,300           | KLA INSTRS CORP           |    | 707,400         |
| 43,000           | KLM ROYAL DUTCH AIR       |    | 822,375         |
| 51,900           | KNIGHT RIDDER INC.        |    | 2,873,963       |
| 10,000           | KNOGO CORP                |    | 282,500         |
| 19,400           | KOPPERS INC               |    | 565,025         |
| 34,200           | KROGER COMPANY            |    | 2,047,725       |
| 24,000           | KROY INC                  |    | 234,000         |
| 33,500           | KULICKE & SOFFA IND.      |    | 393,625         |
| 25,000           | LA QUINTA MTR INNS INC    |    | 378,125         |
| 7,000            | LA Z BOY CHAIR CO         |    | 493,500         |
| 14,000           | LAIDLAW INDUSTRIES        |    | 274,750         |
| 12,000           | LANCASTER COLONY CORP     |    | 301,500         |
| 33,333           | LANCE INC.                |    | 1,133,322       |
| 15,500           | LAND OF LINCOLN SVGS & LN |    | 220,875         |
| 13,500           | LAWSON PRODS INC          |    | 327,375         |
| 48,000           | LAWTER INTL INC           |    | 708,000         |
| 15,000           | LEAR SIEGLER INC.         |    | 819,375         |
| 10,000           | LEASEWAY TRANSN CORP      |    | 470,000         |
| 28,100           | LEE DATA CORP.            |    | 189,675         |
| 4,600            | LIBBEY OWENS FORD CO      |    | 335,800         |
| 2,000            | LIBERTY CORP S C          |    | 84,000          |
| 30,000           | LIEBERT CORP              |    | 798,750         |
| 117,500          | LILLY ELI & CO            |    | 9,502,813       |
| 144,300          | LIMITED INC.              |    | 4,870,125       |
| 29,400           | LIN BROADCAST. CORP.      |    | 1,447,950       |
| 31,100           | LINCOLN NATL CORP IND     |    | 1,644,413       |
| 25,000           | LITTON INDS INC.          |    | 2,025,000       |
| 34,600           | LIZ CLAIBORNE INC.        |    | 1,626,200       |
| 52,770           | LOCKHEED AIRCRAFT CORP    |    | 2,941,928       |
| 19,000           | LOCTITE CORP              |    | 864,500         |
| 70,250           | LOEWS CORP                |    | 4,829,688       |
| 26,000           | LOMAS & NETTLETON FINL CO |    | 1,196,000       |
| 25,000           | LONE STAR INDUSTRIES      |    | 771,875         |
| 30,300           | LONE STAR TECH            |    | 261,338         |
| 26,000           | LONG DRUG STORES INC      |    | 942,500         |
| 16,000           | LORAL CORP                |    | 708,000         |
| 16,000           | LOUISIANA LD & EXPL CO    |    | 428,000         |
| 21,854           | LOUISIANA PAC. CORP.      |    | 581,863         |
| 28,000           | LOUISVILLE GAS & ELEC CO  |    | 1,085,000       |

MINNESOTA STATE BOARD OF INVESTMENT  
PASSIVE EQUITY FUND  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                 |    | MARKET<br>VALUE |
|------------------|--------------------------|----|-----------------|
| 35,200           | LOWES COMPANY            | \$ | 1,267,200       |
| 36,000           | LTX CORP                 |    | 369,000         |
| 6,400            | LUBRIZOL CORP            |    | 217,600         |
| 37,600           | LUCKY STORES             |    | 1,118,600       |
| 19,300           | LUKENS STL CO            |    | 275,025         |
| 9,000            | LYNCH COMMUNICATIONS SYS |    | 128,250         |
| 31,800           | M/A COM                  |    | 548,550         |
| 45,100           | MACHINE TECHNOLOGY       |    | 264,963         |
| 32,400           | MACK TRUCKS INC.         |    | 392,850         |
| 14,800           | MACMILLAN INC.           |    | 745,550         |
| 40,800           | MACY R.H. & CO.          |    | 2,774,400       |
| 23,000           | MANITOWOC INC            |    | 448,500         |
| 38,500           | MANOR CARE INC           |    | 957,688         |
| 37,080           | MANPOWER INC             |    | 1,580,535       |
| 35,700           | MANUFACTURERS HAN. CORP. |    | 1,843,013       |
| 10,000           | MANUFACTURERS NATL CORP  |    | 497,500         |
| 12,200           | MAPCO INC                |    | 564,250         |
| 33,000           | MARINE MIDLAND BKS INC   |    | 1,716,000       |
| 59,800           | MARION LABS INC          |    | 2,676,050       |
| 104,000          | MARRIOTT CORP.           |    | 3,874,000       |
| 59,200           | MARSH & MCCLENNAN        |    | 3,492,800       |
| 1,800            | MARSHALL & ILSLEY CORP   |    | 67,050          |
| 16,900           | MARSHALL INDUSTRIES      |    | 361,238         |
| 41,100           | MARTIN MARIETTA          |    | 1,890,600       |
| 31,400           | MARYLAND NATIONAL CORP   |    | 1,538,600       |
| 109,800          | MASCO CORP               |    | 3,623,400       |
| 54,750           | MASCO INDS               |    | 1,450,875       |
| 9,992            | MATERIAL SCIENCES CORP   |    | 201,089         |
| 5,000            | MATH. APPLICATION GRP.   |    | 16,250          |
| 39,062           | MATRIX CORP N J          |    | 952,136         |
| 5,300            | MATRIX SCIENCE CORP.     |    | 182,850         |
| 35,100           | MAY DEPT. STORES CO.     |    | 2,908,913       |
| 10,000           | MAYFLOWER GROUP INC.     |    | 253,750         |
| 42,736           | MAYTAG CO.               |    | 2,286,376       |
| 65,550           | MCA INC.                 |    | 3,343,050       |
| 12,000           | MCCORMICK & CO INC       |    | 514,500         |
| 22,400           | MCDERMOTT INTL INC       |    | 476,000         |
| 104,062          | MCDONALDS CORP.          |    | 7,609,534       |
| 30,400           | MCDONNELL DOUGLAS CORP.  |    | 2,367,400       |
| 32,000           | MCFARLAND ENERGY INC     |    | 328,000         |
| 45,200           | MCGRAW HILL INC.         |    | 2,700,700       |
| 226,500          | MCI COMMUNICATION        |    | 2,349,938       |
| 8,000            | MCINTYRE MINES LTD       |    | 233,000         |
| 16,100           | MCKESSON CORP            |    | 994,175         |
| 13,100           | MCO HOLDINGS INC         |    | 181,763         |
| 55,850           | MCORP                    |    | 1,040,206       |
| 6,700            | MDU RESOURCES GROUP      |    | 312,388         |

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PASSIVE EQUITY FUND  
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| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 21,200           | MEAD CORP.                | \$ | 1,086,500       |
| 8,500            | MEASUREX CORP             |    | 313,438         |
| 11,000           | MEDIA GEN INC             |    | 1,080,750       |
| 3,800            | MEDIQ INC                 |    | 28,025          |
| 3,800            | MEDIQ INC PFD             |    | 26,600          |
| 30,900           | MEDTRONIC INC.            |    | 2,356,125       |
| 19,000           | MEI DIVERSIFIED INC.      |    | 166,250         |
| 21,100           | MELLON BANK CORP          |    | 1,474,363       |
| 18,100           | MELRIDGE INC.             |    | 660,650         |
| 41,800           | MELVILLE CORPORATION      |    | 2,967,800       |
| 33,400           | MENTOR GRAPHICS CORP.     |    | 509,350         |
| 28,003           | MERABANK FED SVGS BANK    |    | 1,333,643       |
| 22,500           | MERCANTILE BANCORPORATION |    | 781,875         |
| 6,048            | MERCANTILE BANKSHARES COR |    | 267,624         |
| 11,000           | MERCANTILE STORES INC     |    | 1,277,375       |
| 115,400          | MERCK & COMPANY INC.      |    | 12,059,300      |
| 10,400           | MEREDITH CORP             |    | 790,400         |
| 33,000           | MERIDIAN BANCORP INC      |    | 1,790,250       |
| 87,000           | MERRILL LYNCH & CO. INC.  |    | 3,012,375       |
| 2,000            | METRO AIRLS INC           |    | 25,000          |
| 33,700           | MGMT. SCIENCE AMER.       |    | 467,588         |
| 200              | MGT. ASSIST.INC LIQUID. T |    | 513             |
| 5,000            | MICHIGAN NATL CORP        |    | 208,750         |
| 15,000           | MICOM SYS INC             |    | 191,250         |
| 35,800           | MIDLAND ROSS CORP         |    | 774,175         |
| 16,000           | MIDLANTIC BKS INC         |    | 782,000         |
| 24,600           | MILLER HERMAN INC.        |    | 759,525         |
| 40,000           | MILLIPORE CORP.           |    | 1,365,000       |
| 38,800           | MINISCRIBE                |    | 291,000         |
| 95,000           | MINNESOTA MNG & MFG CO    |    | 10,806,250      |
| 25,000           | MINNESOTA PWR & LT CO     |    | 1,412,500       |
| 16,000           | MINNETONKA INC            |    | 256,000         |
| 33,900           | MITCHELL ENERGY           |    | 394,088         |
| 47,000           | MITEL CORP                |    | 229,125         |
| 317,100          | MOBIL CORPORATION         |    | 10,028,288      |
| 13,800           | MOLEX INC                 |    | 693,450         |
| 17,000           | MONARCH CAPITAL CORP.     |    | 1,241,000       |
| 62,000           | MONOLITHIC MEMORIES INC   |    | 961,000         |
| 60,400           | MONSANTO CO.              |    | 4,507,350       |
| 25,000           | MONTANA PWR CO            |    | 971,875         |
| 85,100           | MOORE CORP LTD            |    | 2,180,688       |
| 11,750           | MOORE FINL GROUP INC IDAH |    | 323,125         |
| 10,000           | MOORE MCCORMACK RES INC   |    | 208,750         |
| 69,800           | MORGAN J P & COMPANY INC. |    | 6,133,675       |
| 23,000           | MORRISON KNUDSEN CORP     |    | 1,075,250       |
| 39,400           | MORTON THIOKOL            |    | 1,428,250       |
| 95,700           | MOTOROLA INCORPORATED     |    | 3,816,038       |

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PASSIVE EQUITY FUND  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 10,000           | MULTIBANK FINL CORP       | \$ | 240,000         |
| 10,440           | MULTIMEDIA INC. NEW       |    | 448,920         |
| 14,300           | MUNFORD INC.              |    | 339,625         |
| 25,000           | MURPHY OIL                |    | 578,125         |
| 31,500           | MYLAN LABS INC            |    | 771,750         |
| 10,100           | N.W. NATL. LIFE           |    | 315,625         |
| 26,000           | NACCO INDS INC            |    | 1,075,750       |
| 30,000           | NALCO CHEMICAL CO.        |    | 836,250         |
| 13,550           | NATIONAL BANKSHARES CORP. |    | 274,388         |
| 27,000           | NATIONAL CITY CORP        |    | 1,289,250       |
| 22,450           | NATIONAL CONVENIENCE STOR |    | 252,563         |
| 27,100           | NATIONAL DATA CORP        |    | 548,775         |
| 28,000           | NATIONAL DISTILLERS & CHE |    | 1,113,000       |
| 20,300           | NATIONAL INTERGROUP INC   |    | 423,763         |
| 27,200           | NATIONAL SVC INDS INC     |    | 1,060,800       |
| 16,300           | NATL PATENT DEVEL CORP    |    | 283,213         |
| 47,075           | NATL. MED. ENTER. INC.    |    | 1,100,378       |
| 64,300           | NATL. SEMICONDUCTOR       |    | 755,525         |
| 32,000           | NBD BANCORP INC           |    | 1,716,000       |
| 18,000           | NBI INC                   |    | 231,750         |
| 32,300           | NCNB CORP.                |    | 1,744,200       |
| 82,500           | NCR CORP.                 |    | 4,238,438       |
| 25,575           | NETWORK SYSTEMS CORP.     |    | 329,278         |
| 26,000           | NEVADA PWR CO             |    | 1,111,500       |
| 20,500           | NEW ENGLAND BUSINESS SVC  |    | 1,117,250       |
| 32,138           | NEW ENGLAND ELEC SYS      |    | 891,830         |
| 2,000            | NEW JERSEY NATL CORP      |    | 73,500          |
| 7,000            | NEW JERSEY RES CORP       |    | 209,125         |
| 10,300           | NEW PROCESS CO            |    | 312,863         |
| 38,700           | NEW YORK ST ELEC & GAS CO |    | 1,277,100       |
| 36,600           | NEW YORK TIMES CO         |    | 2,978,325       |
| 42,000           | NEWHALL LD & FARMING CO C |    | 1,722,000       |
| 24,600           | NEWMONT MINING            |    | 1,153,125       |
| 15,000           | NEWPORT CORP              |    | 296,250         |
| 106,800          | NIAGARA MOHAWK PWR CORP   |    | 2,349,600       |
| 23,100           | NICOR INC                 |    | 652,575         |
| 46,000           | NIKE INC.                 |    | 897,000         |
| 52,500           | NL INDUSTRIES             |    | 767,813         |
| 23,400           | NO. AMERICAN PHILIPS CORP |    | 1,053,000       |
| 44,788           | NO. STS. POWER CO. MINN.  |    | 1,567,580       |
| 33,500           | NOBLE AFFILIATES INC      |    | 326,625         |
| 8,375            | NOBLE DRILLING CORP       |    | 20,938          |
| 22,400           | NORDSTROM INC             |    | 924,000         |
| 49,100           | NORFOLK SOUTHERN CORP     |    | 4,320,800       |
| 37,800           | NORSTAR BANCORP           |    | 1,134,000       |
| 80,000           | NORTHEAST UTILITIES       |    | 1,730,000       |
| 50,200           | NORTHERN IND PUB SVC CO   |    | 589,850         |



MINNESOTA STATE BOARD OF INVESMENT  
PASSIVE EQUITY FUND  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 39,000           | NORTHERN TELECOM LTD.     | \$ | 1,160,250       |
| 2,000            | NORTHERN TRUST CORP       |    | 84,750          |
| 33,300           | NORTHROP CORP             |    | 1,665,000       |
| 12,500           | NORTHWEST NAT GAS CO      |    | 248,438         |
| 15,000           | NORTHWESTERN STL & WIRE C |    | 286,875         |
| 11,000           | NORTON CO                 |    | 445,500         |
| 34,700           | NORWEST CORP.             |    | 1,305,588       |
| 33,400           | NOVAR ELECTRONICS         |    | 501,000         |
| 28,000           | NOXELL CORP               |    | 1,239,000       |
| 34,500           | NUCOR CORP                |    | 1,311,000       |
| 70,000           | NUTRI SYS INC             |    | 428,750         |
| 19,044           | NWA INC.                  |    | 952,200         |
| 159,720          | NYNEX                     |    | 10,781,100      |
| 2,733            | OAKWOOD HOMES CORP        |    | 44,753          |
| 102,849          | OCCIDENTAL PETE CORP      |    | 2,751,211       |
| 39,000           | OCEAN DRILLING & EXPL CO  |    | 463,125         |
| 24,000           | OGDEN CORP.               |    | 963,000         |
| 12,500           | OHIO CAS CORP             |    | 1,043,750       |
| 103,200          | OHIO EDISON CO            |    | 2,012,400       |
| 19,000           | OHIO MATTRESS CO.         |    | 277,875         |
| 33,000           | OKLAHOMA GAS & ELEC CO    |    | 1,109,625       |
| 5,900            | OLD KENT FINL CORP        |    | 230,100         |
| 17,250           | OLD REP INTL CORP         |    | 629,625         |
| 12,400           | OLIN CORP                 |    | 607,600         |
| 25,000           | OMNICARE INC              |    | 203,125         |
| 24,000           | ONEOK INC                 |    | 732,000         |
| 20,000           | OPTICAL COATING LAB       |    | 352,500         |
| 24,900           | OPTICAL RADIATION CORP    |    | 485,550         |
| 8,100            | ORANGE & ROCKLAND UTILS I |    | 283,500         |
| 26,600           | OUTBOARD MARINE CORP      |    | 851,200         |
| 32,000           | OVERNITE TRANSPORT        |    | 1,116,000       |
| 40,000           | OVERSEAS SHIPHOLDING GROU |    | 1,190,000       |
| 8,000            | OWENS & MINOR INC         |    | 141,000         |
| 27,900           | OWENS CORNING FIBER. CORP |    | 1,339,200       |
| 46,600           | OWENS ILLINOIS INC.       |    | 1,776,625       |
| 26,500           | OXFORD INDS INC           |    | 467,063         |
| 15,000           | OZARK HLDGS INC           |    | 270,000         |
| 11,000           | PACCAR INC                |    | 632,500         |
| 277,300          | PACIFIC GAS & ELEC. CO.   |    | 6,343,238       |
| 26,900           | PACIFIC LTG CORP          |    | 1,334,913       |
| 13,000           | PACIFIC RES INC HAWAII    |    | 211,250         |
| 10,000           | PACIFIC SCIENTIFIC CO     |    | 168,750         |
| 172,520          | PACIFIC TELESIS GROUP     |    | 9,682,685       |
| 41,400           | PACIFICORP                |    | 1,505,925       |
| 10,000           | PACO PHARMACEUTICAL SVCS  |    | 221,250         |
| 14,700           | PAINE WEBBER              |    | 501,638         |
| 18,250           | PALL CORP                 |    | 711,750         |

MINNESOTA STATE BOARD OF INVESTMENT  
PASSIVE EQUITY FUND  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 22,800           | PANDICK INC               | \$ | 501,600         |
| 31,900           | PANHANDLE EASTN CORP      |    | 1,535,188       |
| 33,000           | PANSOPHC SYS INC          |    | 990,000         |
| 49,980           | PARADYNE CORP             |    | 412,335         |
| 35,000           | PARK OHIO INDS INC OHIO   |    | 253,750         |
| 90,000           | PARKER DRILLING CO        |    | 360,000         |
| 29,550           | PARKER HANNIFIN CORP      |    | 779,381         |
| 3,000            | PATRIOT BANCORPORATION    |    | 210,000         |
| 30,000           | PAYLESS CASHWAYS          |    | 783,750         |
| 30,600           | PENN CENT CORP            |    | 1,755,675       |
| 65,300           | PENNEY J.C. INC.          |    | 5,566,825       |
| 51,600           | PENNSYLVANIA PWR & LT CO  |    | 1,747,950       |
| 16,000           | PENNWALT CORP             |    | 932,000         |
| 35,300           | PENNZOIL CO.              |    | 1,897,375       |
| 35,750           | PENTAIR INC               |    | 1,063,563       |
| 44,000           | PEOPLES ENERGY CORP       |    | 1,028,500       |
| 30,000           | PEOPLES EXPRESS INC.      |    | 206,250         |
| 3,000            | PEOPLES EXPRESS INC. CL B |    | 66,000          |
| 13,300           | PEP BOYS MANNY MOE & JACK |    | 515,375         |
| 230,100          | PEPSICO INCORPORATED      |    | 7,765,875       |
| 33,500           | PERKIN ELMER              |    | 917,063         |
| 12,500           | PERRY DRUG STORES INC     |    | 235,938         |
| 45,300           | PETRIE STORES CORP.       |    | 1,443,938       |
| 24,000           | PETROLITE CORP            |    | 606,000         |
| 130,400          | PFIZER INCORPORATED       |    | 9,323,600       |
| 45,800           | PHELPS DODGE              |    | 1,116,375       |
| 29,000           | PHH GROUP INC             |    | 928,000         |
| 127,200          | PHILADELPHIA ELEC. CO.    |    | 2,575,800       |
| 189,000          | PHILLIPS PETROLEUM CO.    |    | 1,819,125       |
| 22,500           | PHILLIPS VAN HEUSEN CORP  |    | 897,188         |
| 26,250           | PIC N SAVE CORP.          |    | 774,375         |
| 14,400           | PIEDMONT AVIATION         |    | 572,400         |
| 38,100           | PILLSBURY COMPANY         |    | 3,081,338       |
| 28,000           | PIONEER CORP              |    | 658,000         |
| 16,954           | PIONEER GROUP INC         |    | 428,089         |
| 30,000           | PIONEER HI-BRED INT'L.    |    | 1,222,500       |
| 15,000           | PIONEER STD ELECTRS INC   |    | 131,250         |
| 26,600           | PITNEY BOWES INC.         |    | 1,652,525       |
| 56,500           | PITTSTON CO               |    | 656,813         |
| 22,000           | PLAINS PETE CO            |    | 525,250         |
| 59,900           | PNC FINANCIAL             |    | 2,673,038       |
| 30,000           | POGO PRODUCING CO         |    | 191,250         |
| 28,100           | POLAROID CORP.            |    | 2,051,300       |
| 23,000           | POLICY MGMT. SYS. CORP.   |    | 442,750         |
| 18,900           | PONDEROSA SYSTEM INC.     |    | 474,863         |
| 33,700           | POPE & TALBOT             |    | 674,000         |
| 7,780            | POPE RES DEL LTD PARTNERS |    | 157,545         |

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PASSIVE EQUITY FUND  
ALPHABETICAL EQUITY HOLDINGS  
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| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 38,000           | PORTLAND GENERAL CORP.    | \$ | 1,154,250       |
| 22,400           | POTLATCH CORP             |    | 1,136,800       |
| 31,600           | POTOMAC ELEC. & PWR.      |    | 1,501,000       |
| 51,200           | PPG INDUSTRIES INC.       |    | 3,488,000       |
| 17,900           | PRATT & LAMBERT INC       |    | 557,138         |
| 7,500            | PRECISION CASTPARTS CORP  |    | 232,500         |
| 30,000           | PREMIER INDL CORP         |    | 907,500         |
| 10,000           | PRESTON CORP              |    | 232,500         |
| 42,100           | PRICE CO                  |    | 1,936,600       |
| 29,000           | PRIMARK CORP              |    | 833,750         |
| 37,400           | PRIME COMPUTER INC.       |    | 673,200         |
| 24,433           | PRIME MTR INNS INC        |    | 1,010,915       |
| 132,500          | PROCTOR & GAMBLE          |    | 10,616,563      |
| 26,100           | PROTECTIVE LIFE CORP      |    | 632,925         |
| 26,000           | PROVIDENT LIFE & ACC INS  |    | 770,250         |
| 24,100           | PSA INC                   |    | 608,525         |
| 100,115          | PUBLIC SERVICE ENTERPRISE |    | 3,741,798       |
| 35,000           | PUBLIC SVC CO COLO        |    | 700,000         |
| 35,000           | PUBLIC SVC CO N MEX       |    | 1,181,250       |
| 2,500            | PUGET SOUND BANCORP WASH  |    | 126,250         |
| 59,000           | PUGET SOUND PWR & LT CO   |    | 1,312,750       |
| 40,000           | PULTE HOME CORP           |    | 795,000         |
| 20,000           | PURITAN BENNETT CORP      |    | 490,000         |
| 11,000           | PUROLATOR COURIER CORP    |    | 207,625         |
| 4,800            | QUAKER CHEMICAL           |    | 69,600          |
| 30,200           | QUAKER OATS CO            |    | 2,359,375       |
| 18,400           | QUAKER ST OIL REFNG CORP  |    | 503,700         |
| 19,500           | QUANTUM CORP.             |    | 360,750         |
| 26,000           | QUESTAR CORP              |    | 838,500         |
| 21,000           | QUICK & REILLY GROUP INC  |    | 745,500         |
| 16,800           | QUIXOTE CORP              |    | 201,600         |
| 49,200           | QUOTRON SYSTEMS INC.      |    | 922,500         |
| 8,000            | R T E CORP                |    | 191,000         |
| 25,000           | R.P.M. INC OHIO           |    | 565,625         |
| 26,900           | RAINIER BANCORPORATION    |    | 991,938         |
| 75,200           | RALSTON PURINA CO.        |    | 5,489,600       |
| 77,000           | RANGER OIL LTD            |    | 308,000         |
| 34,000           | RANSBURG CORP             |    | 675,750         |
| 11,000           | RAYCHEM CORP              |    | 1,094,500       |
| 66,900           | RAYTHEON COMPANY          |    | 4,256,513       |
| 8,250            | REDKEN LABS INC.          |    | 200,063         |
| 30,400           | REDMAN INDS INC           |    | 266,000         |
| 49,900           | REEVES COMMUNICATIONS COR |    | 654,938         |
| 5,100            | REICHOLD CHEMS INC        |    | 193,163         |
| 2,508            | REPUB. PICTURES CORP CL A |    | 32,918          |
| 25,000           | REPUBLIC BANK CORP        |    | 721,875         |
| 34,950           | REPUBLIC N Y CORP         |    | 1,598,963       |

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| NO. OF<br>SHARES | SECURITY                  | MARKET<br>VALUE |
|------------------|---------------------------|-----------------|
| 11,000           | RESORT INTL.              | \$ 774,125      |
| 24,350           | REVCO D.S.                | 903,994         |
| 45,000           | REXNORD INC               | 708,750         |
| 40,000           | REYNOLDS & REYNOLDS CO    | 1,300,000       |
| 22,800           | REYNOLDS METALS CO        | 1,077,300       |
| 10,000           | RHODES INC                | 297,500         |
| 27,600           | RIBI IMMUNOCHEM RESH INC  | 244,950         |
| 6,000            | RIGGS NATL CORP WASH D C  | 240,000         |
| 41,700           | RITE AID CORP             | 1,428,225       |
| 90,750           | RLC CORP.                 | 896,156         |
| 39,800           | ROADWAY SVCS INC          | 1,761,150       |
| 18,500           | ROBERTSON H H CO          | 307,563         |
| 34,000           | ROCHESTER GAS & ELEC CORP | 935,000         |
| 10,300           | ROCHESTER TEL CORP        | 498,263         |
| 10,000           | ROCKAWAY CORP             | 238,750         |
| 119,200          | ROCKWELL INTL CORP        | 5,244,800       |
| 57,600           | ROHM & HAAS CO            | 1,915,200       |
| 22,600           | ROHR INDS INC             | 723,200         |
| 21,000           | ROLLINS COMMUNICATIONS IN | 824,250         |
| 35,000           | ROLLINS INC               | 595,000         |
| 5,000            | ROPER CORP                | 189,375         |
| 25,242           | RORER GROUP INC.          | 1,066,479       |
| 44,000           | ROUSE CO                  | 1,408,000       |
| 69,200           | ROWAN COMPANIES INC       | 380,600         |
| 91,000           | RPC ENERGY SVCS INC       | 273,000         |
| 38,000           | RUBBERMAID INC            | 2,047,250       |
| 14,700           | RYAN HOMES INC.           | 510,825         |
| 41,625           | RYANS FAMILY STEAK HOUSES | 962,578         |
| 67,710           | RYDER SYSTEMS INC.        | 1,980,518       |
| 37,000           | RYKOFF S E & CO           | 1,160,875       |
| 33,000           | SABINE CORP               | 486,750         |
| 31,900           | SAFECO CORPORATION        | 1,870,138       |
| 25,200           | SAFEGUARD BUSINESS SYS IN | 453,600         |
| 7,750            | SAFETY KLEEN CORP         | 286,750         |
| 55,900           | SAFEWAY STORES INC.       | 3,004,625       |
| 18,000           | SAGA CORP.                | 708,750         |
| 50,000           | SALEM CARPET MLS INC      | 468,750         |
| 121,100          | SALOMON INC               | 5,888,488       |
| 37,000           | SAN DIEGO GAS & ELEC CO   | 1,336,625       |
| 15,700           | SANDERS ASSOCIATES        | 843,875         |
| 120,645          | SANTA FE SO. PACIFIC CORP | 4,071,769       |
| 46,600           | SARA LEE                  | 3,273,650       |
| 5,600            | SAVANNAH ELEC & PWR CO    | 193,900         |
| 23,800           | SAVANNAH FOODS & INDS INC | 725,900         |
| 12,650           | SCAN TRON CORP            | 294,113         |
| 36,000           | SCANA                     | 1,296,000       |
| 16,500           | SCHERER R.P. CORP.        | 294,938         |

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| NO. OF<br>SHARES | SECURITY                  | MARKET<br>VALUE |
|------------------|---------------------------|-----------------|
| 42,723           | SCHERING PLOUGH CORP      | \$ 3,604,790    |
| 251,520          | SCHLUMBERGER LTD          | 8,646,000       |
| 8,000            | SCHULMAN A INC            | 354,000         |
| 19,000           | SCI HLDGS INC WTS         | 81,938          |
| 48,900           | SCI SYS INC               | 904,650         |
| 33,000           | SCIENTIFIC ATLANTA INC    | 342,375         |
| 20,000           | SCIENTIFIC MICRO SYS INC  | 120,000         |
| 27,000           | SCITEX LTD                | 158,625         |
| 5,768            | SCOA INDS INC             | 123,297         |
| 33,900           | SCOTT PAPER CO.           | 2,000,100       |
| 41,400           | SEAGATE TECHNOLOGY        | 512,325         |
| 14,500           | SEALED AIR CORP           | 594,500         |
| 14,600           | SEALED POWER CORP         | 428,875         |
| 299,700          | SEARS ROEBUCK & COMPANY   | 14,535,450      |
| 10,050           | SECURITY BANCORP INC DEL  | 246,225         |
| 55,770           | SECURITY PACIFIC CORP.    | 2,035,605       |
| 32,200           | SELECTIVE INSURANCE GROUP | 716,450         |
| 29,400           | SENSORMATIC ELECTRS CORP  | 275,625         |
| 40,625           | SERVICE CORP. INT'L       | 1,462,500       |
| 18,400           | SERVICE MERCHANDISE       | 225,400         |
| 25,500           | SERVICEMASTER INDS INC    | 669,375         |
| 34,000           | SHAKLEE CORP              | 769,250         |
| 20,700           | SHARED MED. SYSTEMS CORP. | 701,213         |
| 10,000           | SHAW INDS INC             | 195,000         |
| 15,000           | SHAWMUT CORP              | 759,375         |
| 50,000           | SHERWIN WILLIAMS CO.      | 1,331,250       |
| 37,333           | SHONEYS INC               | 1,427,987       |
| 12,800           | SIERRA PAC RES            | 312,000         |
| 25,000           | SINGER CO.                | 1,396,875       |
| 19,125           | SIPPICAN INC              | 219,938         |
| 10,175           | SIZZLER RESTAURANTS INTL  | 279,813         |
| 19,700           | SKYLINE CORP.             | 307,813         |
| 64,000           | SMITHKLINE-BECKMAN CORP.  | 6,416,000       |
| 22,000           | SMUCKER J M CO            | 979,000         |
| 21,200           | SNAP ON TOOLS CORP        | 1,250,800       |
| 6,500            | SO. CAROLINA NATL. CORP.  | 321,750         |
| 10,000           | SOCIETY CORP              | 682,500         |
| 6,800            | SOFTWARE AG SYS GROUP     | 125,800         |
| 38,000           | SONAT INC.                | 1,083,000       |
| 17,000           | SONOCO PRODS CO           | 633,250         |
| 6,300            | SOUTH JERSEY INDS INC     | 237,038         |
| 11,575           | SOUTHDOWN INC.            | 358,825         |
| 28,000           | SOUTHEAST BKG CORP        | 1,239,000       |
| 176,800          | SOUTHERN CALIF. EDISON    | 5,547,100       |
| 224,600          | SOUTHERN CO               | 5,334,250       |
| 28,500           | SOUTHERN NEW ENGLAND TEL  | 1,464,188       |
| 31,000           | SOUTHERN UN CO.           | 449,500         |

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| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 40,174           | SOUTHLAND CORP.           | \$ | 2,199,527       |
| 13,333           | SOUTHTRUST CORP           |    | 329,992         |
| 21,250           | SOUTHWEST AIRLINES        |    | 443,594         |
| 81,960           | SOUTHWESTERN BELL CORP.   |    | 8,974,620       |
| 24,000           | SOUTHWESTERN ENERGY CO    |    | 507,000         |
| 37,000           | SOUTHWESTERN PUB SVC CO   |    | 1,211,750       |
| 25,425           | SOVRAN FINANCIAL CORP.    |    | 1,064,672       |
| 4,500            | SPARTON CORP              |    | 79,313          |
| 46,000           | SPERRY CORP.              |    | 3,484,500       |
| 21,000           | SPRINGS INDS INC          |    | 1,123,500       |
| 22,100           | SQUARE D CO               |    | 944,775         |
| 43,000           | SQUIBB CORP.              |    | 4,880,500       |
| 30,000           | ST JOE GOLD CORP          |    | 285,000         |
| 25,200           | ST JUDE MED INC           |    | 856,800         |
| 31,400           | ST. PAUL COS. INC.        |    | 1,420,850       |
| 31,000           | STALEY CONTL INC          |    | 844,750         |
| 36,500           | STANDARD BRANDS PAINT CO  |    | 848,625         |
| 20,400           | STANDARD MICROSYSTEMS COR |    | 321,300         |
| 17,000           | STANDARD MTR PRODS INC    |    | 335,750         |
| 83,500           | STANDARD OIL CO. OHIO     |    | 3,767,938       |
| 23,400           | STANDARD PRODS CO         |    | 742,950         |
| 10,000           | STANDARD REGISTER         |    | 395,000         |
| 6,000            | STANDEX INTL.             |    | 98,250          |
| 13,700           | STANLEY WKS               |    | 558,275         |
| 35,000           | STATE STREET BOSTON CORP  |    | 1,986,250       |
| 47,300           | STERLING DRUG INC         |    | 2,294,050       |
| 27,000           | STEVENS J.P.              |    | 968,625         |
| 6,600            | STEWART WARNER CORP       |    | 190,575         |
| 18,000           | STONE CONTAINER CORP      |    | 850,500         |
| 15,000           | STOP & SHOP INC.          |    | 832,500         |
| 4,815            | STRAWBRIDGE & CLOTHIER    |    | 267,233         |
| 37,500           | STRYKER CORP              |    | 1,556,250       |
| 34,000           | STUDENT LN MARKETING ASSN |    | 1,865,750       |
| 43,200           | SUBARU OF AMERICA INC.    |    | 1,566,000       |
| 10,600           | SUMMIT BANCORPORATION     |    | 307,400         |
| 32,100           | SUMMIT HEALTH LTD         |    | 272,850         |
| 6,700            | SUN CHEMICAL              |    | 480,725         |
| 86,745           | SUN INC                   |    | 4,142,074       |
| 14,800           | SUNDSTRAND CORP           |    | 884,300         |
| 96,080           | SUNSHINE MNG CO           |    | 276,229         |
| 38,300           | SUNTRUST BKS INC          |    | 2,015,538       |
| 33,500           | SUPER FOOD SVCS INC       |    | 820,750         |
| 54,900           | SUPER VALU STORES INC.    |    | 1,482,300       |
| 9,000            | SUPERMARKETS GEN CORP     |    | 562,500         |
| 10,000           | SVGS. BANK PUGET SOUND    |    | 280,000         |
| 22,000           | SWIFT INDPT PACKING CO    |    | 137,500         |
| 56,500           | SYNTEX CORPORATION        |    | 4,011,500       |

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| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 43,200           | SYSCO CORP                | \$ | 1,231,200       |
| 3,600            | SYSTEMS & COMPUTER TECHNO |    | 18,450          |
| 15,000           | TAB PRODS CO              |    | 213,750         |
| 12,000           | TAFT BROADCASTING         |    | 1,290,000       |
| 10,500           | TALLEY INDS INC           |    | 249,375         |
| 12,000           | TAMBRANDS INC.            |    | 1,377,000       |
| 38,000           | TANDEM COMPUTERS INC      |    | 1,178,000       |
| 50,000           | TANDON CORP.              |    | 306,250         |
| 73,400           | TANDY CORP                |    | 2,807,550       |
| 4,600            | TASTY BAKING CORP         |    | 142,025         |
| 10,000           | TCA CABLE TV INC          |    | 217,500         |
| 24,000           | TECO ENERGY INC           |    | 1,122,000       |
| 7,000            | TECUMSEH PRODS CO         |    | 878,500         |
| 50,000           | TEJON RANCH CO            |    | 2,693,750       |
| 14,800           | TEKTRONIX INC             |    | 886,150         |
| 44,000           | TELE COMMUNICATIONS INC   |    | 2,409,000       |
| 16,700           | TELECOM PLUS INTL CORP    |    | 123,163         |
| 5,000            | TELECREDIT INC            |    | 207,500         |
| 9,400            | TELEDYNE INC.             |    | 3,163,100       |
| 3,400            | TELEX CORP.               |    | 202,300         |
| 29,200           | TELLABS INC               |    | 365,000         |
| 19,436           | TEMPLE INLAND             |    | 991,236         |
| 10,000           | TENNANT CO                |    | 257,500         |
| 123,700          | TENNECO INC.              |    | 4,917,075       |
| 22,600           | TERADYNE INC.             |    | 497,200         |
| 44,000           | TESORO PETE CORP          |    | 423,500         |
| 188,100          | TEXACO INC.               |    | 5,925,150       |
| 17,000           | TEXAS AMERN BANCSHARES IN |    | 323,000         |
| 31,500           | TEXAS COMMERCE BANKSHARES |    | 685,125         |
| 51,200           | TEXAS EASTERN CORP.       |    | 1,862,400       |
| 18,451           | TEXAS INDUSTRIES          |    | 562,756         |
| 19,400           | TEXAS INSTRUMENTS         |    | 2,315,875       |
| 108,500          | TEXAS UTILITIES CO.       |    | 3,322,813       |
| 29,700           | TEXTRON INC               |    | 1,692,900       |
| 14,300           | THOMAS & BETTS CORP       |    | 622,050         |
| 15,400           | THOMPSON MED CO INC       |    | 279,125         |
| 20,000           | THRIFTY CORP              |    | 777,500         |
| 27,900           | TIDEWATER INC.            |    | 188,325         |
| 24,000           | TIE COMMUNICATIONS        |    | 144,000         |
| 51,800           | TIME INC.                 |    | 4,545,450       |
| 51,800           | TIMES MIRROR CO           |    | 3,613,050       |
| 10,200           | TIMKEN CO                 |    | 495,975         |
| 13,000           | TODD SHIPYARDS CORP       |    | 360,750         |
| 4,120            | TOOTSIE ROLL INDS INC     |    | 279,130         |
| 57,300           | TORCHMARK CORP            |    | 2,134,425       |
| 99,600           | TOYS R US                 |    | 3,386,400       |
| 20,000           | TRACOR INC.               |    | 457,500         |

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| NO. OF<br>SHARES | SECURITY                  | MARKET<br>VALUE |
|------------------|---------------------------|-----------------|
| 7,541            | TRANS WORLD AIRL PFD .05  | \$ 302          |
| 18,422           | TRANS WORLD AIRLINES      | 280,936         |
| 58,400           | TRANSAMERICA CORP         | 2,073,200       |
| 18,100           | TRANSCO ENERGY CO.        | 895,950         |
| 4,751            | TRANSCO EXPL. PART. LTD   | 77,798          |
| 36,300           | TRANSWORLD CORP           | 1,229,663       |
| 68,700           | TRAVELERS CORP.           | 3,435,000       |
| 20,000           | TRINITY INDS INC.         | 360,000         |
| 10,000           | TRUS JOIST CORP           | 352,500         |
| 26,600           | TRW INC.                  | 2,706,550       |
| 40,800           | TYCO LABS                 | 1,433,100       |
| 23,400           | TYLER CORP                | 380,250         |
| 72,000           | TYSON FOODS INC (DEL)     | 2,592,000       |
| 34,100           | U S BANCORP               | 1,338,425       |
| 5,200            | U.S. HEALTHCARE INC       | 96,200          |
| 239,162          | U.S. STEEL                | 4,932,716       |
| 145,920          | U.S. WEST CORP            | 8,043,840       |
| 29,600           | UAL INC.                  | 1,624,300       |
| 6,300            | UCCEL CORP                | 137,813         |
| 25,000           | ULTIMATE CORP.            | 693,750         |
| 8,400            | ULTRASYSTEMS INC          | 98,700          |
| 44,400           | UNION CAMP CORP.          | 2,269,950       |
| 45,591           | UNION CARBIDE CORP        | 963,110         |
| 15,197           | UNION CARBIDE CORP RTS    | 507,200         |
| 93,200           | UNION ELEC CO             | 2,353,300       |
| 88,100           | UNION PACIFIC CORP.       | 5,010,688       |
| 142,900          | UNITED ARTIST COMM INC CL | 2,822,275       |
| 15,000           | UNITED BANCORP ARIZ       | 468,750         |
| 27,000           | UNITED BANKERS INC        | 185,625         |
| 19,000           | UNITED BKS COLO INC       | 617,500         |
| 20,000           | UNITED BRANDS CO          | 582,500         |
| 28,000           | UNITED ILLUM CO           | 889,000         |
| 11,000           | UNITED INDL CORP          | 226,875         |
| 10,400           | UNITED JERSEY BKS HACKENS | 456,300         |
| 8,000            | UNITED NEW MEXICO FINL CO | 114,000         |
| 42,000           | UNITED STATES LEASING INT | 1,743,000       |
| 43,600           | UNITED STATES SHOE CORP   | 1,073,650       |
| 45,000           | UNITED STATES SURGICAL CO | 1,068,750       |
| 10,000           | UNITED STATIONERS INC     | 167,500         |
| 22,600           | UNITED STOCKYARDS CORP    | 220,350         |
| 95,800           | UNITED TECHNOLOGIES CORP. | 4,742,100       |
| 65,200           | UNITED TELECOM. INC.      | 1,776,700       |
| 44,000           | UNITED VA BANKSHARES INC  | 1,540,000       |
| 23,000           | UNITRODE CORP             | 425,500         |
| 10,000           | UNIVAR CORP               | 116,250         |
| 19,300           | UNIVERSAL FOODS CORP      | 694,800         |
| 55,000           | UNIVERSAL HEALTH SVCS     | 893,750         |



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| NO. OF<br>SHARES | SECURITY                  |    | MARKET<br>VALUE |
|------------------|---------------------------|----|-----------------|
| 102,580          | UNOCAL CORP.              | \$ | 2,025,955       |
| 48,200           | UPJOHN CO                 |    | 4,560,925       |
| 20,000           | US AIR GROUP              |    | 637,500         |
| 67,700           | US FIDELITY & GUAR. CO.   |    | 2,699,538       |
| 52,600           | USG CORP HOLDING CO.      |    | 2,150,025       |
| 17,000           | USLIFE CORP               |    | 820,250         |
| 39,000           | UTAH POWER & LIGHT COMPAN |    | 1,199,250       |
| 55,800           | V F CORP                  |    | 1,778,625       |
| 20,100           | VALLEY NATIONAL CORP.     |    | 899,475         |
| 33,100           | VALUE LINE INC            |    | 901,975         |
| 19,900           | VARIAN ASSOC. INC.        |    | 512,425         |
| 25,000           | VARLEN CORP               |    | 337,500         |
| 30,000           | VEECO INSTRS INC          |    | 487,500         |
| 28,000           | VESTRON INC               |    | 227,500         |
| 44,000           | VIACOM INTL.              |    | 1,342,000       |
| 23,900           | VICORP RESTAURANTS INC    |    | 442,150         |
| 30,000           | VIE DE FRANCE CORP        |    | 180,000         |
| 25,000           | VLSI TECHNOLOGY INC       |    | 256,250         |
| 11,000           | VOLT INFORMATION SCIENCES |    | 233,750         |
| 10,000           | VULCAN MATLS CO           |    | 1,068,750       |
| 229,000          | WAL-MART STORES INC.      |    | 11,879,375      |
| 48,400           | WALGREEN CO               |    | 1,905,750       |
| 22,000           | WALLACE COMPUTER SER, INC |    | 1,050,500       |
| 15,625           | WALTER JIM CORP           |    | 703,125         |
| 116,100          | WANG LABS CL B            |    | 1,756,013       |
| 54,500           | WARNER COMMUNICATIONS     |    | 3,079,250       |
| 62,400           | WARNER LAMBERT            |    | 3,861,000       |
| 10,500           | WASHINGTON GAS LT CO      |    | 305,813         |
| 12,700           | WASHINGTON MUT SVGS BK SE |    | 420,688         |
| 36,000           | WASHINGTON NATL CORP      |    | 1,251,000       |
| 7,700            | WASHINGTON POST B         |    | 1,352,313       |
| 34,000           | WASHINGTON WTR PWR CO     |    | 1,020,000       |
| 78,100           | WASTE MANAGEMENT          |    | 3,905,000       |
| 19,000           | WATKINS JOHNSON CO.       |    | 684,000         |
| 32,000           | WD 40 CO                  |    | 824,000         |
| 22,000           | WEIS MARKETS INC.         |    | 866,250         |
| 20,300           | WELLS FARGO & CO.         |    | 2,156,875       |
| 24,000           | WELLS FARGO MTG & EQUITY  |    | 636,000         |
| 82,400           | WENDYS INTL INC           |    | 1,287,500       |
| 25,000           | WEST INC                  |    | 750,000         |
| 26,920           | WEST POINT PEPPERELL INC. |    | 1,534,440       |
| 10,000           | WESTERN CAP. INVESTMENT C |    | 168,750         |
| 6,500            | WESTERN PAC INDS INC      |    | 892,125         |
| 12,920           | WESTERN TEL COMM          |    | 319,770         |
| 134,200          | WESTINGHOUSE ELEC. CO.    |    | 7,196,475       |
| 27,000           | WESTMORELAND COAL CO      |    | 594,000         |
| 14,700           | WESTVACO CORP             |    | 738,675         |

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| NO. OF<br>SHARES       | SECURITY                | MARKET<br>VALUE  |
|------------------------|-------------------------|------------------|
| 33,000                 | WETTERAU INC            | \$ 1,262,250     |
| 104,400                | WEYERHEUSER CO.         | 3,640,950        |
| 27,600                 | WHIRLPOOL CORP.         | 2,149,350        |
| 35,400                 | WHITEHALL CORP.         | 885,000          |
| 33,900                 | WHITTAKER CORP          | 974,625          |
| 18,666                 | WILLAMETTE INDS INC.    | 690,642          |
| 28,100                 | WILLIAMS COS            | 660,350          |
| 6,000                  | WILMINGTON TRUST CO.    | 291,000          |
| 16,000                 | WILSON FOODS CORP       | 162,000          |
| 32,500                 | WINN DIXIE STORES INC   | 1,608,750        |
| 113,400                | WINNEBAGO IND INC.      | 1,474,200        |
| 26,400                 | WISCONSIN ELEC. POWER   | 1,455,300        |
| 24,000                 | WISCONSIN PUB SVC CORP  | 1,215,000        |
| 26,000                 | WISCONSIN PWR & LT CO   | 1,287,000        |
| 28,000                 | WISER OIL CO DEL        | 427,000          |
| 20,100                 | WITCO CORP.             | 1,102,988        |
| 14,100                 | WOLVERINE WORLD WIDE    | 151,575          |
| 57,600                 | WOOLWORTH F W CO        | 2,764,800        |
| 49,500                 | WORTHINGTON INDS INC    | 1,466,438        |
| 26,000                 | WRIGLEY WM JR CO        | 1,101,750        |
| 12,000                 | WRIGLEY WM JR CO        | 224,352          |
| 21,200                 | WYMAN-GORDON CO.        | 466,400          |
| 84,700                 | XEROX CORP              | 4,753,788        |
| 50,887                 | XIDEX CORP              | 998,657          |
| 19,800                 | XTRA CORP.              | 460,350          |
| 31,200                 | YELLOW FREIGHT SYSTEM   | 1,251,900        |
| 6,410                  | YORK INTL CORP          | 108,970          |
| 48,266                 | ZAYRE CORP.             | 2,069,405        |
| 18,900                 | ZENITH ELECTRONICS CORP | 467,775          |
| 15,000                 | ZERO CORP.              | 268,125          |
| 40,000                 | ZIYAD INC               | 180,000          |
| 23,000                 | ZURN INDS INC           | 879,750          |
| TOTAL EQUITY PORTFOLIO |                         | \$ 1,977,353,380 |

MINNESOTA STATE BOARD OF INVESMENT  
 PASSIVE EQUITY FUND  
 ALPHABETICAL BOND HOLDINGS  
 JUNE 30 , 1986

| PAR<br>VALUE         | SECURITY            | MATURITY   | COUPON     | MARKET<br>VALUE |
|----------------------|---------------------|------------|------------|-----------------|
| 200                  | C B S INC           | 08/01/1995 | 10.875% \$ | 222             |
| 8,760                | GENERAL MOTORS CONT | 10/28/1991 | 0.000%     | 0               |
| 1,578                | MAI HLDGS INC       | 11/15/1997 | 16.000%    | 1,578           |
| 700                  | MARY KAY CORP       | 11/30/2000 | 0.000%     | 399             |
| 33,000               | NATIONAL GYPSUM CO  | 06/30/2004 | 15.500%    | 16,706          |
| 165,000              | SHELLER GLOBE CORP  | 06/15/2001 | 0.000%     | 82,088          |
| 420                  | UNION CARBIDE CORP  | 01/31/1993 | 13.250%    | 443             |
| 420                  | UNION CARBIDE CORP  | 01/31/1996 | 14.250%    | 454             |
| 25                   | UNION CARBIDE CORP  | 01/31/2006 | 15.000%    | 28              |
| TOTAL BOND PORTFOLIO |                     |            | \$         | 101,917         |

MINNESOTA STATE BOARD OF INVESTMENT  
ACTIVE EQUITY MANAGER HOLDINGS  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  | ADVISOR             | MARKET<br>VALUE |
|------------------|---------------------------|---------------------|-----------------|
| 80,000           | ABBOTT LABS               | ALLIANCE CAPITAL    | \$ 4,300,000    |
| 15,100           | ACME CLEVELAND CORP       | NORWEST BANK        | 179,313         |
| 5,000            | ACTION INDS INC           | NORWEST BANK        | 68,750          |
| 13,000           | ADT , INC.                | LIEBER & COMPANY    | 381,875         |
| 9,000            | ADVANCED MICRO DEV.       | NORWEST BANK        | 180,000         |
| 16,200           | AFG INDS INC              | LIEBER & COMPANY    | 516,375         |
| 120,000          | AHMANSON H.F. CO.         | FRED ALGER          | 3,315,000       |
| 144,000          | AHMANSON H.F. CO.         | IDS ADVISORY        | 3,978,000       |
| 49,800           | AHMANSON H.F. CO.         | WADDELL & REED      | 1,375,725       |
|                  | SUB-TOTAL                 | 313,800 SHARES      | 8,668,725       |
| 60,000           | AIR PRODUCTS & CHEM. INC. | INVESTMENT ADVISORS | 2,100,000       |
| 3,800            | ALCAN ALUMINUM LTD.       | NORWEST BANK        | 115,900         |
| 17,900           | ALEXANDER & ALEXANDER     | LIEBER & COMPANY    | 704,813         |
| 7,200            | ALEXANDERS INC            | LIEBER & COMPANY    | 276,300         |
| 136,800          | ALLEGHENY INTERNATIONAL   | BEUTEL GOODMAN      | 2,804,400       |
| 24,000           | ALLEGHENY INTERNATIONAL   | NORWEST BANK        | 492,000         |
|                  | SUB-TOTAL                 | 160,800 SHARES      | 3,296,400       |
| 3,000            | ALLEN ORGAN CLASS B       | LIEBER & COMPANY    | 111,750         |
| 52,372           | ALLIANCE TECHNOLOGY FD IN | ALLIANCE CAPITAL    | 1,278,407       |
| 28,900           | ALLIED BANCSHARES INC.    | NORWEST BANK        | 455,175         |
| 150,000          | ALTOS COMPUTER SYSTEMS    | BMI CAPITAL         | 2,343,750       |
| 50,000           | ALUMINUM CO. OF AMERICA   | INVESTMENT ADVISORS | 1,906,250       |
| 7,000            | ALUMINUM CO. OF AMERICA   | NORWEST BANK        | 266,875         |
| 14,950           | ALUMINUM CO. OF AMERICA   | WADDELL & REED      | 569,969         |
|                  | SUB-TOTAL                 | 71,950 SHARES       | 2,743,094       |
| 12,500           | ALZA CORPORATION          | FORSTMANN LEFF      | 621,875         |
| 45,000           | ALZA CORPORATION          | HELLMAN JORDAN      | 2,238,750       |
|                  | SUB-TOTAL                 | 57,500 SHARES       | 2,860,625       |
| 25,200           | AMAX INC                  | NORWEST BANK        | 333,900         |
| 33,400           | AMCAST INDUSTRIAL CORP.   | NORWEST BANK        | 425,850         |
| 58,500           | AMDAHL CORP               | WADDELL & REED      | 1,023,750       |
| 140,700          | AMER. BANK. INS. GRP.     | FORSTMANN LEFF      | 2,040,150       |
| 7,500            | AMER. BANK. INS. GRP.     | NORWEST BANK        | 108,750         |
|                  | SUB-TOTAL                 | 148,200 SHARES      | 2,148,900       |
| 110,000          | AMER. GENERAL CORP.       | BEUTEL GOODMAN      | 4,633,750       |
| 21,450           | AMER. GENERAL CORP.       | WADDELL & REED      | 903,581         |
|                  | SUB-TOTAL                 | 131,450 SHARES      | 5,537,331       |
| 21,000           | AMER. INT'L.. GROUP INC.  | ALLIANCE CAPITAL    | 2,706,375       |
| 25,000           | AMER. INT'L.. GROUP INC.  | BMI CAPITAL         | 3,221,875       |
| 43,600           | AMER. INT'L.. GROUP INC.  | HELLMAN JORDAN      | 5,618,950       |
|                  | SUB-TOTAL                 | 89,600 SHARES       | 11,547,200      |

MINNESOTA STATE BOARD OF INVESTMENT  
ACTIVE EQUITY MANAGER HOLDINGS  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  | ADVISOR             | MARKET<br>VALUE |
|------------------|---------------------------|---------------------|-----------------|
| 44,400           | AMER. MEDICAL INT'L.      | NORWEST BANK        | \$ 771,450      |
| 55,200           | AMER. MEDICAL INT'L.      | INTERNAL MANAGED    | 959,100         |
|                  | SUB-TOTAL                 | 99,600 SHARES       | 1,730,550       |
| 30,800           | AMERADA HESS CORP.        | NORWEST BANK        | 616,000         |
| 75,800           | AMERADA HESS CORP.        | INTERNAL MANAGED    | 1,516,000       |
|                  | SUB-TOTAL                 | 106,600 SHARES      | 2,132,000       |
| 70,000           | AMERICAN BAKERIES CO      | BMI CAPITAL         | 2,073,750       |
| 113,000          | AMERICAN CARRIERS         | FORSTMANN LEFF      | 1,680,875       |
| 20,400           | AMERICAN CYANAMID         | WADDELL & REED      | 1,581,000       |
| 51,000           | AMERICAN EXPRESS COMPANY  | FRED ALGER          | 3,187,500       |
| 55,000           | AMERICAN EXPRESS COMPANY  | ALLIANCE CAPITAL    | 3,437,500       |
| 86,500           | AMERICAN EXPRESS COMPANY  | HELLMAN JORDAN      | 5,406,250       |
| 30,000           | AMERICAN EXPRESS COMPANY  | INVESTMENT ADVISORS | 1,875,000       |
| 26,600           | AMERICAN EXPRESS COMPANY  | WADDELL & REED      | 1,662,500       |
|                  | SUB-TOTAL                 | 249,100 SHARES      | 15,568,750      |
| 20,000           | AMERICAN FAMILY CORP      | LIEBER & COMPANY    | 662,500         |
| 17,000           | AMERICAN FLETCHER CORP    | LIEBER & COMPANY    | 930,750         |
| 10,300           | AMERICAN HOME PRODS CORP  | FORSTMANN LEFF      | 927,000         |
| 15,000           | AMERICAN INCOME LIFE INS  | NORWEST BANK        | 208,125         |
| 11,000           | AMERICAN PRESIDENT COS LT | WADDELL & REED      | 565,125         |
| 13,000           | AMERICAN SOFTWARE INC     | LIEBER & COMPANY    | 170,625         |
| 11,000           | AMERICAN STANDARD INC.    | LIEBER & COMPANY    | 463,375         |
| 75,000           | AMERICAN TEL & TEL NEW    | IDS ADVISORY        | 1,903,125       |
| 18,100           | AMERICAN TEL & TEL NEW    | NORWEST BANK        | 459,288         |
|                  | SUB-TOTAL                 | 93,100 SHARES       | 2,362,413       |
| 29,700           | AMERICANA HOTELS & RLTY C | NORWEST BANK        | 322,988         |
| 60,000           | AMETEK INC                | IDS ADVISORY        | 1,792,500       |
| 47,000           | AMR CORP.                 | ALLIANCE CAPITAL    | 2,590,875       |
| 50,000           | AMR CORP.                 | INVESTMENT ADVISORS | 2,756,250       |
|                  | SUB-TOTAL                 | 97,000 SHARES       | 5,347,125       |
| 20,000           | ANALOGIC CORP             | LIEBER & COMPANY    | 247,500         |
| 24,200           | ANALOGIC CORP             | NORWEST BANK        | 299,475         |
|                  | SUB-TOTAL                 | 44,200 SHARES       | 546,975         |
| 11,400           | ANDREW CORP.              | NORWEST BANK        | 202,350         |
| 12,300           | APOGEE ENTERPRISES        | LIEBER & COMPANY    | 246,000         |
| 54,600           | APPLE COMPUTER            | FORSTMANN LEFF      | 1,958,775       |
| 37,000           | APPLE COMPUTER            | HELLMAN JORDAN      | 1,327,375       |
|                  | SUB-TOTAL                 | 91,600 SHARES       | 3,286,150       |
| 120,000          | ARCHER DANIELS MIDLAND CO | HELLMAN JORDAN      | 2,190,000       |
| 75,000           | ARCHER DANIELS MIDLAND CO | INVESTMENT ADVISORS | 1,368,750       |

MINNESOTA STATE BOARD OF INVESMENT  
ACTIVE EQUITY MANAGER HOLDINGS  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  | ADVISOR          | MARKET<br>VALUE |
|------------------|---------------------------|------------------|-----------------|
|                  | SUB-TOTAL                 | 195,000 SHARES   | 3,558,750       |
| 6,500            | ARMSTRONG IND. INC.       | LIEBER & COMPANY | \$ 416,813      |
| 17,000           | ARMSTRONG RUBBER          | NORWEST BANK     | 248,625         |
| 50,100           | ASHLAND OIL INC           | IDS ADVISORY     | 2,711,663       |
| 7,000            | ASHLAND OIL INC           | LIEBER & COMPANY | 378,875         |
| 30,300           | ASHLAND OIL INC           | INTERNAL MANAGED | 1,639,988       |
|                  | SUB-TOTAL                 | 87,400 SHARES    | 4,730,525       |
| 100,000          | ASK COMPUTER              | FRED ALGER       | 1,100,000       |
| 70,000           | ASK COMPUTER              | BMI CAPITAL      | 770,000         |
|                  | SUB-TOTAL                 | 170,000 SHARES   | 1,870,000       |
| 23,000           | ASPEN RIBBONS INC         | LIEBER & COMPANY | 60,375          |
| 10,000           | ASSOC. DRY GOODS          | LIEBER & COMPANY | 655,000         |
| 15,000           | ATCOR INC                 | NORWEST BANK     | 232,500         |
| 15,000           | ATLANTIC RESEARCH CORP    | LIEBER & COMPANY | 442,500         |
| 47,000           | ATLANTIC RICHFIELD        | INTERNAL MANAGED | 2,444,000       |
| 90,000           | AUDIO VIDEO AFFILIATES IN | BMI CAPITAL      | 1,203,750       |
| 72,000           | AUTOMATIC DATA PROCESSING | IDS ADVISORY     | 2,547,000       |
| 27,600           | BAKER INTL. CORP.         | NORWEST BANK     | 362,250         |
| 70,000           | BAKER INTL. CORP.         | INTERNAL MANAGED | 918,750         |
|                  | SUB-TOTAL                 | 97,600 SHARES    | 1,281,000       |
| 7,100            | BANK OF NY CO. INC.       | FORSTMANN LEFF   | 451,738         |
| 16,000           | BANK OF NY CO. INC.       | LIEBER & COMPANY | 1,018,000       |
|                  | SUB-TOTAL                 | 23,100 SHARES    | 1,469,738       |
| 28,900           | BANKERS TRUST NY CORP.    | INTERNAL MANAGED | 1,398,038       |
| 49,400           | BARD C.R. INC.            | FORSTMANN LEFF   | 1,722,825       |
| 68,700           | BARRISTER INFORMATION SYS | BMI CAPITAL      | 1,082,025       |
| 70,000           | BAUSCH & LOMB INC         | FRED ALGER       | 2,730,000       |
| 21,100           | BECOR WESTERN INC         | NORWEST BANK     | 274,300         |
| 50,000           | BECTON DICKINSON & CO     | BMI CAPITAL      | 2,756,250       |
| 35,400           | BECTON DICKINSON & CO     | WADDELL & REED   | 1,951,425       |
|                  | SUB-TOTAL                 | 85,400 SHARES    | 4,707,675       |
| 41,800           | BELL & HOWELL CO.         | FORSTMANN LEFF   | 1,964,600       |
| 28,000           | BELL CANADA ENTERPRISES I | NORWEST BANK     | 777,000         |
| 7,000            | BENCH CRAFT INC           | LIEBER & COMPANY | 108,500         |
| 50,000           | BENEFICIAL CORPORATION    | BEUTEL GOODMAN   | 2,325,000       |
| 10,000           | BENEFICIAL CORPORATION    | LIEBER & COMPANY | 465,000         |
| 16,800           | BENEFICIAL CORPORATION    | WADDELL & REED   | 781,200         |
|                  | SUB-TOTAL                 | 76,800 SHARES    | 3,571,200       |
| 89,000           | BENIHANA NATL CORP        | FORSTMANN LEFF   | 867,750         |
| 10,000           | BERGEN BRUNSWIG CORP.     | NORWEST BANK     | 242,500         |

MINNESOTA STATE BOARD OF INVESMENT  
ACTIVE EQUITY MANAGER HOLDINGS  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                 | ADVISOR             | MARKET<br>VALUE |
|------------------|--------------------------|---------------------|-----------------|
| 38,250           | BERKLEY W R CORP         | FORSTMANN LEFF      | \$ 1,530,000    |
| 15,000           | BEST PRODUCTS            | NORWEST BANK        | 208,125         |
| 150,200          | BEVERLY ENTERPRISES      | FRED ALGER          | 3,285,625       |
| 70,000           | BEVERLY ENTERPRISES      | INVESTMENT ADVISORS | 1,531,250       |
|                  | SUB-TOTAL                | 220,200 SHARES      | 4,816,875       |
| 36,000           | BIG BEAR INC             | LIEBER & COMPANY    | 783,000         |
| 10,200           | BK. OF NEW HAMP. CORP.   | LIEBER & COMPANY    | 275,400         |
| 10,200           | BLACK & DECKER MFG CO    | NORWEST BANK        | 209,100         |
| 84,500           | BMC INDS INC MINN        | NORWEST BANK        | 411,938         |
| 8,750            | BOATMEN'S BANCSHARES     | LIEBER & COMPANY    | 414,531         |
| 62,250           | BOEING COMPANY           | FRED ALGER          | 3,921,750       |
| 40,000           | BOEING COMPANY           | INVESTMENT ADVISORS | 2,520,000       |
|                  | SUB-TOTAL                | 102,250 SHARES      | 6,441,750       |
| 72,200           | BOISE CASCADE CORP       | BEUTEL GOODMAN      | 4,187,600       |
| 30,000           | BOISE CASCADE CORP       | INVESTMENT ADVISORS | 1,740,000       |
|                  | SUB-TOTAL                | 102,200 SHARES      | 5,927,600       |
| 15,000           | BRISTOL-MYERS COMPANY    | INVESTMENT ADVISORS | 1,290,000       |
| 40,000           | BROWNING FERRIS INDS INC | INVESTMENT ADVISORS | 1,520,000       |
| 19,800           | BRUNSWICK CORP.          | WADDELL & REED      | 700,425         |
| 7,500            | BUILDERS TRANSPORT INC.  | LIEBER & COMPANY    | 213,750         |
| 5,800            | BURLINGTON NORTHERN INC. | NORWEST BANK        | 369,750         |
| 16,100           | BURLINGTON NORTHERN INC. | INTERNAL MANAGED    | 1,026,375       |
|                  | SUB-TOTAL                | 21,900 SHARES       | 1,396,125       |
| 11,400           | BURROUGHS CORPORATION    | NORWEST BANK        | 701,100         |
| 19,200           | BURROUGHS CORPORATION    | INTERNAL MANAGED    | 1,180,800       |
|                  | SUB-TOTAL                | 30,600 SHARES       | 1,881,900       |
| 41,900           | C P REHAB CORP           | NORWEST BANK        | 209,500         |
| 50,000           | C.O.M.B. COMPANY         | FRED ALGER          | 1,700,000       |
| 17,600           | C.O.M.B. COMPANY         | FORSTMANN LEFF      | 598,400         |
| 64,000           | C.O.M.B. COMPANY         | INVESTMENT ADVISORS | 2,176,000       |
|                  | SUB-TOTAL                | 131,600 SHARES      | 4,474,400       |
| 127,000          | CALFED INC               | FORSTMANN LEFF      | 4,841,875       |
| 32,000           | CALFED INC               | IDS ADVISORY        | 1,220,000       |
| 17,000           | CALFED INC               | WADDELL & REED      | 648,125         |
|                  | SUB-TOTAL                | 176,000 SHARES      | 6,710,000       |
| 10,200           | CAMPBELL RED LAKES MINES | NORWEST BANK        | 151,725         |
| 59,000           | CANADIAN PACIFIC LTD     | NORWEST BANK        | 715,375         |
| 70,200           | CANADIAN PACIFIC LTD     | INTERNAL MANAGED    | 851,175         |
|                  | SUB-TOTAL                | 129,200 SHARES      | 1,566,550       |

MINNESOTA STATE BOARD OF INVESTMENT  
ACTIVE EQUITY MANAGER HOLDINGS  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  | ADVISOR             | MARKET<br>VALUE |
|------------------|---------------------------|---------------------|-----------------|
| 50,000           | CAROLINA FREIGHT CORP     | INVESTMENT ADVISORS | \$ 1,806,250    |
| 28,300           | CAROLINA FREIGHT CORP     | WADDELL & REED      | 1,022,338       |
|                  | SUB-TOTAL                 | 78,300 SHARES       | 2,828,588       |
| 90,500           | CARTER HAWLEY HALE STORES | BEUTEL GOODMAN      | 3,325,875       |
| 200,000          | CASTLE & COOKE INC        | BMI CAPITAL         | 3,325,000       |
| 40,000           | CATERPILLAR INC.          | INVESTMENT ADVISORS | 1,990,000       |
| 13,000           | CBI INDS INC              | NORWEST BANK        | 323,375         |
| 19,000           | CBS INCORPORATED          | HELLMAN JORDAN      | 2,745,500       |
| 3,000            | CBS INCORPORATED          | LIEBER & COMPANY    | 433,500         |
|                  | SUB-TOTAL                 | 22,000 SHARES       | 3,179,000       |
| 6,300            | CELANESE CORPORATION      | FORSTMANN LEFF      | 1,439,550       |
| 12,750           | CELANESE CORPORATION      | WADDELL & REED      | 2,913,375       |
|                  | SUB-TOTAL                 | 19,050 SHARES       | 4,352,925       |
| 25,000           | CEN. BANKSHRS. SO.        | LIEBER & COMPANY    | 768,750         |
| 22,200           | CENTEL CORP.              | INTERNAL MANAGED    | 1,320,900       |
| 12,500           | CENTERRE BANCORPORATION   | LIEBER & COMPANY    | 637,500         |
| 11,000           | CETUS CORP                | FORSTMANN LEFF      | 401,500         |
| 16,500           | CHAMPION INTERNATIONAL    | NORWEST BANK        | 406,313         |
| 50,000           | CHARMING SHOPPES INC      | FRED ALGER          | 1,731,250       |
| 25,100           | CHASE MANHATTAN CORP.     | INTERNAL MANAGED    | 1,113,813       |
| 23,600           | CHEMICAL NEW YORK CORP    | INTERNAL MANAGED    | 1,209,500       |
| 21,000           | CHICAGO PAC CORP          | LIEBER & COMPANY    | 703,500         |
| 19,500           | CHIEF AUTO SYSTEMS        | LIEBER & COMPANY    | 502,125         |
| 75,000           | CHRYSLER CORP.            | FRED ALGER          | 2,859,375       |
| 55,000           | CHRYSLER CORP.            | ALLIANCE CAPITAL    | 2,096,875       |
| 118,500          | CHRYSLER CORP.            | HELLMAN JORDAN      | 4,517,813       |
| 83,725           | CHRYSLER CORP.            | WADDELL & REED      | 3,192,016       |
|                  | SUB-TOTAL                 | 332,225 SHARES      | 12,666,078      |
| 14,101           | CHUBB CORPORATION         | FORSTMANN LEFF      | 972,935         |
| 49,450           | CHUBB CORPORATION         | HELLMAN JORDAN      | 3,412,050       |
| 11,000           | CHUBB CORPORATION         | WADDELL & REED      | 759,000         |
|                  | SUB-TOTAL                 | 74,551 SHARES       | 5,143,985       |
| 22,000           | CIRCLE K CORP             | WADDELL & REED      | 764,500         |
| 66,000           | CIRCUS CIRCUS ENTER.      | FRED ALGER          | 2,574,000       |
| 33,000           | CLARK EQUIP CO            | NORWEST BANK        | 726,000         |
| 61,900           | CLEVELAND-CLIFFS INC      | NORWEST BANK        | 889,813         |
| 60,500           | CMI CORP                  | NORWEST BANK        | 310,063         |
| 50,000           | COBE LABS INC             | FORSTMANN LEFF      | 1,250,000       |
| 44,900           | COCA COLA BOTTLING CO CON | ALLIANCE CAPITAL    | 2,491,950       |
| 30,000           | COCA COLA COMPANY         | ALLIANCE CAPITAL    | 3,765,000       |
| 48,000           | COLLINS & AIKMAN CORP     | IDS ADVISORY        | 1,884,000       |
| 10,000           | COLONIAL LIFE & ACC INS C | LIEBER & COMPANY    | 480,000         |



MINNESOTA STATE BOARD OF INVESTMENT  
ACTIVE EQUITY MANAGER HOLDINGS  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  | ADVISOR             | MARKET<br>VALUE |
|------------------|---------------------------|---------------------|-----------------|
| 10,000           | COMMERCE UN CORP          | LIEBER & COMPANY    | \$ 303,750      |
| 12,500           | COMMONWEALTH EDISON CO.   | NORWEST BANK        | 401,563         |
| 32,250           | COMMONWEALTH EDISON CO.   | INTERNAL MANAGED    | 1,036,031       |
|                  | SUB-TOTAL                 | 44,750 SHARES       | 1,437,594       |
| 100,000          | COMMUNICATIONS SATELLITE  | BEUTEL GOODMAN      | 3,425,000       |
| 12,500           | COMMUNICATIONS SATELLITE  | NORWEST BANK        | 428,125         |
|                  | SUB-TOTAL                 | 112,500 SHARES      | 3,853,125       |
| 100,000          | COMMUNITY PSYCHIATRIC CEN | BMI CAPITAL         | 3,012,500       |
| 37,900           | COMP U CARD INTL INC      | FORSTMANN LEFF      | 1,231,750       |
| 15,000           | COMPREHENSIVE CARE CORP   | NORWEST BANK        | 196,875         |
| 14,000           | COMPUGRAPHIC CORP         | NORWEST BANK        | 269,500         |
| 10,000           | COMPUTER HORIZONS CORP    | LIEBER & COMPANY    | 136,250         |
| 33,500           | COMPUTER PRODS INC        | NORWEST BANK        | 180,063         |
| 15,900           | COMPUTER SCIENCES CORP.   | WADDELL & REED      | 626,063         |
| 32,000           | CONAGRA INC.              | IDS ADVISORY        | 1,880,000       |
| 15,600           | CONIFER GROUP             | LIEBER & COMPANY    | 631,800         |
| 20,000           | CONSOL. EDISON OF N.Y.    | IDS ADVISORY        | 882,500         |
| 47,000           | CONSOL. NAT. GAS          | INTERNAL MANAGED    | 1,457,000       |
| 25,000           | CONTEL CORP               | NORWEST BANK        | 753,125         |
| 43,500           | CONTEL CORP               | INTERNAL MANAGED    | 1,310,438       |
|                  | SUB-TOTAL                 | 68,500 SHARES       | 2,063,563       |
| 100,000          | CONTROL DATA CORP.        | BMI CAPITAL         | 2,250,000       |
| 43,000           | CORNING GLASS WORKS       | FRED ALGER          | 3,133,625       |
| 30,000           | CORNING GLASS WORKS       | INVESTMENT ADVISORS | 2,186,250       |
|                  | SUB-TOTAL                 | 73,000 SHARES       | 5,319,875       |
| 110,000          | CPT CORP.                 | NORWEST BANK        | 453,750         |
| 25,000           | CRAY RESH INC             | FRED ALGER          | 2,415,625       |
| 28,000           | CRAY RESH INC             | ALLIANCE CAPITAL    | 2,705,500       |
| 32,000           | CRAY RESH INC             | FORSTMANN LEFF      | 3,092,000       |
|                  | SUB-TOTAL                 | 85,000 SHARES       | 8,213,125       |
| 50,000           | CROSSLAND SVGS FSB BROOKL | BMI CAPITAL         | 1,006,250       |
| 15,000           | CRYSTAL BRANDS INC        | NORWEST BANK        | 335,625         |
| 50,000           | CSX CORPORATION           | INVESTMENT ADVISORS | 1,637,500       |
| 53,400           | CSX CORPORATION           | WADDELL & REED      | 1,748,850       |
|                  | SUB-TOTAL                 | 103,400 SHARES      | 3,386,350       |
| 27,400           | CULLINET SOFTWARE INC.    | NORWEST BANK        | 352,775         |
| 6,300            | CUMMINS ENGINE CO.        | NORWEST BANK        | 419,738         |
| 144,900          | DAISY SYSTEMS CORP.       | FORSTMANN LEFF      | 1,593,900       |
| 28,800           | DAISY SYSTEMS CORP.       | NORWEST BANK        | 316,800         |
|                  | SUB-TOTAL                 | 173,700 SHARES      | 1,910,700       |

MINNESOTA STATE BOARD OF INVESMENT  
ACTIVE EQUITY MANAGER HOLDINGS  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  | ADVISOR             | MARKET<br>VALUE |
|------------------|---------------------------|---------------------|-----------------|
| 80,000           | DAMON CORP.               | FRED ALGER          | \$ 1,420,000    |
| 37,000           | DANIEL INDS INC           | NORWEST BANK        | 259,000         |
| 16,000           | DART & KRAFT INC.         | FORSTMANN LEFF      | 1,014,000       |
| 3,500            | DART GROUP                | LIEBER & COMPANY    | 509,250         |
| 17,500           | DATA I O CORP             | NORWEST BANK        | 175,000         |
| 14,000           | DAYCO CORP                | NORWEST BANK        | 264,250         |
| 45,500           | DAYTON-HUDSON CORP.       | ALLIANCE CAPITAL    | 2,536,625       |
| 16,900           | DAYTON-HUDSON CORP.       | WADDELL & REED      | 942,175         |
|                  | SUB-TOTAL                 | 62,400 SHARES       | 3,478,800       |
| 95,000           | DEERE & COMPANY           | BEUTEL GOODMAN      | 2,707,500       |
| 13,300           | DEERE & COMPANY           | NORWEST BANK        | 379,050         |
|                  | SUB-TOTAL                 | 108,300 SHARES      | 3,086,550       |
| 16,000           | DEKALB CORP               | NORWEST BANK        | 330,000         |
| 9,500            | DELTA AIR LINES INC.      | NORWEST BANK        | 394,250         |
| 26,600           | DELTA AIR LINES INC.      | INTERNAL MANAGED    | 1,103,900       |
|                  | SUB-TOTAL                 | 36,100 SHARES       | 1,498,150       |
| 14,200           | DENNISON MFG CO           | NORWEST BANK        | 404,700         |
| 26,900           | DETROIT EDISON CO         | NORWEST BANK        | 443,850         |
| 88,000           | DIAMOND SHAMROCK          | NORWEST BANK        | 957,000         |
| 1,072            | DIAMOND SHAMROCK OFFSHORE | NORWEST BANK        | 16,080          |
| 10,000           | DIGITAL COMMUNICATIONS AS | NORWEST BANK        | 170,000         |
| 48,000           | DIGITAL EQUIPMENT CORP.   | FRED ALGER          | 4,116,000       |
| 10,400           | DIGITAL EQUIPMENT CORP.   | FORSTMANN LEFF      | 891,800         |
| 56,000           | DIGITAL EQUIPMENT CORP.   | HELLMAN JORDAN      | 4,802,000       |
| 30,000           | DIGITAL EQUIPMENT CORP.   | INVESTMENT ADVISORS | 2,572,500       |
|                  | SUB-TOTAL                 | 144,400 SHARES      | 12,382,300      |
| 65,000           | DISNEY WALT CORP          | ALLIANCE CAPITAL    | 3,558,750       |
| 48,000           | DISNEY WALT CORP          | IDS ADVISORY        | 2,628,000       |
| 10,000           | DISNEY WALT CORP          | LIEBER & COMPANY    | 547,500         |
|                  | SUB-TOTAL                 | 123,000 SHARES      | 6,734,250       |
| 36,000           | DONNELLEY RR & SONS       | ALLIANCE CAPITAL    | 2,803,500       |
| 30,000           | DOVER CORP.               | INVESTMENT ADVISORS | 1,245,000       |
| 60,000           | DOW CHEMICAL COMPANY      | FRED ALGER          | 3,442,500       |
| 24,000           | DOW CHEMICAL COMPANY      | IDS ADVISORY        | 1,377,000       |
| 60,000           | DOW CHEMICAL COMPANY      | INVESTMENT ADVISORS | 3,442,500       |
| 36,100           | DOW CHEMICAL COMPANY      | WADDELL & REED      | 2,071,238       |
|                  | SUB-TOTAL                 | 180,100 SHARES      | 10,333,238      |
| 15,000           | DOXSEE FOOD CORP          | LIEBER & COMPANY    | 155,625         |
| 40,500           | DU PONT EI DENEMOURS      | HELLMAN JORDAN      | 3,371,625       |
| 17,000           | DUN & BRADSTREET COS INC  | IDS ADVISORY        | 2,014,500       |
| 35,000           | DUQUESNE LT CO            | NORWEST BANK        | 481,250         |

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ACTIVE EQUITY MANAGER HOLDINGS  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  | ADVISOR             | MARKET<br>VALUE |
|------------------|---------------------------|---------------------|-----------------|
| 30,000           | DYLEX LTD                 | LIEBER & COMPANY    | \$ 414,018      |
| 15,000           | DYNATECH CORP             | LIEBER & COMPANY    | 498,750         |
| 30,000           | E Z EM INC                | LIEBER & COMPANY    | 457,500         |
| 10,700           | E.F. HUTTON GROUP INC.    | FORSTMANN LEFF      | 347,750         |
| 13,000           | E.F. HUTTON GROUP INC.    | LIEBER & COMPANY    | 422,500         |
|                  | SUB-TOTAL                 | 23,700 SHARES       | 770,250         |
| 7,000            | EASTMAN KODAK COMPANY     | LIEBER & COMPANY    | 410,375         |
| 16,000           | EASTMAN KODAK COMPANY     | NORWEST BANK        | 938,000         |
|                  | SUB-TOTAL                 | 23,000 SHARES       | 1,348,375       |
| 18,000           | EDUCATIONAL COMP. CORP.   | LIEBER & COMPANY    | 236,250         |
| 27,000           | EL PASO ELEC CO           | NORWEST BANK        | 432,000         |
| 28,000           | ELECTRO BIOLOGY INC       | NORWEST BANK        | 220,500         |
| 15,000           | ELECTRO RENT CORP         | LIEBER & COMPANY    | 217,500         |
| 22,500           | EMERY AIR FREIGHT CORP.   | NORWEST BANK        | 329,063         |
| 35,000           | EMULEX CORP               | NORWEST BANK        | 218,750         |
| 37,900           | ENDEVCO INC               | WADDELL & REED      | 284,250         |
| 10,000           | ENGLEHARD CORP            | NORWEST BANK        | 280,000         |
| 22,700           | ENRON CORP.               | INTERNAL MANAGED    | 998,800         |
| 43,500           | EXXON CORPORATION         | INTERNAL MANAGED    | 2,648,063       |
| 18,000           | FAIRFIELD COMMUN. INC.    | LIEBER & COMPANY    | 191,250         |
| 10,000           | FEDERAL EXPRESS CORP.     | HELLMAN JORDAN      | 572,500         |
| 22,000           | FEDERAL EXPRESS CORP.     | WADDELL & REED      | 1,259,500       |
|                  | SUB-TOTAL                 | 32,000 SHARES       | 1,832,000       |
| 50,000           | FEDERAL NATL. MTG.        | ALLIANCE CAPITAL    | 1,968,750       |
| 20,200           | FEDERAL NATL. MTG.        | FORSTMANN LEFF      | 795,375         |
| 49,000           | FEDERAL NATL. MTG.        | HELLMAN JORDAN      | 1,929,375       |
| 41,400           | FEDERAL NATL. MTG.        | WADDELL & REED      | 1,630,125       |
|                  | SUB-TOTAL                 | 160,600 SHARES      | 6,323,625       |
| 5,000            | FEDERATED DEPT. STORES    | LIEBER & COMPANY    | 444,375         |
| 18,800           | FEDERATED GROUP INC       | NORWEST BANK        | 272,600         |
| 11,000           | FEDERATED GTY CORP        | LIEBER & COMPANY    | 192,500         |
| 200,000          | FINANCIAL NEWS NETWORK IN | FRED ALGER          | 3,150,000       |
| 50,000           | FIREMANS FD CORP          | INVESTMENT ADVISORS | 1,837,500       |
| 31,000           | FIREMANS FD CORP          | WADDELL & REED      | 1,139,250       |
|                  | SUB-TOTAL                 | 81,000 SHARES       | 2,976,750       |
| 64,500           | FIRST BANK SYSTEM         | ALLIANCE CAPITAL    | 3,716,813       |
| 30,000           | FIRST BANK SYSTEM         | IDS ADVISORY        | 1,728,750       |
| 25,000           | FIRST BANK SYSTEM         | INVESTMENT ADVISORS | 1,440,625       |
|                  | SUB-TOTAL                 | 119,500 SHARES      | 6,886,188       |
| 50,000           | FIRST BOSTON INC          | ALLIANCE CAPITAL    | 2,562,500       |
| 57,000           | FIRST BOSTON INC          | FORSTMANN LEFF      | 2,921,250       |

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ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  | ADVISOR          | MARKET<br>VALUE |
|------------------|---------------------------|------------------|-----------------|
|                  | SUB-TOTAL                 | 107,000 SHARES   | 5,483,750       |
| 2,800            | FIRST EMPIRE ST CORP      | LIEBER & COMPANY | \$ 275,100      |
| 119,500          | FIRST EXECUTIVE CORP DEL  | FORSTMANN LEFF   | 3,316,125       |
| 26,328           | FIRST FIDELITY BANCORP    | LIEBER & COMPANY | 1,043,247       |
| 14,600           | FIRST INTERSTATE BANCORP  | LIEBER & COMPANY | 21,900          |
| 83,000           | FIRST INTERSTATE BANCORP. | BEUTEL GOODMAN   | 5,146,000       |
| 8,000            | FIRST JERSEY NAT'L. CO.   | LIEBER & COMPANY | 453,000         |
| 40,400           | FIRST MISS CORP           | NORWEST BANK     | 267,650         |
| 12,000           | FIRST SVGS. BANK FLORIDA  | LIEBER & COMPANY | 372,000         |
| 60,000           | FIRST UN CORP             | IDS ADVISORY     | 1,717,500       |
| 2,000            | FLEETWOOD ENTER. INC.     | NORWEST BANK     | 46,000          |
| 28,000           | FLEETWOOD ENTER. INC.     | WADDELL & REED   | 644,000         |
|                  | SUB-TOTAL                 | 30,000 SHARES    | 690,000         |
| 20,000           | FLORIDA FED. S & L        | LIEBER & COMPANY | 387,500         |
| 5,400            | FLORIDA ROCK INDUSTRIES   | LIEBER & COMPANY | 348,300         |
| 16,700           | FLUOR CORP                | NORWEST BANK     | 271,375         |
| 45,000           | FORD MOTOR CO.            | FRED ALGER       | 2,480,625       |
| 55,500           | FORD MOTOR CO.            | HELLMAN JORDAN   | 3,059,438       |
|                  | SUB-TOTAL                 | 100,500 SHARES   | 5,540,063       |
| 37,000           | FOSTER L B CO             | NORWEST BANK     | 166,500         |
| 13,200           | FOSTER WHEELER CORP       | NORWEST BANK     | 178,200         |
| 7,400            | FOXBORO CO                | NORWEST BANK     | 225,700         |
| 275              | FREEPORT MCMORAN ENERGY   | NORWEST BANK     | 4,194           |
| 138              | FREEPORT MCMORAN GOLD CO  | NORWEST BANK     | 1,031           |
| 16,500           | FREEPORT-MCMORAN INC      | NORWEST BANK     | 286,688         |
| 28,325           | G & K SERVICES INC.       | LIEBER & COMPANY | 495,688         |
| 20,600           | GAF CORP                  | FORSTMANN LEFF   | 710,700         |
| 9,600            | GALAXY CARPET MLS INC     | LIEBER & COMPANY | 144,000         |
| 45,000           | GANNETT INC.              | ALLIANCE CAPITAL | 3,847,500       |
| 7,500            | GATEWAY BK SOUTH NORWALK  | LIEBER & COMPANY | 182,813         |
| 73,000           | GCA CORP                  | NORWEST BANK     | 319,375         |
| 45,000           | GEARHART INDS INC         | NORWEST BANK     | 101,250         |
| 62,500           | GELCO CORPORATION         | INTERNAL MANAGED | 976,563         |
| 12,240           | GENCORP                   | FORSTMANN LEFF   | 914,940         |
| 6,080            | GENCORP                   | LIEBER & COMPANY | 454,480         |
|                  | SUB-TOTAL                 | 18,320 SHARES    | 1,369,420       |
| 60,000           | GENENTECH INC             | FRED ALGER       | 5,407,500       |
| 25,800           | GENENTECH INC             | FORSTMANN LEFF   | 2,325,225       |
|                  | SUB-TOTAL                 | 85,800 SHARES    | 7,732,725       |
| 17,900           | GENERAL DYNAMICS          | INTERNAL MANAGED | 1,369,350       |
| 30,000           | GENERAL ELECTRIC CO.      | ALLIANCE CAPITAL | 2,430,000       |
| 8,600            | GENERAL ELECTRIC CO.      | FORSTMANN LEFF   | 696,600         |

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ALPHABETICAL EQUITY HOLDINGS  
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| NO. OF<br>SHARES | SECURITY                  | ADVISOR             | MARKET<br>VALUE |
|------------------|---------------------------|---------------------|-----------------|
| 33,000           | GENERAL ELECTRIC CO.      | INVESTMENT ADVISORS | \$ 2,673,000    |
| 36,300           | GENERAL ELECTRIC CO.      | WADDELL & REED      | 2,940,300       |
|                  | SUB-TOTAL                 | 107,900 SHARES      | 8,739,900       |
| 100,000          | GENERAL INSTRUMENT CORP   | BMI CAPITAL         | 2,162,500       |
| 25,200           | GENERAL INSTRUMENT CORP   | WADDELL & REED      | 544,950         |
|                  | SUB-TOTAL                 | 125,200 SHARES      | 2,707,450       |
| 16,400           | GENERAL MILLS INC.        | FORSTMANN LEFF      | 1,361,200       |
| 22,000           | GENERAL MOTORS CORP.      | ALLIANCE CAPITAL    | 1,707,750       |
| 53,500           | GENERAL MOTORS CORP.      | BEUTEL GOODMAN      | 4,152,938       |
| 21,500           | GENERAL MOTORS CORP.      | NORWEST BANK        | 1,668,938       |
| 13,800           | GENERAL MOTORS CORP.      | INTERNAL MANAGED    | 1,071,225       |
|                  | SUB-TOTAL                 | 110,800 SHARES      | 8,600,850       |
| 44,400           | GENERAL PUBLIC UTILITIES  | FORSTMANN LEFF      | 932,400         |
| 44,000           | GENERAL RE CORP.          | ALLIANCE CAPITAL    | 2,750,000       |
| 34,400           | GENERAL RE CORP.          | HELLMAN JORDAN      | 2,150,000       |
| 30,000           | GENERAL RE CORP.          | IDS ADVISORY        | 1,875,000       |
| 13,200           | GENERAL RE CORP.          | WADDELL & REED      | 825,000         |
|                  | SUB-TOTAL                 | 121,600 SHARES      | 7,600,000       |
| 8,400            | GENERAL SIGNAL CORP.      | NORWEST BANK        | 397,950         |
| 162,000          | GENRAD INC.               | BEUTEL GOODMAN      | 1,417,500       |
| 11,500           | GIFFORD HILL & CO INC     | NORWEST BANK        | 270,250         |
| 185,000          | GLAXO HLDGS LTD           | FRED ALGER          | 2,913,750       |
| 16,500           | GODFREY COMPANY           | LIEBER & COMPANY    | 563,063         |
| 14,000           | GOODRICH (B.F.)           | WADDELL & REED      | 609,000         |
| 21,500           | GOODYEAR TIRE & RUBBER    | NORWEST BANK        | 709,500         |
| 19,000           | GOULD INC.                | NORWEST BANK        | 415,625         |
| 21,000           | GR. AMER. FIRST SVGS BK S | FORSTMANN LEFF      | 488,250         |
| 19,000           | GREENTREE ACCEPT. INC.    | LIEBER & COMPANY    | 1,102,000       |
| 33,300           | GREYHOUND CORP.           | WADDELL & REED      | 1,173,825       |
| 20,000           | GTE CORP.                 | NORWEST BANK        | 1,082,500       |
| 24,750           | GTE CORP.                 | INTERNAL MANAGED    | 1,339,594       |
|                  | SUB-TOTAL                 | 44,750 SHARES       | 2,422,094       |
| 30,200           | GULF & WESTERN INC.       | FORSTMANN LEFF      | 2,147,975       |
| 18,000           | GULF CDA CORP             | LIEBER & COMPANY    | 193,500         |
| 54,700           | GULF STS UTILS CO         | NORWEST BANK        | 485,463         |
| 33,400           | HALLIBURTON INC.          | NORWEST BANK        | 743,150         |
| 53,500           | HALLIBURTON INC.          | INTERNAL MANAGED    | 1,190,375       |
|                  | SUB-TOTAL                 | 86,900 SHARES       | 1,933,525       |
| 17,500           | HAMMERMILL PAPER CO       | FORSTMANN LEFF      | 739,375         |
| 50,400           | HARCOURT BRACE JOVAN.     | FRED ALGER          | 1,827,000       |
| 7,500            | HARPER GROUP              | LIEBER & COMPANY    | 256,875         |

MINNESOTA STATE BOARD OF INVESTMENT  
ACTIVE EQUITY MANAGER HOLDINGS  
ALPHABETICAL EQUITY HOLDINGS  
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| NO. OF<br>SHARES | SECURITY                  | ADVISOR          | MARKET<br>VALUE |
|------------------|---------------------------|------------------|-----------------|
| 21,000           | HARTMARX CORP             | LIEBER & COMPANY | \$ 601,125      |
| 25,000           | HASBRO INDS. INC.         | IDS ADVISORY     | 1,450,000       |
| 15,000           | HAZELTINE CORP            | NORWEST BANK     | 303,750         |
| 18,500           | HECKS INC                 | NORWEST BANK     | 238,188         |
| 24,900           | HECLA INC.                | NORWEST BANK     | 258,338         |
| 42,000           | HEEKIN CAN INC            | BMI CAPITAL      | 1,039,500       |
| 15,000           | HEI CORP.                 | LIEBER & COMPANY | 58,125          |
| 12,500           | HENLEY GROUP INC          | NORWEST BANK     | 240,625         |
| 120,000          | HERITAGE ENTERTAINMENT IN | FORSTMANN LEFF   | 1,200,000       |
| 12,500           | HERITAGE ENTERTAINMENT IN | LIEBER & COMPANY | 125,000         |
|                  | SUB-TOTAL                 | 132,500 SHARES   | 1,325,000       |
| 20,000           | HERITAGE FEDERAL S&L      | LIEBER & COMPANY | 455,000         |
| 61,300           | HEWLETT PACKARD CO.       | FRED ALGER       | 2,513,300       |
| 50,000           | HEWLETT PACKARD CO.       | ALLIANCE CAPITAL | 2,050,000       |
|                  | SUB-TOTAL                 | 111,300 SHARES   | 4,563,300       |
| 65,000           | HM FED SVG&LN ASSN S.D.CA | FRED ALGER       | 2,437,500       |
| 10,400           | HOLMES D.H. & CO.         | LIEBER & COMPANY | 286,000         |
| 14,000           | HOME FED SVGS & LN ASSN   | LIEBER & COMPANY | 273,000         |
| 125,000          | HOME GROUP INC            | BMI CAPITAL      | 3,265,625       |
| 33,500           | HOME GROUP INC            | FORSTMANN LEFF   | 875,188         |
| 146,000          | HOME GROUP INC            | HELLMAN JORDAN   | 3,814,250       |
|                  | SUB-TOTAL                 | 304,500 SHARES   | 7,955,063       |
| 3,000            | HONEYWELL INC.            | NORWEST BANK     | 227,250         |
| 29,500           | HOSPITAL CORP. OF AMER.   | INTERNAL MANAGED | 1,121,000       |
| 50,000           | HOUSEHOLD INTL.           | BMI CAPITAL      | 2,168,750       |
| 19,600           | HOUSEHOLD INTL.           | WADDELL & REED   | 850,150         |
| 27,200           | HOUSEHOLD INTL.           | INTERNAL MANAGED | 1,179,800       |
|                  | SUB-TOTAL                 | 96,800 SHARES    | 4,198,700       |
| 13,500           | HOUSTON INDUSTRIES INC.   | NORWEST BANK     | 425,250         |
| 35,100           | HOUSTON INDUSTRIES INC.   | INTERNAL MANAGED | 1,105,650       |
|                  | SUB-TOTAL                 | 48,600 SHARES    | 1,530,900       |
| 12,000           | HOWARD SVGS BK LIVINGSTON | LIEBER & COMPANY | 577,500         |
| 50,000           | HUGHES TOOL               | NORWEST BANK     | 487,500         |
| 6,900            | HUMANA INC.               | NORWEST BANK     | 175,088         |
| 35,000           | HUMANA INC.               | INTERNAL MANAGED | 888,125         |
|                  | SUB-TOTAL                 | 41,900 SHARES    | 1,063,213       |
| 92,000           | HUSKY OIL LTD             | NORWEST BANK     | 540,500         |
| 22,000           | ILLINOIS POWER CORP       | NORWEST BANK     | 591,250         |
| 5,000            | INDIANA NATL CORP         | LIEBER & COMPANY | 230,000         |
| 7,200            | INT'L. KINGS TABLE        | WADDELL & REED   | 187,200         |
| 43,000           | INTECOM INC               | NORWEST BANK     | 220,375         |

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| NO. OF<br>SHARES | SECURITY                  | ADVISOR             | MARKET<br>VALUE |
|------------------|---------------------------|---------------------|-----------------|
| 26,500           | INTEGRATED DEVICE TECH.   | WADDELL & REED      | \$ 331,250      |
| 76,500           | INTEL CORP.               | ALLIANCE CAPITAL    | 1,759,500       |
| 61,000           | INTEL CORP.               | HELLMAN JORDAN      | 1,403,000       |
|                  | SUB-TOTAL                 | 137,500 SHARES      | 3,162,500       |
| 63,400           | INTERFIRST CORP.          | NORWEST BANK        | 459,650         |
| 20,000           | INTERGRAPH CORP.          | BMI CAPITAL         | 520,000         |
| 100,000          | INTERNATIONAL TECHNOLOGY  | BMI CAPITAL         | 4,300,000       |
| 11,600           | INTL. ALUMINUM CORP.      | LIEBER & COMPANY    | 232,000         |
| 27,000           | INTL. BUSINESS MACHINES   | ALLIANCE CAPITAL    | 3,955,500       |
| 14,700           | INTL. BUSINESS MACHINES   | FORSTMANN LEFF      | 2,153,550       |
| 18,000           | INTL. BUSINESS MACHINES   | IDS ADVISORY        | 2,637,000       |
| 30,000           | INTL. BUSINESS MACHINES   | INVESTMENT ADVISORS | 4,395,000       |
| 6,300            | INTL. BUSINESS MACHINES   | LIEBER & COMPANY    | 922,950         |
| 5,900            | INTL. BUSINESS MACHINES   | NORWEST BANK        | 864,350         |
|                  | SUB-TOTAL                 | 101,900 SHARES      | 14,928,350      |
| 101,200          | ISC SYS CORP              | FORSTMANN LEFF      | 1,593,900       |
| 47,300           | ITT CORP                  | FRED ALGER          | 2,571,938       |
| 50,000           | ITT CORP                  | BEUTEL GOODMAN      | 2,718,750       |
| 18,800           | ITT CORP                  | FORSTMANN LEFF      | 1,022,250       |
| 16,000           | ITT CORP                  | HELLMAN JORDAN      | 870,000         |
| 19,600           | ITT CORP                  | WADDELL & REED      | 1,065,750       |
|                  | SUB-TOTAL                 | 151,700 SHARES      | 8,248,688       |
| 17,400           | IU INTL CORP              | NORWEST BANK        | 267,525         |
| 4,500            | JEFFERSON BANKSHRS. VA.   | LIEBER & COMPANY    | 172,125         |
| 14,700           | JORGENSEN EARLE M CO DEL  | NORWEST BANK        | 387,713         |
| 30,000           | JOY MFG CO                | NORWEST BANK        | 731,250         |
| 15,000           | JUSTIN INDS INC           | NORWEST BANK        | 258,750         |
| 70,000           | K MART CORPORATION        | BEUTEL GOODMAN      | 3,981,250       |
| 29,100           | K MART CORPORATION        | INTERNAL MANAGED    | 1,655,063       |
|                  | SUB-TOTAL                 | 99,100 SHARES       | 5,636,313       |
| 36,000           | KAISER CEMENT CORP        | NORWEST BANK        | 499,500         |
| 11,700           | KANEB ENERGY PARTNERS LTD | NORWEST BANK        | 112,613         |
| 6,300            | KANSAS CITY PWR & LT CO   | NORWEST BANK        | 154,350         |
| 28,000           | KELLWOOD CO.              | BMI CAPITAL         | 938,000         |
| 25,000           | KELLY SVCS INC            | IDS ADVISORY        | 1,500,000       |
| 18,900           | KEMPER CORP.              | WADDELL & REED      | 609,525         |
| 17,500           | KIDDE INC.                | NORWEST BANK        | 575,313         |
| 10,900           | KIMBERLY CLARK CORP       | WADDELL & REED      | 998,713         |
| 39,100           | KOPPERS INC               | WADDELL & REED      | 1,138,788       |
| 5,000            | KROGER COMPANY            | NORWEST BANK        | 299,375         |
| 24,500           | KROGER COMPANY            | INTERNAL MANAGED    | 1,466,938       |
|                  | SUB-TOTAL                 | 29,500 SHARES       | 1,766,313       |

MINNESOTA STATE BOARD OF INVESTMENT  
ACTIVE EQUITY MANAGER HOLDINGS  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                 | ADVISOR             | MARKET<br>VALUE |
|------------------|--------------------------|---------------------|-----------------|
| 34,700           | LAC MINERALS LTD NEW     | NORWEST BANK        | \$ 550,863      |
| 18,666           | LADD FURNITURE           | LIEBER & COMPANY    | 520,315         |
| 260,600          | LAFARGE CORP.            | BEUTEL GOODMAN      | 2,768,875       |
| 9,000            | LANE INC                 | LIEBER & COMPANY    | 447,750         |
| 38,600           | LEAR PETROLEUM CORP      | NORWEST BANK        | 246,075         |
| 8,200            | LEAR SIEGLER INC.        | NORWEST BANK        | 447,925         |
| 17,400           | LEE ENTERPRISES INC      | LIEBER & COMPANY    | 454,575         |
| 38,000           | LILLY ELI & CO           | FRED ALGER          | 3,073,250       |
| 42,800           | LILLY ELI & CO           | FORSTMANN LEFF      | 3,461,450       |
| 17,000           | LILLY ELI & CO           | HELLMAN JORDAN      | 1,374,875       |
| 32,000           | LILLY ELI & CO           | IDS ADVISORY        | 2,588,000       |
|                  | SUB-TOTAL                | 129,800 SHARES      | 10,497,575      |
| 52,500           | LIMITED INC.             | IDS ADVISORY        | 1,771,875       |
| 73,300           | LIN BROADCAST. CORP.     | ALLIANCE CAPITAL    | 3,610,025       |
| 13,500           | LINCOLN NATL CORP IND    | WADDELL & REED      | 713,813         |
| 12,200           | LITTON INDS INC.         | INTERNAL MANAGED    | 988,200         |
| 50,000           | LIZ CLAIBORNE INC.       | IDS ADVISORY        | 2,350,000       |
| 65,000           | LOCKHEED AIRCRAFT CORP   | BEUTEL GOODMAN      | 3,623,750       |
| 45,700           | LOCKHEED AIRCRAFT CORP   | INTERNAL MANAGED    | 2,547,775       |
|                  | SUB-TOTAL                | 110,700 SHARES      | 6,171,525       |
| 34,700           | LOEWS CORP               | FRED ALGER          | 2,385,625       |
| 36,050           | LOEWS CORP               | WADDELL & REED      | 2,478,438       |
|                  | SUB-TOTAL                | 70,750 SHARES       | 4,864,063       |
| 225,000          | LONG ISLAND LTG CO       | INTERNAL MANAGED    | 2,812,500       |
| 60,100           | LOTUS                    | FORSTMANN LEFF      | 2,223,700       |
| 62,193           | LOUISIANA PAC. CORP.     | WADDELL & REED      | 1,655,889       |
| 17,000           | LOWES COMPANY            | WADDELL & REED      | 612,000         |
| 76,000           | LSI LOGIC CORP.          | HELLMAN JORDAN      | 750,500         |
| 105,300          | LSI LOGIC CORP.          | WADDELL & REED      | 1,039,838       |
|                  | SUB-TOTAL                | 181,300 SHARES      | 1,790,338       |
| 24,000           | LTV CORP                 | NORWEST BANK        | 123,000         |
| 104,700          | LTV CORP                 | WADDELL & REED      | 536,588         |
|                  | SUB-TOTAL                | 128,700 SHARES      | 659,588         |
| 7,100            | LUCKY STORES             | NORWEST BANK        | 211,225         |
| 20,000           | M.D.C. HOLDINGS, INC     | LIEBER & COMPANY    | 402,500         |
| 15,400           | M/A COM                  | NORWEST BANK        | 265,650         |
| 51,000           | MANPOWER INC             | INVESTMENT ADVISORS | 2,173,875       |
| 27,500           | MANPOWER INC             | WADDELL & REED      | 1,172,188       |
|                  | SUB-TOTAL                | 78,500 SHARES       | 3,346,063       |
| 6,000            | MANUFACTURERS HAN. CORP. | NORWEST BANK        | 309,750         |
| 25,300           | MANUFACTURERS HAN. CORP. | INTERNAL MANAGED    | 1,306,113       |



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| NO. OF<br>SHARES | SECURITY                 | ADVISOR             | MARKET<br>VALUE |
|------------------|--------------------------|---------------------|-----------------|
|                  | SUB-TOTAL                | 31,300 SHARES       | 1,615,863       |
| 20,000           | MARCUS CORP              | LIEBER & COMPANY    | \$ 590,000      |
| 34,000           | MARION LABS INC          | IDS ADVISORY        | 1,521,500       |
| 75,000           | MARRIOTT CORP.           | INVESTMENT ADVISORS | 2,793,750       |
| 52,000           | MARSH & MCLENNAN         | ALLIANCE CAPITAL    | 3,068,000       |
| 5,300            | MARSH & MCLENNAN         | WADDELL & REED      | 312,700         |
|                  | SUB-TOTAL                | 57,300 SHARES       | 3,380,700       |
| 40,000           | MASCO CORP               | IDS ADVISORY        | 1,320,000       |
| 13,600           | MATERIAL SCIENCES CORP   | LIEBER & COMPANY    | 273,700         |
| 98,700           | MATTEL INC               | FORSTMANN LEFF      | 1,369,463       |
| 62,000           | MAXICARE HEALTH PLANS    | HELLMAN JORDAN      | 1,743,750       |
| 5,000            | MAY DEPT. STORES CO.     | LIEBER & COMPANY    | 414,375         |
| 18,000           | MAYFLOWER GROUP INC.     | LIEBER & COMPANY    | 456,750         |
| 63,000           | MCA INC.                 | ALLIANCE CAPITAL    | 3,213,000       |
| 25,000           | MCA INC.                 | IDS ADVISORY        | 1,275,000       |
| 6,000            | MCA INC.                 | LIEBER & COMPANY    | 306,000         |
|                  | SUB-TOTAL                | 94,000 SHARES       | 4,794,000       |
| 7,600            | MCDERMOTT INTL INC       | NORWEST BANK        | 161,500         |
| 57,525           | MCDONALDS CORP.          | FRED ALGER          | 4,206,516       |
| 46,500           | MCDONALDS CORP.          | ALLIANCE CAPITAL    | 3,400,313       |
| 30,000           | MCDONALDS CORP.          | INVESTMENT ADVISORS | 2,193,750       |
|                  | SUB-TOTAL                | 134,025 SHARES      | 9,800,578       |
| 17,800           | MCDONNELL DOUGLAS CORP.  | INTERNAL MANAGED    | 1,386,175       |
| 20,000           | MCI COMMUNICATION        | NORWEST BANK        | 207,500         |
| 35,000           | MCORP                    | NORWEST BANK        | 651,875         |
| 14,000           | MEDITRUST                | NORWEST BANK        | 374,500         |
| 35,000           | MEDTRONIC INC.           | INVESTMENT ADVISORS | 2,668,750       |
| 13,000           | MERCHANTS NATL CORP      | LIEBER & COMPANY    | 458,250         |
| 40,000           | MERCK & COMPANY INC.     | FRED ALGER          | 4,180,000       |
| 30,000           | MERCK & COMPANY INC.     | ALLIANCE CAPITAL    | 3,135,000       |
| 20,000           | MERCK & COMPANY INC.     | INVESTMENT ADVISORS | 2,090,000       |
|                  | SUB-TOTAL                | 90,000 SHARES       | 9,405,000       |
| 25,200           | MEREDITH CORP            | ALLIANCE CAPITAL    | 1,915,200       |
| 4,723            | MERIDIAN BNCP PFD 2.50   | LIEBER & COMPANY    | 260,946         |
| 49,000           | MERRILL LYNCH & CO. INC. | HELLMAN JORDAN      | 1,696,625       |
| 8,500            | MERRILL LYNCH & CO. INC. | NORWEST BANK        | 294,313         |
|                  | SUB-TOTAL                | 57,500 SHARES       | 1,990,938       |
| 30,000           | MICROSEMI CORP           | LIEBER & COMPANY    | 266,250         |
| 32,400           | MIDDLE SOUTH UTILS INC   | LIEBER & COMPANY    | 421,200         |
| 25,300           | MIDDLE SOUTH UTILS INC   | NORWEST BANK        | 328,900         |
| 110,000          | MIDDLE SOUTH UTILS INC   | INTERNAL MANAGED    | 1,430,000       |

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| NO. OF<br>SHARES | SECURITY                  | ADVISOR             | MARKET<br>VALUE |
|------------------|---------------------------|---------------------|-----------------|
|                  | SUB-TOTAL                 | 167,700 SHARES      | 2,180,100       |
| 24,000           | MILLER HERMAN INC.        | LIEBER & COMPANY    | \$ 741,000      |
| 60,000           | MILLIPORE CORP.           | FRED ALGER          | 2,047,500       |
| 65,000           | MILLIPORE CORP.           | BMI CAPITAL         | 2,218,125       |
|                  | SUB-TOTAL                 | 125,000 SHARES      | 4,265,625       |
| 22,500           | MIN. & RES. LTD. ADR      | NORWEST BANK        | 186,328         |
| 9,200            | MINNESOTA MNG & MFG CO    | WADDELL & REED      | 1,046,500       |
| 25,800           | MITCHELL ENERGY           | NORWEST BANK        | 299,925         |
| 72,000           | MITEL CORP                | NORWEST BANK        | 351,000         |
| 23,000           | MOBIL CORPORATION         | NORWEST BANK        | 727,375         |
| 33,300           | MOBIL CORPORATION         | INTERNAL MANAGED    | 1,053,113       |
|                  | SUB-TOTAL                 | 56,300 SHARES       | 1,780,488       |
| 130,000          | MOLECULAR GENETICS INC    | FORSTMANN LEFF      | 1,462,500       |
| 15,500           | MOORE MCCORMACK RES INC   | NORWEST BANK        | 323,563         |
| 35,000           | MORGAN J P & COMPANY INC. | ALLIANCE CAPITAL    | 3,075,625       |
| 20,000           | MORGAN J P & COMPANY INC. | INVESTMENT ADVISORS | 1,757,500       |
|                  | SUB-TOTAL                 | 55,000 SHARES       | 4,833,125       |
| 5,500            | MORGAN STANLEY GROUP INC  | HELLMAN JORDAN      | 389,125         |
| 74,000           | MOTOROLA INCORPORATED     | HELLMAN JORDAN      | 2,950,750       |
| 2,500            | MUNFORD INC.              | LIEBER & COMPANY    | 59,375          |
| 9,800            | NATIONAL INTERGROUP INC   | NORWEST BANK        | 204,575         |
| 28,125           | NATL. COMPUTER SYSTEMS    | LIEBER & COMPANY    | 611,719         |
| 26,000           | NATL. MED. ENTER. INC.    | NORWEST BANK        | 607,750         |
| 49,750           | NATL. MED. ENTER. INC.    | INTERNAL MANAGED    | 1,162,906       |
|                  | SUB-TOTAL                 | 75,750 SHARES       | 1,770,656       |
| 300,000          | NATL. SEMICONDUCTOR       | BEUTEL GOODMAN      | 3,525,000       |
| 153,000          | NBI INC                   | FORSTMANN LEFF      | 1,969,875       |
| 29,100           | NBI INC                   | NORWEST BANK        | 374,663         |
|                  | SUB-TOTAL                 | 182,100 SHARES      | 2,344,538       |
| 19,000           | NCR CORP.                 | WADDELL & REED      | 976,125         |
| 85,000           | NEWMONT MINING            | BEUTEL GOODMAN      | 3,984,375       |
| 25,500           | NIAGARA MOHAWK PWR CORP   | NORWEST BANK        | 561,000         |
| 70,000           | NICOLET INSTRUMENT CORP   | BMI CAPITAL         | 1,225,000       |
| 14,300           | NICOR INC                 | NORWEST BANK        | 403,975         |
| 5,600            | NO. AMERICAN PHILIPS CORP | NORWEST BANK        | 252,000         |
| 25,500           | NORFOLK SOUTHERN CORP     | ALLIANCE CAPITAL    | 2,244,000       |
| 57,650           | NORTHEAST UTILITIES       | INTERNAL MANAGED    | 1,246,681       |
| 53,200           | NORTHERN IND PUB SVC CO   | NORWEST BANK        | 625,100         |
| 109,800          | NORTHERN IND PUB SVC CO   | INTERNAL MANAGED    | 1,290,150       |
|                  | SUB-TOTAL                 | 163,000 SHARES      | 1,915,250       |

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| NO. OF<br>SHARES | SECURITY                  | ADVISOR             | MARKET<br>VALUE |
|------------------|---------------------------|---------------------|-----------------|
| 11,200           | NORTHERN TELECOM LTD.     | NORWEST BANK        | \$ 333,200      |
| 6,000            | NORTON CO                 | NORWEST BANK        | 243,000         |
| 100,000          | NOVO INDS-ADR             | BMI CAPITAL         | 3,312,500       |
| 9,000            | NOVO INDS-ADR             | NORWEST BANK        | 298,125         |
| 11,000           | NOVO INDS-ADR             | WADDELL & REED      | 364,375         |
|                  | SUB-TOTAL                 | 120,000 SHARES      | 3,975,000       |
|                  |                           |                     |                 |
| 20,500           | NOWSCO WELL SERVICE LTD   | LIEBER & COMPANY    | 153,750         |
| 19,000           | NRM ENERGY CO LP          | NORWEST BANK        | 263,625         |
| 22,000           | NUMERICA FINL CORP        | LIEBER & COMPANY    | 473,000         |
| 55,000           | NWA INC.                  | ALLIANCE CAPITAL    | 2,750,000       |
| 22,200           | NYNEX                     | INTERNAL MANAGED    | 1,498,500       |
| 12,000           | OCCIDENTAL PETE CORP      | NORWEST BANK        | 321,000         |
| 83,000           | OCEAN DRILLING & EXPL CO  | INTERNAL MANAGED    | 985,625         |
| 100,000          | OGDEN CORP.               | BEUTEL GOODMAN      | 4,012,500       |
| 6,300            | OGLEBAY NORTON CO         | NORWEST BANK        | 173,250         |
| 8,750            | OLD REP INTL CORP         | LIEBER & COMPANY    | 319,375         |
| 15,000           | ONEOK INC                 | NORWEST BANK        | 457,500         |
| 15,100           | OPTICAL RADIATION CORP    | NORWEST BANK        | 294,450         |
| 60,000           | OUTBOARD MARINE CORP      | WADDELL & REED      | 1,920,000       |
| 60,000           | PACIFIC TELESIS GROUP     | IDS ADVISORY        | 3,367,500       |
| 17,900           | PACIFICARE HEALTH SYS INC | NORWEST BANK        | 272,975         |
| 8,600            | PACIFICORP                | NORWEST BANK        | 312,825         |
| 210,600          | PAN AM CORPORATION        | FRED ALGER          | 1,263,600       |
| 10,000           | PANHANDLE EASTN CORP      | LIEBER & COMPANY    | 481,250         |
| 12,000           | PAR TECHNOLOGY            | LIEBER & COMPANY    | 240,000         |
| 28,000           | PARISIAN INC.             | WADDELL & REED      | 721,000         |
| 33,300           | PAYLESS CASHWAYS          | WADDELL & REED      | 869,963         |
| 80,000           | PENN CENT CORP            | BEUTEL GOODMAN      | 4,590,000       |
| 11,700           | PENNEY J.C. INC.          | WADDELL & REED      | 997,425         |
| 25,600           | PENNZOIL CO.              | INTERNAL MANAGED    | 1,376,000       |
| 34,200           | PERKIN ELMER              | WADDELL & REED      | 936,225         |
| 30,000           | PERMIAN BASIN RTY TR      | NORWEST BANK        | 187,500         |
| 30,200           | PFIZER INCORPORATED       | WADDELL & REED      | 2,159,300       |
| 64,550           | PHILADELPHIA ELEC. CO.    | INTERNAL MANAGED    | 1,307,138       |
| 39,700           | PHILLIPS PETROLEUM CO.    | NORWEST BANK        | 382,113         |
| 60,000           | PIC N SAVE CORP.          | INVESTMENT ADVISORS | 1,770,000       |
| 30,000           | PIEDMONT AVIATION         | IDS ADVISORY        | 1,192,500       |
| 36,000           | POGO PRODUCING CO         | NORWEST BANK        | 229,500         |
| 40,000           | POLAROID CORP.            | BMI CAPITAL         | 2,920,000       |
| 40,800           | POLAROID CORP.            | WADDELL & REED      | 2,978,400       |
|                  | SUB-TOTAL                 | 80,800 SHARES       | 5,898,400       |
|                  |                           |                     |                 |
| 14,400           | POPE & TALBOT             | LIEBER & COMPANY    | 288,000         |
| 3,000            | POPE RES DEL LTD PARTNERS | LIEBER & COMPANY    | 60,750          |
| 18,000           | PPG INDUSTRIES INC.       | WADDELL & REED      | 1,226,250       |
| 20,000           | PRICE CO                  | FORSTMANN LEFF      | 920,000         |

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| NO. OF<br>SHARES | SECURITY                  | ADVISOR             | MARKET<br>VALUE |
|------------------|---------------------------|---------------------|-----------------|
| 37,333           | PRIME MTR INNS INC        | HELLMAN JORDAN      | \$ 1,544,653    |
| 22,000           | PRIME MTR INNS INC        | WADDELL & REED      | 910,250         |
|                  | SUB-TOTAL                 | 59,333 SHARES       | 2,454,903       |
|                  |                           |                     |                 |
| 90,000           | PROGRESSIVE CORP OHIO     | ALLIANCE CAPITAL    | 2,947,500       |
| 24,000           | PROTECTIVE LIFE CORP      | LIEBER & COMPANY    | 582,000         |
| 34,300           | PUBLIC SVC CO COLO        | NORWEST BANK        | 686,000         |
| 10,000           | PULTE HOME CORP           | LIEBER & COMPANY    | 198,750         |
| 29,500           | PUROLATOR COURIER CORP    | NORWEST BANK        | 556,813         |
| 18,000           | QUAKER ST OIL REFNG CORP  | LIEBER & COMPANY    | 492,750         |
| 16,900           | QUANTUM CORP.             | NORWEST BANK        | 312,650         |
| 18,800           | RAYTHEON COMPANY          | INTERNAL MANAGED    | 1,196,150       |
| 5,700            | REICHOLD CHEMS INC        | NORWEST BANK        | 215,888         |
| 21,000           | RENT A CENTER             | LIEBER & COMPANY    | 540,750         |
| 9,000            | REPUBLIC BANK CORP        | NORWEST BANK        | 259,875         |
| 81,400           | RLC CORP.                 | INTERNAL MANAGED    | 803,825         |
| 18,700           | ROBERTSON H H CO          | NORWEST BANK        | 310,888         |
| 62,700           | ROCKAWAY CORP             | FORSTMANN LEFF      | 1,496,963       |
| 28,000           | ROCKWELL INTL CORP        | IDS ADVISORY        | 1,232,000       |
| 110,000          | ROPER CORP                | BMI CAPITAL         | 4,166,250       |
| 50,000           | ROSES STORES INC          | BMI CAPITAL         | 2,275,000       |
| 5,000            | ROSES STORES INC          | LIEBER & COMPANY    | 227,500         |
|                  | SUB-TOTAL                 | 55,000 SHARES       | 2,502,500       |
|                  |                           |                     |                 |
| 8,000            | ROSES STORES INC.         | LIEBER & COMPANY    | 336,000         |
| 52,700           | ROWAN COMPANIES INC       | NORWEST BANK        | 289,850         |
| 16,750           | ROYAL DUTCH PET. GLDRS.   | INTERNAL MANAGED    | 1,348,375       |
| 7,000            | RUSS BERRIE & CO.         | LIEBER & COMPANY    | 182,000         |
| 42,750           | RYDER SYSTEMS INC.        | INTERNAL MANAGED    | 1,250,438       |
| 36,500           | SAFEGUARD HEALTH ENTERPRI | NORWEST BANK        | 337,625         |
| 19,000           | SALOMON INC               | FRED ALGER          | 923,875         |
| 49,000           | SALOMON INC               | ALLIANCE CAPITAL    | 2,382,625       |
| 47,000           | SALOMON INC               | IDS ADVISORY        | 2,285,375       |
| 11,200           | SALOMON INC               | WADDELL & REED      | 544,600         |
|                  | SUB-TOTAL                 | 126,200 SHARES      | 6,136,475       |
|                  |                           |                     |                 |
| 10,000           | SANFORD CORP ILL          | LIEBER & COMPANY    | 300,000         |
| 45,000           | SANTA FE SO. PACIFIC CORP | FRED ALGER          | 1,518,750       |
| 5,000            | SCHEIB EARL INC           | LIEBER & COMPANY    | 85,000          |
| 40,000           | SCHERING PLOUGH CORP      | FRED ALGER          | 3,375,000       |
| 20,000           | SCHLUMBERGER LTD          | INVESTMENT ADVISORS | 687,500         |
| 18,500           | SCHLUMBERGER LTD          | NORWEST BANK        | 635,938         |
| 35,000           | SCHLUMBERGER LTD          | INTERNAL MANAGED    | 1,203,125       |
|                  | SUB-TOTAL                 | 73,500 SHARES       | 2,526,563       |
|                  |                           |                     |                 |
| 22,500           | SCIENTIFIC ATLANTA INC    | NORWEST BANK        | 233,438         |
| 29,000           | SCOTTYS INC               | NORWEST BANK        | 493,000         |

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| NO. OF<br>SHARES | SECURITY                  | ADVISOR             | MARKET<br>VALUE |
|------------------|---------------------------|---------------------|-----------------|
| 150,000          | SEA CONTAINERS LTD.       | BEUTEL GOODMAN      | \$ 3,843,750    |
| 16,800           | SEA CONTAINERS LTD.       | NORWEST BANK        | 430,500         |
|                  | SUB-TOTAL                 | 166,800 SHARES      | 4,274,250       |
| 20,200           | SEALED POWER CORP         | NORWEST BANK        | 593,375         |
| 45,000           | SEARS ROEBUCK & COMPANY   | FRED ALGER          | 2,182,500       |
| 4,000            | SEARS ROEBUCK & COMPANY   | NORWEST BANK        | 194,000         |
|                  | SUB-TOTAL                 | 49,000 SHARES       | 2,376,500       |
| 200,000          | SENSORMATIC ELECTRS CORP  | BMI CAPITAL         | 1,875,000       |
| 58,200           | SERVICE MERCHANDISE       | INTERNAL MANAGED    | 712,950         |
| 60,500           | SERVICEMASTER INDS INC    | IDS ADVISORY        | 1,588,125       |
| 40,000           | SHARED MED. SYSTEMS CORP. | BMI CAPITAL         | 1,355,000       |
| 75,000           | SHARED MED. SYSTEMS CORP. | IDS ADVISORY        | 2,540,625       |
|                  | SUB-TOTAL                 | 115,000 SHARES      | 3,895,625       |
| 40,000           | SHONEYS INC               | INVESTMENT ADVISORS | 1,530,000       |
| 60,000           | SIGMA ALDRICH             | INVESTMENT ADVISORS | 2,310,000       |
| 47,000           | SINGER CO.                | FRED ALGER          | 2,626,125       |
| 28,000           | SIZZLER RESTAURANTS INTL  | WADDELL & REED      | 770,000         |
| 50,000           | SMITH INTL INC            | NORWEST BANK        | 181,250         |
| 20,000           | SNYDER OIL PARTNERS       | NORWEST BANK        | 220,000         |
| 80,800           | SOFTWARE PUBL. CORP.      | NORWEST BANK        | 434,300         |
| 14,200           | SONAT INC.                | NORWEST BANK        | 404,700         |
| 75,600           | SONAT INC.                | INTERNAL MANAGED    | 2,154,600       |
|                  | SUB-TOTAL                 | 89,800 SHARES       | 2,559,300       |
| 13,500           | SOUTHERN CO               | NORWEST BANK        | 320,625         |
| 50,000           | SOUTHERN CO               | INTERNAL MANAGED    | 1,187,500       |
|                  | SUB-TOTAL                 | 63,500 SHARES       | 1,508,125       |
| 17,300           | SOUTHLAND CORP.           | WADDELL & REED      | 947,175         |
| 22,000           | SOUTHLAND CORP.           | INTERNAL MANAGED    | 1,204,500       |
|                  | SUB-TOTAL                 | 39,300 SHARES       | 2,151,675       |
| 17,800           | SOUTHWEST AIRLINES        | NORWEST BANK        | 371,575         |
| 4,000            | SOUTHWESTERN BELL CORP.   | NORWEST BANK        | 438,000         |
| 26,100           | SOUTHWESTERN BELL CORP.   | INTERNAL MANAGED    | 2,857,950       |
|                  | SUB-TOTAL                 | 30,100 SHARES       | 3,295,950       |
| 6,800            | SPRINGS INDS INC          | LIEBER & COMPANY    | 363,800         |
| 33,500           | SQUIBB CORP.              | HELLMAN JORDAN      | 3,802,250       |
| 6,900            | SQUIBB CORP.              | WADDELL & REED      | 783,150         |
|                  | SUB-TOTAL                 | 40,400 SHARES       | 4,585,400       |
| 59,300           | ST JUDE MED INC           | FORSTMANN LEFF      | 2,016,200       |
| 50,000           | ST. PAUL COS. INC.        | HELLMAN JORDAN      | 2,262,500       |

MINNESOTA STATE BOARD OF INVESTMENT  
ACTIVE EQUITY MANAGER HOLDINGS  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  | ADVISOR             | MARKET<br>VALUE |
|------------------|---------------------------|---------------------|-----------------|
| 17,800           | STANDARD BRANDS PAINT CO  | NORWEST BANK        | \$ 413,850      |
| 11,200           | STANDARD OIL CO. OHIO     | NORWEST BANK        | 505,400         |
| 42,550           | STANDARD OIL CO. OHIO     | INTERNAL MANAGED    | 1,920,069       |
|                  | SUB-TOTAL                 | 53,750 SHARES       | 2,425,469       |
| 15,000           | STEWART & STEVENSON SVCS  | NORWEST BANK        | 221,250         |
| 1,500            | STORAGE EQUITIES INC      | NORWEST BANK        | 22,125          |
| 9,630            | STRAWBRIDGE & CLOTHIER    | LIEBER & COMPANY    | 534,465         |
| 50,000           | STRIDE RITE CORP          | IDS ADVISORY        | 1,693,750       |
| 11,600           | SUNAIR ELEC. INC.         | LIEBER & COMPANY    | 88,450          |
| 78,500           | SUNSHINE MNG CO           | NORWEST BANK        | 225,688         |
| 15,400           | SUPERMARKETS GEN CORP     | WADDELL & REED      | 962,500         |
| 8,000            | SUSQUEHANNA BNKSHRS. INC. | LIEBER & COMPANY    | 632,000         |
| 6,000            | SWANK INC                 | NORWEST BANK        | 84,000          |
| 30,000           | SYNTEX CORPORATION        | IDS ADVISORY        | 2,130,000       |
| 30,000           | SYNTEX CORPORATION        | INVESTMENT ADVISORS | 2,130,000       |
|                  | SUB-TOTAL                 | 60,000 SHARES       | 4,260,000       |
| 60,000           | TANDEM COMPUTERS INC      | HELLMAN JORDAN      | 1,860,000       |
| 49,100           | TANDEM COMPUTERS INC      | WADDELL & REED      | 1,522,100       |
|                  | SUB-TOTAL                 | 109,100 SHARES      | 3,382,100       |
| 35,750           | TANDON CORP.              | WADDELL & REED      | 218,969         |
| 50,000           | TANDY CORP                | BMI CAPITAL         | 1,912,500       |
| 27,500           | TELE COMMUNICATIONS INC   | FRED ALGER          | 1,505,625       |
| 17,700           | TELE COMMUNICATIONS INC   | FORSTMANN LEFF      | 969,075         |
|                  | SUB-TOTAL                 | 45,200 SHARES       | 2,474,700       |
| 44,000           | TELERATE INC              | FORSTMANN LEFF      | 918,500         |
| 16,500           | TELLABS INC               | NORWEST BANK        | 206,250         |
| 26,500           | TENNECO INC.              | NORWEST BANK        | 1,053,375       |
| 23,800           | TENNECO INC.              | INTERNAL MANAGED    | 946,050         |
|                  | SUB-TOTAL                 | 50,300 SHARES       | 1,999,425       |
| 100,000          | TEXACO INC.               | BEUTEL GOODMAN      | 3,150,000       |
| 12,500           | TEXACO INC.               | NORWEST BANK        | 393,750         |
| 45,200           | TEXACO INC.               | INTERNAL MANAGED    | 1,423,800       |
|                  | SUB-TOTAL                 | 157,700 SHARES      | 4,967,550       |
| 39,900           | TEXAS AIR CORP            | FORSTMANN LEFF      | 1,306,725       |
| 41,500           | TEXAS COMMERCE BANKSHARES | NORWEST BANK        | 902,625         |
| 31,250           | TEXAS COMMERCE BANKSHARES | INTERNAL MANAGED    | 679,688         |
|                  | SUB-TOTAL                 | 72,750 SHARES       | 1,582,313       |
| 4,300            | TEXAS EASTERN CORP.       | LIEBER & COMPANY    | 156,413         |
| 6,500            | TEXAS EASTERN CORP.       | NORWEST BANK        | 236,438         |
| 34,450           | TEXAS EASTERN CORP.       | INTERNAL MANAGED    | 1,253,119       |

MINNESOTA STATE BOARD OF INVESTMENT  
ACTIVE EQUITY MANAGER HOLDINGS  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  | ADVISOR             | MARKET<br>VALUE |
|------------------|---------------------------|---------------------|-----------------|
|                  | SUB-TOTAL                 | 45,250 SHARES       | 1,645,969       |
| 18,000           | TEXAS UTILITIES CO.       | NORWEST BANK        | \$ 551,250      |
| 32,200           | TEXAS UTILITIES CO.       | INTERNAL MANAGED    | 986,125         |
|                  | SUB-TOTAL                 | 50,200 SHARES       | 1,537,375       |
| 16,400           | THOMAS & BETTS CORP       | WADDELL & REED      | 713,400         |
| 53,300           | THOUSAND TRAILS           | NORWEST BANK        | 266,500         |
| 50,500           | TIE COMMUNICATIONS        | NORWEST BANK        | 303,000         |
| 45,900           | TIME ENERGY SYS INC       | NORWEST BANK        | 195,075         |
| 26,500           | TIME INC.                 | IDS ADVISORY        | 2,325,375       |
| 20,300           | TIMEPLEX INC.             | NORWEST BANK        | 347,638         |
| 40,000           | TIMES MIRROR CO           | FRED ALGER          | 2,790,000       |
| 23,500           | TODD SHIPYARDS CORP       | NORWEST BANK        | 652,125         |
| 100,000          | TONKA                     | BMI CAPITAL         | 2,800,000       |
| 12,100           | TONKA                     | WADDELL & REED      | 338,800         |
|                  | SUB-TOTAL                 | 112,100 SHARES      | 3,138,800       |
| 93,750           | TOYS R US                 | ALLIANCE CAPITAL    | 3,187,500       |
| 61,950           | TOYS R US                 | FORSTMANN LEFF      | 2,106,300       |
| 114,000          | TOYS R US                 | HELLMAN JORDAN      | 3,876,000       |
| 56,250           | TOYS R US                 | IDS ADVISORY        | 1,912,500       |
|                  | SUB-TOTAL                 | 325,950 SHARES      | 11,082,300      |
| 93,000           | TRANS WORLD AIRLINES      | HELLMAN JORDAN      | 1,418,250       |
| 9,500            | TRANSAMERICA CORP         | NORWEST BANK        | 337,250         |
| 44,900           | TRANSCANADA PIPELINES LTD | NORWEST BANK        | 533,188         |
| 21,900           | TRANSWORLD CORP           | FORSTMANN LEFF      | 741,863         |
| 30,000           | TRAVELERS CORP.           | IDS ADVISORY        | 1,500,000       |
| 45,000           | TRIANGLE INDS INC         | BMI CAPITAL         | 1,080,000       |
| 30,000           | TRIBUNE COMPANY           | INVESTMENT ADVISORS | 2,280,000       |
| 25,200           | TURNER EQUITY INVS INC    | NORWEST BANK        | 198,450         |
| 22,000           | U.S. STEEL                | NORWEST BANK        | 453,750         |
| 122,462          | U.S. STEEL                | INTERNAL MANAGED    | 2,525,779       |
|                  | SUB-TOTAL                 | 144,462 SHARES      | 2,979,529       |
| 60,000           | U.S. WEST CORP            | IDS ADVISORY        | 3,307,500       |
| 27,100           | UAL INC.                  | FRED ALGER          | 1,487,113       |
| 85,000           | UAL INC.                  | BEUTEL GOODMAN      | 4,664,375       |
| 7,200            | UAL INC.                  | FORSTMANN LEFF      | 395,100         |
|                  | SUB-TOTAL                 | 119,300 SHARES      | 6,546,588       |
| 70,000           | UNION CAMP CORP.          | IDS ADVISORY        | 3,578,750       |
| 17,399           | UNION EXPL PARTNERS LTD   | NORWEST BANK        | 278,384         |
| 5,000            | UNION PACIFIC CORP.       | NORWEST BANK        | 284,375         |
| 117,225          | UNITED CABLE TV CORP.     | ALLIANCE CAPITAL    | 3,604,669       |
| 18,000           | UNITED FIRST FED S&L SARA | LIEBER & COMPANY    | 623,250         |

MINNESOTA STATE BOARD OF INVESTMENT  
ACTIVE EQUITY MANAGER HOLDINGS  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES | SECURITY                  | ADVISOR             | MARKET<br>VALUE |
|------------------|---------------------------|---------------------|-----------------|
| 48,000           | UNITED TECHNOLOGIES CORP. | HELLMAN JORDAN      | \$ 2,376,000    |
| 31,600           | UNITED TECHNOLOGIES CORP. | INTERNAL MANAGED    | 1,564,200       |
|                  | SUB-TOTAL                 | 79,600 SHARES       | 3,940,200       |
| 27,500           | UNITED TELECOM. INC.      | NORWEST BANK        | 749,375         |
| 43,500           | UNITED TELECOM. INC.      | INTERNAL MANAGED    | 1,185,375       |
|                  | SUB-TOTAL                 | 71,000 SHARES       | 1,934,750       |
| 14,000           | UNITRODE CORP             | LIEBER & COMPANY    | 259,000         |
| 6,000            | UNIVERSAL FOODS CORP      | NORWEST BANK        | 216,000         |
| 68,600           | UNIVERSAL FURNITURE LTD   | FORSTMANN LEFF      | 2,555,350       |
| 22,200           | UNOCAL CORP.              | NORWEST BANK        | 438,450         |
| 28,500           | US AIR GROUP              | FORSTMANN LEFF      | 908,438         |
| 28,600           | US AIR GROUP              | INTERNAL MANAGED    | 911,625         |
|                  | SUB-TOTAL                 | 57,100 SHARES       | 1,820,063       |
| 20,000           | USACAFES                  | LIEBER & COMPANY    | 160,000         |
| 16,800           | UTAH POWER & LIGHT COMPAN | NORWEST BANK        | 516,600         |
| 27,500           | VALERO ENERGY CORP        | NORWEST BANK        | 226,875         |
| 39,000           | VALID LOGIC SYSTEMS INC.  | NORWEST BANK        | 238,875         |
| 85,000           | VARIAN ASSOC. INC.        | BMI CAPITAL         | 2,188,750       |
| 1,700            | VEECO INSTRS INC          | NORWEST BANK        | 27,625          |
| 4,200            | VERMONT FINANCIAL SVCS    | LIEBER & COMPANY    | 205,800         |
| 89,600           | WAL-MART STORES INC.      | ALLIANCE CAPITAL    | 4,648,000       |
| 15,000           | WAL-MART STORES INC.      | HELLMAN JORDAN      | 778,125         |
| 50,000           | WAL-MART STORES INC.      | IDS ADVISORY        | 2,593,750       |
|                  | SUB-TOTAL                 | 154,600 SHARES      | 8,019,875       |
| 24,000           | WANG LABS CL B            | NORWEST BANK        | 363,000         |
| 70,000           | WARNER COMMUNICATIONS     | FRED ALGER          | 3,955,000       |
| 38,000           | WARNER COMMUNICATIONS     | HELLMAN JORDAN      | 2,147,000       |
|                  | SUB-TOTAL                 | 108,000 SHARES      | 6,102,000       |
| 13,000           | WASHINGTON POST B         | ALLIANCE CAPITAL    | 2,283,125       |
| 41,700           | WASTE MANAGEMENT          | FORSTMANN LEFF      | 2,085,000       |
| 70,000           | WASTE MANAGEMENT          | IDS ADVISORY        | 3,500,000       |
| 17,000           | WASTE MANAGEMENT          | WADDELL & REED      | 850,000         |
|                  | SUB-TOTAL                 | 128,700 SHARES      | 6,435,000       |
| 11,000           | WATERFORD GLASS GROUP PLC | FORSTMANN LEFF      | 232,375         |
| 6,000            | WAUSAU PAPER MLS CO       | LIEBER & COMPANY    | 189,000         |
| 50,000           | WEYERHEUSER CO.           | INVESTMENT ADVISORS | 1,743,750       |
| 25,000           | WICKES COS INC NEW        | HELLMAN JORDAN      | 946,875         |
| 350,000          | WICKES COS INC NEW        | HELLMAN JORDAN      | 2,143,750       |
|                  | SUB-TOTAL                 | 375,000 SHARES      | 3,090,625       |
| 23,000           | WILEY JOHN + SON          | BMI CAPITAL         | 759,000         |



MINNESOTA STATE BOARD OF INVESTMENT  
ACTIVE EQUITY MANAGER HOLDINGS  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES       | SECURITY              | ADVISOR          | MARKET<br>VALUE |
|------------------------|-----------------------|------------------|-----------------|
| 15,000                 | WILLIAMS COS          | NORWEST BANK     | \$ 352,500      |
| 43,050                 | WILLIAMS COS          | INTERNAL MANAGED | 1,011,675       |
|                        | SUB-TOTAL             | 58,050 SHARES    | 1,364,175       |
| 78,400                 | WOOLWORTH F W CO      | FRED ALGER       | 3,763,200       |
| 60,000                 | WOOLWORTH F W CO      | IDS ADVISORY     | 2,880,000       |
|                        | SUB-TOTAL             | 138,400 SHARES   | 6,643,200       |
| 16,200                 | WYMAN-GORDON CO.      | NORWEST BANK     | 356,400         |
| 65,000                 | XEROX CORP            | BEUTEL GOODMAN   | 3,648,125       |
| 6,500                  | XEROX CORP            | NORWEST BANK     | 364,813         |
|                        | SUB-TOTAL             | 71,500 SHARES    | 4,012,938       |
| 7,000                  | XTRA CORP.            | NORWEST BANK     | 162,750         |
| 78,000                 | YELLOW FREIGHT SYSTEM | IDS ADVISORY     | 3,129,750       |
| 19,600                 | YELLOW FREIGHT SYSTEM | WADDELL & REED   | 786,450         |
|                        | SUB-TOTAL             | 97,600 SHARES    | 3,916,200       |
| 50,200                 | ZYCAD CORP.           | NORWEST BANK     | 332,575         |
| TOTAL EQUITY PORTFOLIO |                       | \$               | 958,612,421     |

MINNESOTA STATE BOARD OF INVESMENT  
ACTIVE EQUITY MANAGER HOLDINGS  
BEUTEL GOODMAN CAPITAL MANAGEMENT  
ALPHABETICAL BOND HOLDINGS  
JUNE 30 , 1986

| PAR<br>VALUE         | SECURITY                 | MATURITY   | COUPON    | MARKET<br>VALUE |
|----------------------|--------------------------|------------|-----------|-----------------|
| 15,000,000           | NATIONAL MED ENTERPRISES | 12/04/2004 | 0.000% \$ | 4,425,000       |
| TOTAL BOND PORTFOLIO |                          |            |           | \$ 4,425,000    |

MINNESOTA STATE BOARD OF INVESMENT  
ACTIVE EQUITY MANAGER HOLDINGS  
FORSTMANN LEFF ASSOCIATES  
ALPHABETICAL BOND HOLDINGS  
JUNE 30 , 1986

| PAR<br>VALUE         | SECURITY               | MATURITY   | COUPON    | MARKET<br>VALUE |
|----------------------|------------------------|------------|-----------|-----------------|
| 1,168,000            | U.S.A. TREASURY NOTE   | 11/15/1995 | 9.500% \$ | 1,319,104       |
| 577,700              | UNION CARBIDE CORP     | 01/31/1993 | 13.250%   | 608,751         |
| 577,700              | UNION CARBIDE CORP     | 01/31/1996 | 14.250%   | 623,916         |
| 722,125              | UNION CARBIDE CORP     | 01/31/2006 | 15.000%   | 816,001         |
| 2,355,000            | UNITED STATES TREAS NT | 05/15/1996 | 7.375%    | 2,362,348       |
| TOTAL BOND PORTFOLIO |                        |            |           | \$ 5,730,120    |

MINNESOTA STATE BOARD OF INVESMENT  
ACTIVE EQUITY MANAGER HOLDINGS  
WADDELL & REED  
ALPHABETICAL BOND HOLDINGS  
JUNE 30 , 1986

| PAR<br>VALUE         | SECURITY                 | MATURITY   | COUPON    | MARKET<br>VALUE |
|----------------------|--------------------------|------------|-----------|-----------------|
| 770,000              | AMERICA WEST AIRLS CV    | 04/01/2011 | 7.500% \$ | 777,700         |
| 330,000              | COSTCO WHSL CORP CV      | 04/30/2011 | 7.250%    | 377,850         |
| 350,000              | CRAZY EDDIE INC CV.      | 06/15/2011 | 6.000%    | 350,000         |
| 440,000              | FEDERAL NATL MTG ASSN    | 02/10/1996 | 7.000%    | 531,190         |
| 1,000,000            | HOME FED SVGS/LN ASSN CV | 05/15/2011 | 6.500%    | 1,060,000       |
| 550,000              | PRIME MTR INNS INC CV    | 04/01/2011 | 6.625%    | 640,750         |
| TOTAL BOND PORTFOLIO |                          |            |           | \$ 3,737,490    |

MINNESOTA STATE BOARD OF INVESTMENT  
 POOLED BOND FUND  
 INVESTMENT ADVISORS  
 ALPHABETICAL BOND HOLDINGS  
 JUNE 30 , 1986

| PAR<br>VALUE         | SECURITY                  | MATURITY   | COUPON    | MARKET<br>VALUE |
|----------------------|---------------------------|------------|-----------|-----------------|
| 1,500,000            | AMERICAN MED INTL INC     | 01/15/1991 | 9.625% \$ | 1,545,390       |
| 1,500,000            | AMOCO CO                  | 06/01/1991 | 14.000%   | 1,659,375       |
| 1,000,000            | BENEFICIAL CORP           | 07/15/1991 | 13.375%   | 1,063,750       |
| 1,250,000            | CITICORP                  | 10/15/1989 | 12.875%   | 1,320,313       |
| 965,250              | COUPON TREAS RCPT         | 08/15/1988 | 0.000%    | 827,972         |
| 769,625              | COUPON TREAS RCPT         | 08/15/1988 | 0.000%    | 660,169         |
| 427,500              | COUPON TREAS RCPT         | 08/15/1988 | 0.000%    | 366,705         |
| 2,000,000            | FEDERAL HOME LN BKS       | 03/25/1991 | 7.750%    | 2,002,500       |
| 50,000               | INDIANA & MICH ELEC       | 02/01/1988 | 3.875%    | 47,213          |
| 1,000,000            | INTERCO INC               | 02/15/1991 | 14.250%   | 1,050,000       |
| 1,000,000            | MORGAN GTY TR CO NEW YORK | 12/01/1987 | 9.610%    | 1,035,000       |
| 1,000,000            | PRIVATE EPT FDG CORP      | 10/30/1987 | 11.750%   | 1,046,930       |
| 1,425,000            | PRIVATE EXPT FDG CORP     | 11/01/1990 | 12.350%   | 1,469,788       |
| 400,000              | STANDARD OIL CO OHIO      | 09/15/1992 | 13.375%   | 448,000         |
| 3,500,000            | TREASURY INVT GROWTH RCPT | 05/15/1988 | 0.000%    | 3,065,265       |
| 3,000,000            | U.S.A. TREASURY NOTE      | 11/15/1992 | 10.500%   | 3,433,110       |
| 4,000,000            | U.S.A. TREASURY NOTE      | 05/15/1993 | 10.125%   | 4,530,000       |
| 3,000,000            | U.S.A. TREASURY NOTE      | 11/15/1990 | 13.000%   | 3,596,250       |
| 2,000,000            | UNITED STATES TREAS NTS   | 11/30/1986 | 10.375%   | 2,031,240       |
| 2,000,000            | UNITED STATES TREAS NTS   | 02/15/1990 | 11.000%   | 2,218,740       |
| 2,000,000            | UNITED STATES TREAS NTS   | 04/15/1993 | 7.375%    | 2,003,740       |
| 1,500,000            | UPJOHN COMPANY            | 06/01/1991 | 14.000%   | 1,670,730       |
| TOTAL BOND PORTFOLIO |                           |            |           | \$ 37,092,180   |

MINNESOTA STATE BOARD OF INVESTMENT  
 POOLED BOND FUND  
 LEHMAN MANAGEMENT INC.  
 ALPHABETICAL BOND HOLDINGS  
 JUNE 30 , 1986

| PAR<br>VALUE | SECURITY                  | MATURITY   | COUPON    | MARKET<br>VALUE |
|--------------|---------------------------|------------|-----------|-----------------|
| 4,000,000    | ATLANTIC RICHFIELD CO     | 10/15/1989 | 9.750% \$ | 4,120,000       |
| 1,000,000    | CABOT CORP                | 09/01/1995 | 10.750%   | 1,084,680       |
| 9,000,000    | EXXON PIPELINE            | 10/15/2004 | 9.000%    | 9,000,000       |
| 6,779,401    | FED HM LN PC # 170128     | 06/01/2015 | 11.500%   | 6,982,783       |
| 3,715,368    | FED HM LN POOL # 170145   | 10/01/2015 | 11.000%   | 3,826,829       |
| 4,354,780    | FED HM LN POOL # 170148   | 12/01/2015 | 10.500%   | 4,436,432       |
| 205,978      | FED HM LN POOL # 182064   | 06/01/2011 | 9.000%    | 196,967         |
| 7,660,370    | FED HM LN POOL # 200021   | 11/01/2000 | 10.500%   | 7,851,879       |
| 3,306,490    | FED HOME LOAN POOL #14053 | 10/01/1996 | 4.500%    | 2,847,714       |
| 9,529,000    | FNMA POOL # 027047        | 06/01/2015 | 8.500%    | 8,933,438       |
| 87,966       | GNMA POOL # 058211        | 01/15/2013 | 12.000%   | 93,024          |
| 817,754      | GNMA POOL # 059520        | 02/15/2013 | 12.000%   | 864,775         |
| 47,053       | GNMA POOL # 069163        | 10/15/2013 | 12.000%   | 49,758          |
| 684,561      | GNMA POOL # 070393        | 08/15/2013 | 12.000%   | 723,923         |
| 71,918       | GNMA POOL # 101656        | 08/15/2013 | 12.000%   | 76,053          |
| 876,306      | GNMA POOL # 110311        | 03/15/2014 | 12.000%   | 926,694         |
| 433,014      | GNMA POOL # 111011        | 01/15/2014 | 12.000%   | 457,912         |
| 196,096      | GNMA POOL # 114673        | 05/15/2014 | 12.000%   | 207,371         |
| 421,971      | GNMA POOL # 69306         | 06/15/2013 | 12.000%   | 446,235         |
| 1,500,000    | HELLER FINANCIAL INC      | 04/01/1993 | 7.750%    | 1,402,500       |
| 5,000,000    | IBM CR CORP               | 06/15/1990 | 9.625%    | 5,187,000       |
| 4,000,000    | MORGAN GTY TR CO NEW YORK | 06/15/1987 | 8.625%    | 4,049,800       |
| 4,750,000    | SHELL OIL CO              | 06/15/2011 | 14.250%   | 5,605,000       |
| 4,000,000    | SOUTHERN CALIF EDISON CO  | 07/01/1996 | 8.000%    | 3,978,280       |
| 4,000,000    | TEXACO CAP INC            | 01/15/2000 | 10.750%   | 4,030,000       |
| 7,000,000    | U.S.A. TREASURY BOND      | 11/15/2002 | 11.625%   | 9,323,090       |
| 2,170,000    | U.S.A. TREASURY BOND      | 08/15/2005 | 10.750%   | 2,766,750       |
| 1,000,000    | U.S.A. TREASURY NOTE      | 11/15/1988 | 11.750%   | 1,098,440       |
| 7,125,000    | U.S.A. TREASURY NOTE      | 09/30/1988 | 11.375%   | 7,748,438       |
| 5,000,000    | U.S.A. TREASURY NOTE      | 12/31/1988 | 10.625%   | 5,389,050       |
| 8,000,000    | U.S.A. TREASURY NOTE      | 01/15/1992 | 11.625%   | 9,414,960       |
| 9,250,000    | U.S.A. TREASURY NOTE      | 08/15/1989 | 13.875%   | 10,891,875      |
| 6,500,000    | U.S.A. TREASURY NOTE      | 07/15/1991 | 13.750%   | 8,139,235       |
| 13,500,000   | U.S.A. TREASURY NOTES     | 11/15/1993 | 11.750%   | 16,545,870      |
| 9,500,000    | UNITED STATES TREAS NT    | 04/30/1987 | 9.750%    | 9,737,500       |
| 4,800,000    | UNITED STATES TREAS NT    | 11/15/1990 | 9.625%    | 5,173,488       |
| 400,000      | UNITED STATES TREAS NTS   | 11/30/1986 | 10.375%   | 406,248         |
| 5,000,000    | UNITED STATES TREAS NTS   | 05/15/1989 | 11.750%   | 5,568,750       |
| 4,000,000    | UNITED STATES TREAS NTS   | 06/30/1990 | 7.250%    | 4,018,760       |
| 5,000,000    | UNITED STATES TREAS NTS   | 04/15/1991 | 12.375%   | 5,948,450       |
| 2,000,000    | UNITED STATES TREAS NTS   | 08/15/1990 | 9.875%    | 2,165,000       |
| 6,000,000    | UNITED STATES TREAS NTS   | 07/15/1992 | 10.375%   | 6,791,220       |
| 6,650,000    | UNITED STATES TREAS NTS   | 02/15/1990 | 11.000%   | 7,377,311       |
| 4,600,000    | UNITED STATES TREAS NTS   | 01/15/1991 | 11.750%   | 5,325,926       |
| 2,000,000    | UNITED STATES TREAS NTS   | 05/15/1991 | 8.125%    | 2,064,380       |
| 3,000,000    | UNITED STATES TREAS NTS   | 04/15/1993 | 7.375%    | 3,005,610       |

MINNESOTA STATE BOARD OF INVESMENT  
 POOLED BOND FUND  
 LEHMAN MANAGEMENT INC.  
 ALPHABETICAL BOND HOLDINGS  
 JUNE 30 , 1986

| PAR<br>VALUE         | SECURITY                | MATURITY   | COUPON    | MARKET<br>VALUE |
|----------------------|-------------------------|------------|-----------|-----------------|
| 2,000,000            | UNITED STATES TREAS NTS | 06/30/1989 | 9.625% \$ | 2,127,500       |
| 4,000,000            | XEROX CR CORP           | 11/15/1988 | 14.250%   | 4,135,000       |
| TOTAL BOND PORTFOLIO |                         |            | \$        | 212,541,896     |

MINNESOTA STATE BOARD OF INVESTMENT  
 POOLED BOND FUND  
 MORGAN STANLEY ASSET  
 ALPHABETICAL BOND HOLDINGS  
 JUNE 30 , 1986

| PAR<br>VALUE         | SECURITY                   | MATURITY   | COUPON    | MARKET<br>VALUE |
|----------------------|----------------------------|------------|-----------|-----------------|
| 13,250,000           | COLLATERALIZED MTG OBLIG   | 05/25/2016 | 8.800% \$ | 11,130,000      |
| 19,970,324           | FED HM LN PC # 170162      | 04/01/2016 | 9.000%    | 19,096,622      |
| 40,000,000           | FED HM LN PC # 170170      | 06/01/2016 | 9.000%    | 38,250,000      |
| 15,000,000           | FED HM LN PC # 170172      | 06/01/2016 | 9.500%    | 14,662,500      |
| 14,845,866           | FED HM LN POOL # 170158    | 03/01/2016 | 10.000%   | 14,901,538      |
| 29,905,649           | FED HM LN POOL # 170159    | 03/01/2016 | 9.500%    | 29,232,772      |
| 3,964,799            | FEDERAL HOME LOAN MORTGAGE | 03/01/2008 | 8.750%    | 3,736,823       |
| 5,033,074            | FEDERAL HOME LOAN MORTGAGE | 05/01/2008 | 8.750%    | 4,743,672       |
| 14,139,036           | SALOMON BROS MTG SECS II   | 11/01/2012 | 8.125%    | 11,311,229      |
| 40,000,000           | UNITED STATES TREAS NT     | 05/15/1996 | 7.375%    | 40,124,800      |
| 2,500,000            | UNITED STATES TREAS NTS    | 08/15/1991 | 7.500%    | 2,528,900       |
| 29,925,000           | UNITED STATES TREAS NTS    | 04/15/1993 | 7.375%    | 29,980,960      |
| TOTAL BOND PORTFOLIO |                            |            | \$        | 219,699,816 *   |

\* A purchase of 14,993,000 shares Fed. Hm. Ln. Pool #274081 due 07/01/16 with a coupon of 7.5% was reported late to our master custodian. It wasn't included in this year-end asset listing, but was included in the Statement of Assets and Liabilities.

MINNESOTA STATE BOARD OF INVESTMENT  
 POOLED BOND FUND  
 MILLER ANDERSON  
 ALPHABETICAL BOND HOLDINGS  
 JUNE 30 , 1986

| PAR<br>VALUE | SECURITY                  | MATURITY   | COUPON     | MARKET<br>VALUE |
|--------------|---------------------------|------------|------------|-----------------|
| 750,000      | BRITISH COLUMBIA HYDRO &  | 07/15/2011 | 15.500% \$ | 1,102,598       |
| 800,000      | BRITISH COLUMBIA HYDRO &  | 04/15/2011 | 15.000%    | 1,139,264       |
| 3,675,000    | CHRYSLER CORP             | 03/01/1997 | 13.000%    | 4,304,344       |
| 2,500,000    | CHRYSLER FIN CORP         | 11/01/1999 | 12.750%    | 2,981,250       |
| 7,784,387    | CITIBANK NEW YORK ST N A  | 07/01/2012 | 7.000%     | 6,957,296       |
| 1,596,096    | FED HM LN MC POOL # 25298 | 07/01/2008 | 8.750%     | 1,504,321       |
| 843,796      | FED HM LN PC # 140626     | 11/01/2006 | 8.000%     | 778,402         |
| 6,410,692    | FED HM LN PC # 160033     | 12/01/2007 | 8.250%     | 5,953,930       |
| 4,628,236    | FED HM LN PC # 160046     | 05/01/2008 | 8.750%     | 4,362,112       |
| 2,093,241    | FED HM LN PC # 180221     | 09/01/2003 | 6.500%     | 1,805,420       |
| 1,543,304    | FED HM LN PC # 180753     | 04/01/2004 | 7.000%     | 1,361,965       |
| 2,619,412    | FED HM LN PC # 181581     | 04/01/2008 | 7.000%     | 2,311,631       |
| 3,272,156    | FED HM LN PC # 183218     | 12/01/2006 | 7.500%     | 2,953,121       |
| 2,458,040    | FED HM LN PC # 183325     | 06/01/2008 | 8.000%     | 2,267,542       |
| 1,732,895    | FED HM LN PC # 184200     | 04/01/2009 | 8.250%     | 1,609,426       |
| 2,309,780    | FED HM LN PC # 188769     | 05/01/2009 | 8.500%     | 2,153,870       |
| 1,395,483    | FED HM LN PC # 254898     | 04/01/2008 | 7.250%     | 1,245,469       |
| 2,689,018    | FED HM LN PC # 256569     | 12/01/2008 | 8.250%     | 2,497,426       |
| 2,564,936    | FED HM LN PC #18-9540     | 08/01/2008 | 8.250%     | 2,382,184       |
| 3,284,662    | FED HM LN POOL # 180735   | 12/01/2003 | 7.000%     | 2,898,714       |
| 3,214,720    | FED HM LN POOL # 186908   | 05/01/2008 | 8.000%     | 2,965,579       |
| 4,642,555    | FED HM LN POOL # 252993   | 06/01/2008 | 7.750%     | 4,236,332       |
| 1,481,481    | FED HM LN POOL # 255850   | 06/01/2015 | 8.000%     | 1,366,666       |
| 1,317,635    | FED HM LN POOL # 256079   | 07/01/2003 | 6.750%     | 1,149,637       |
| 2,045,317    | FED HM LN POOL # 256716   | 08/01/2008 | 8.500%     | 1,907,258       |
| 4,253,591    | FEDERAL HOME LOAN #181265 | 03/01/2008 | 8.500%     | 3,966,473       |
| 1,791,850    | FEDERAL HOME LOAN POOL #1 | 10/01/2008 | 7.000%     | 1,581,308       |
| 1,781,083    | FEDERAL HOME LOAN POOL #1 | 06/01/2008 | 7.000%     | 1,571,806       |
| 7,186,896    | FEDERAL NATIONAL MORTGAGE | 02/01/2013 | 8.000%     | 6,638,895       |
| 6,487,905    | FEDERAL NATIONAL MORTGAGE | 08/01/2008 | 8.000%     | 5,993,202       |
| 2,195,559    | FNMA POOL # 000085        | 03/01/2011 | 8.500%     | 2,058,337       |
| 4,203,214    | FNMA POOL # 001879        | 06/01/2008 | 7.750%     | 3,835,433       |
| 3,837,907    | FNMA POOL # 002280        | 11/01/2006 | 8.500%     | 3,598,037       |
| 2,145,510    | FNMA POOL # 003850        | 05/01/2008 | 8.500%     | 2,011,416       |
| 1,384,551    | FNMA POOL # 011982        | 06/01/2009 | 9.000%     | 1,327,439       |
| 4,358,964    | FNMA POOL # 015348        | 05/01/2004 | 7.000%     | 3,846,785       |
| 2,483,521    | FNMA POOL # 018207        | 06/01/2009 | 7.750%     | 2,266,213       |
| 2,578,214    | FNMA POOL # 019720        | 10/01/2008 | 7.750%     | 2,352,620       |
| 1,424,447    | FNMA POOL # 022925        | 11/01/2007 | 8.250%     | 1,324,736       |
| 1,529,663    | FNMA POOL # 022950        | 01/01/2004 | 8.250%     | 1,422,586       |
| 7,750,000    | FORD MTR CR CO            | 04/01/1991 | 8.125%     | 7,755,890       |
| 2,649,420    | GEM SVGS ASSN             | 03/01/2000 | 8.088%     | 1,905,277       |
| 1,031,556    | HILL FINL PART CERT       | 01/01/1989 | 5.825%     | 905,272         |
| 3,158,316    | HOUSEHOLD BANK            | 05/01/2002 | 7.809%     | 2,162,120       |
| 1,225,000    | HOUSEHOLD FIN CORP        | 10/15/2004 | 12.250%    | 1,419,518       |
| 1,250,000    | INTERNATIONAL BK FOR RECO | 02/15/2001 | 10.000%    | 1,103,788       |

MINNESOTA STATE BOARD OF INVESMENT  
 POOLED BOND FUND  
 MILLER ANDERSON  
 ALPHABETICAL BOND HOLDINGS  
 JUNE 30 , 1986

| PAR<br>VALUE         | SECURITY                  | MATURITY   | COUPON  | MARKET<br>VALUE |
|----------------------|---------------------------|------------|---------|-----------------|
| 4,580,282            | MIDWEST FEDERAL SAVINGS & | 04/01/2011 | 8.810%  | \$ 3,293,864    |
| 3,700,000            | OCCIDENTAL PETE CORP      | 06/15/1992 | 9.640%  | 3,730,118       |
| 950,000              | PHILLIPS PETE CO          | 03/15/1995 | 9.000%  | 801,563         |
| 5,749,566            | SECURITY SVGS SCOTTSDALE  | 05/01/2003 | 7.943%  | 3,954,092       |
| 9,006,581            | TALMAN FED SVGS & LN      | 03/01/2008 | 9.165%  | 6,881,028       |
| 11,102,958           | TRI CITY PPTY INV CORP    | 03/01/2000 | 0.000%  | 2,036,393       |
| 1,775,000            | U.S.A. TREASURY BOND      | 11/15/2002 | 11.625% | 2,364,069       |
| 5,690,000            | U.S.A. TREASURY BOND      | 02/15/2003 | 10.750% | 7,158,703       |
| 3,250,000            | U.S.A. TREASURY BOND      | 11/15/2003 | 11.875% | 4,430,140       |
| 13,275,000           | U.S.A. TREASURY NOTE      | 05/15/1992 | 13.750% | 17,037,666      |
| 10,712,958           | UNITED SAVINGS HOUSTON    | 05/01/2008 | 9.041%  | 7,375,121       |
| 11,235,000           | UNITED STATES TREAS BDS   | 05/15/2001 | 13.125% | 16,234,575      |
| 5,365,000            | UNITED STATES TREAS BDS   | 05/15/2003 | 10.750% | 6,749,814       |
| 4,323,816            | VIRGINIA BEACH FED SAVING | 02/01/2000 | 8.247%  | 3,157,337       |
| TOTAL BOND PORTFOLIO |                           |            |         | \$ 208,447,389  |



MINNESOTA STATE BOARD OF INVESTMENT  
 POOLED BOND FUND  
 NORWEST BANK MINNEAPOLIS  
 ALPHABETICAL BOND HOLDINGS  
 JUNE 30 , 1986

| PAR<br>VALUE | SECURITY                  | MATURITY   | COUPON     | MARKET<br>VALUE |
|--------------|---------------------------|------------|------------|-----------------|
| 4,000,000    | AMERICAN EXPRESS CREDIT C | 01/15/1991 | 12.875% \$ | 4,320,000       |
| 2,000,000    | BANK OF BOSTON CORP       | 02/15/1996 | 7.000%     | 1,967,500       |
| 1,800,000    | BRITISH COLUMBIA HYDRO &  | 04/15/1991 | 14.500%    | 2,007,126       |
| 1,000,000    | CANADIAN NATL RY CO       | 07/15/2004 | 9.700%     | 1,025,740       |
| 3,000,000    | CHASE MANHATTAN CORP      | 11/01/1995 | 6.875%     | 2,951,250       |
| 2,000,000    | CHICAGO ILL O'HARE INTL A | 01/01/2016 | 8.750%     | 2,102,500       |
| 3,000,000    | CITICORP                  | 11/15/1992 | 8.250%     | 3,015,000       |
| 1,000,000    | COLUMBIA ALA INDL DEV BRD | 12/01/2015 | 9.250%     | 1,084,180       |
| 2,342,665    | FED HM LN # 188689        | 10/01/2007 | 8.000%     | 2,161,108       |
| 989,664      | FED HM LN MC POOL # 21057 | 12/01/2020 | 10.500%    | 1,008,220       |
| 1,183,468    | FED HM LN PC # 188844     | 08/01/2008 | 7.500%     | 1,068,080       |
| 2,038,416    | FED HM LN PC # 210589     | 12/01/2000 | 11.000%    | 2,099,568       |
| 1,011,157    | FED HM LN POOL # 210388   | 10/01/2000 | 11.250%    | 1,047,963       |
| 1,958,608    | FED HM LN POOL # 210440   | 11/01/2000 | 11.000%    | 2,017,366       |
| 1,245,186    | FED HM LN POOL # 255674   | 11/01/1999 | 9.000%     | 1,190,709       |
| 4,000,000    | FEDERAL HOME LN MTG CORP  | 01/31/1994 | 11.875%    | 4,207,480       |
| 4,530,342    | FEDERAL HOME LOAN         | 11/01/2010 | 6.000%     | 3,816,813       |
| 4,091,021    | FEDERAL HOME LOAN MORTGAG | 01/01/2010 | 12.500%    | 4,229,093       |
| 2,000,000    | FIRST CHICAGO CORP        | 06/01/1998 | 8.500%     | 2,004,200       |
| 1,750,000    | FORD MTR CO               | 04/01/1990 | 14.250%    | 1,855,000       |
| 2,000,000    | GANNETT INC               | 02/01/1996 | 8.500%     | 2,019,260       |
| 750,000      | GEORGIA ST MUNI ELEC      | 01/01/2018 | 7.875%     | 723,750         |
| 2,364,969    | GNMA POOL # 050384        | 08/15/1996 | 12.250%    | 2,495,042       |
| 578,820      | GNMA POOL # 050936        | 10/15/2011 | 15.000%    | 662,025         |
| 469,246      | GNMA POOL # 051011        | 02/15/2012 | 15.000%    | 536,700         |
| 780,549      | GNMA POOL # 051883        | 11/15/1996 | 14.750%    | 837,139         |
| 681,934      | GNMA POOL # 052820        | 07/15/2012 | 15.000%    | 779,962         |
| 471,575      | GNMA POOL # 054838        | 09/15/2012 | 15.000%    | 539,363         |
| 1,104,223    | GNMA POOL # 068121        | 05/15/2013 | 12.000%    | 1,167,716       |
| 879,554      | GNMA POOL # 105003        | 08/15/1999 | 12.750%    | 930,542         |
| 876,009      | GNMA POOL # 111358        | 10/15/1999 | 12.750%    | 926,791         |
| 968,739      | GNMA POOL # 115029        | 12/15/2014 | 13.000%    | 1,030,496       |
| 1,013,036    | GNMA POOL # 128012        | 03/15/2015 | 13.000%    | 1,077,617       |
| 984,923      | GNMA POOL # 142224        | 12/15/1999 | 12.250%    | 1,042,433       |
| 1,963,447    | GNMA POOL # 143690        | 12/15/1999 | 12.250%    | 2,078,093       |
| 4,000,000    | GUARANTEED MTG CORP II    | 10/01/1994 | 11.950%    | 4,440,000       |
| 3,000,000    | HERTZ CORP                | 03/01/1996 | 8.500%     | 2,903,850       |
| 3,000,000    | HOUSEHOLD FIN CORP        | 02/15/1993 | 8.400%     | 3,130,590       |
| 1,000,000    | INTERMOUNTAIN PWR AGY SUP | 07/01/2021 | 7.000%     | 882,990         |
| 1,000,000    | INTERMOUNTAIN PWR AGY UTA | 07/01/2019 | 9.000%     | 1,055,000       |
| 2,000,000    | INTERMOUNTAIN PWR AGY UTA | 07/01/2023 | 7.000%     | 1,750,000       |
| 2,500,000    | ITT FINL CORP             | 03/01/1991 | 14.750%    | 2,762,500       |
| 3,000,000    | ITT FINL CORP             | 08/15/1994 | 12.750%    | 3,165,000       |
| 1,500,000    | JACKSONVILLE FLA ELEC AUT | 10/01/2020 | 9.500%     | 1,649,085       |
| 1,200,000    | LINCOLN NATIONAL CORP.    | 09/15/1992 | 13.875%    | 1,356,000       |
| 4,000,000    | ONTARIO PROV CDA          | 05/01/1991 | 14.625%    | 4,467,840       |

MINNESOTA STATE BOARD OF INVESMENT  
 POOLED BOND FUND  
 NORWEST BANK MINNEAPOLIS  
 ALPHABETICAL BOND HOLDINGS  
 JUNE 30 , 1986

| PAR<br>VALUE         | SECURITY                  | MATURITY   | COUPON    | MARKET<br>VALUE |
|----------------------|---------------------------|------------|-----------|-----------------|
| 1,000,000            | PENNSYLVANIA ST HIGHER ED | 07/01/2008 | 9.250% \$ | 1,090,640       |
| 3,000,000            | PHILLIPS PETE CO          | 03/15/1995 | 9.000%    | 2,531,250       |
| 3,000,000            | WELLS FARGO & CO          | 06/25/1997 | 7.800%    | 2,977,500       |
| 2,800,000            | XEROX CR CORP             | 09/15/1991 | 16.000%   | 3,220,000       |
| TOTAL BOND PORTFOLIO |                           |            |           | \$ 99,408,071   |

MINNESOTA STATE BOARD OF INVESTMENT  
 POOLED BOND FUND  
 WESTERN ASSET MANAGEMENT  
 ALPHABETICAL BOND HOLDINGS  
 JUNE 30 , 1986

| PAR<br>VALUE | SECURITY                  | MATURITY   | COUPON     | MARKET<br>VALUE |
|--------------|---------------------------|------------|------------|-----------------|
| 4,500,000    | CHRYSLER CORP             | 11/15/2015 | 12.000% \$ | 4,893,750       |
| 4,125,000    | CITICORP PERSON TO PERSON | 03/01/1998 | 8.750%     | 4,109,243       |
| 837,000      | CONSOLIATED NATURAL GAS   | 10/01/2000 | 12.875%    | 887,220         |
| 6,500,000    | DELTA AIRLINES INC        | 05/15/2016 | 9.000%     | 6,334,835       |
| 3,989,678    | FED HM LN # 181257        | 01/01/2009 | 8.000%     | 3,680,478       |
| 6,115,680    | FED HM LN PC # 25-1783    | 12/01/2009 | 8.500%     | 5,702,871       |
| 164          | FED HM LN POOL # 220001   | 07/01/2000 | 10.750%    | 174             |
| 6,515,000    | FEDERAL FARM CR BKS CONS  | 01/20/1993 | 10.650%    | 7,313,088       |
| 6,200,000    | FEDERAL FARM CR BKS FDG C | 09/01/1994 | 13.000%    | 7,912,750       |
| 2,775,000    | FEDERAL HOME LN BKS       | 06/26/1995 | 10.000%    | 3,095,845       |
| 2,500,000    | FEDERAL HOME LN MTG CORP  | 12/31/2014 | 10.250%    | 2,677,725       |
| 4,000,000    | FEDERAL NATL MTG ASSN     | 02/10/1996 | 7.000%     | 4,829,000       |
| 15,200,000   | FEDERAL NATL MTG ASSN     | 07/05/2014 | 0.000%     | 1,287,288       |
| 11,218,120   | FHA BANCO POOL # 37       | 05/01/2022 | 7.430%     | 9,868,805       |
| 425          | FHA BANCO POOL #2         | 11/01/2019 | 7.337%     | 370             |
| 14,546,321   | FHA CITICORP #136         | 05/01/2023 | 7.430%     | 12,789,271      |
| 3,587,105    | FHA CITICORP 1985-5       | 12/01/2025 | 7.375%     | 3,075,942       |
| 4,662,683    | FHA MERRILL # 16          | 02/01/2021 | 7.430%     | 4,105,399       |
| 4,336,728    | FNMA POOL # 000797        | 01/01/2023 | 7.250%     | 3,870,529       |
| 477,681      | GNMA POOL # 108115        | 09/15/2013 | 11.000%    | 502,162         |
| 3,525,259    | GNMA POOL # 113170        | 01/15/2014 | 11.000%    | 3,705,928       |
| 3,958,532    | GNMA POOL # 139423        | 09/15/2015 | 11.000%    | 4,161,407       |
| 965,926      | GNMA POOL # 140028        | 11/15/2015 | 11.000%    | 1,015,430       |
| 4,996,726    | GNMA POOL # 143846        | 11/15/2015 | 11.000%    | 5,252,809       |
| 992,857      | GNMA POOL # 145971        | 01/15/2016 | 11.000%    | 1,043,741       |
| 998,267      | GNMA POOL # 146908        | 12/15/2015 | 11.000%    | 1,049,428       |
| 998,033      | GNMA POOL # 146918        | 12/15/2015 | 11.000%    | 1,049,182       |
| 34,485,000   | GNMA POOL # 152586        | 06/15/2015 | 9.000%     | 33,493,556      |
| 800,000      | GNMA POOL # 163680        | 06/15/2016 | 9.000%     | 777,000         |
| 2,433,439    | GNMA POOL # 41836         | 09/15/2010 | 11.000%    | 2,558,152       |
| 476,545      | GNMA POOL # 65026         | 08/15/2013 | 11.000%    | 500,968         |
| 889,978      | GNMA POOL # 67763         | 07/15/2013 | 11.000%    | 935,589         |
| 935,414      | GNMA POOL # 68747         | 07/15/2013 | 11.000%    | 983,354         |
| 1,735,000    | LACHMAR HULL 54 US        | 09/25/1988 | 14.000%    | 1,835,630       |
| 2,350,000    | LITTON INDS INC           | 07/01/2005 | 12.625%    | 2,634,938       |
| 5,000,000    | MCI COMMUNICATIONS        | 04/01/2011 | 10.000%    | 4,818,750       |
| 8,500,000    | OCCIDENTAL PETE CORP      | 03/15/2011 | 11.750%    | 8,691,250       |
| 2,500,000    | PENNSYLVANIA PWR & LT CO  | 10/01/2015 | 12.000%    | 2,751,925       |
| 7,500,000    | PENNSYLVANIA PWR & LT CO  | 04/01/1994 | 13.500%    | 8,358,525       |
| 1,150,000    | SOUTHERN PAC TRANSN CO    | 12/01/2001 | 8.200%     | 1,013,438       |
| 424          | STANDARD OIL CO           | 12/15/1990 | 6.300%     | 3,476,800       |
| 43,300,000   | STUDENT LN MRKTG ASSN     | 05/15/2014 | 0.000%     | 3,558,827       |
| 3,660,000    | U.S.A. TREASURY BOND      | 11/15/2012 | 10.375%    | 4,568,119       |
| 7,000,000    | U.S.A. TREASURY NOTES     | 11/15/1993 | 11.750%    | 8,579,340       |
| 2,035,000    | UNITED STATES TREAS NTS   | 07/15/1992 | 10.375%    | 2,303,355       |
| 4,000,000    | UNITED STATES TREAS NTS   | 01/15/1991 | 11.750%    | 4,631,240       |

MINNESOTA STATE BOARD OF INVESTMENT  
 POOLED BOND FUND  
 WESTERN ASSET MANAGEMENT  
 ALPHABETICAL BOND HOLDINGS  
 JUNE 30 , 1986

| PAR<br>VALUE         | SECURITY                | MATURITY   | COUPON    | MARKET<br>VALUE |
|----------------------|-------------------------|------------|-----------|-----------------|
| 9,190,000            | UNITED STATES TREAS NTS | 02/15/1996 | 8.875% \$ | 10,086,025      |
| TOTAL BOND PORTFOLIO |                         |            | \$        | 210,771,452     |

MINNESOTA STATE BOARD OF INVESMENT  
 POOLED BOND FUND  
 INTERNAL SHORT-TERM BOND  
 ALPHABETICAL BOND HOLDINGS  
 JUNE 30 , 1986

| PAR<br>VALUE         | SECURITY                 | MATURITY   | COUPON    | MARKET<br>VALUE |
|----------------------|--------------------------|------------|-----------|-----------------|
| 250,000              | ALLSTATE FINANCIAL CORP. | 04/15/1987 | 8.125% \$ | 250,078         |
| 9,000                | ANOKA/CIRCLE PINES       | 01/01/1987 | 4.500%    | 8,931           |
| 40,000               | APPALACHIAN EL POWER     | 03/01/1987 | 4.625%    | 39,183          |
| 1,900,000            | C.I.T. GROUP HOLDINGS    | 10/01/1986 | 6.375%    | 1,895,573       |
| 80,000               | CASS CITY/PINE RIVER     | 09/01/1989 | 4.700%    | 76,743          |
| 15,000               | CHISAGO 140 TAYLOR FLS   | 02/01/1988 | 3.700%    | 14,491          |
| 5,000                | DOUGLAS ISD 213 OSASIS   | 03/01/1989 | 3.900%    | 3,874           |
| 5,000,000            | FEDERAL FARM CREDIT BANK | 10/20/1986 | 10.750%   | 5,060,150       |
| 5,000                | HENN CTY ISD 17 EDINA    | 02/01/1987 | 4.000%    | 4,972           |
| 10,000               | LAKE CTY/BEAVER BAY      | 01/01/1987 | 5.000%    | 9,948           |
| 1,500,000            | LOUISVILLE & NASHVILLE   | 12/01/1987 | 4.875%    | 1,434,375       |
| 15,000               | MCLEOD CTY SD 38         | 02/01/1987 | 3.900%    | 14,850          |
| 15,000               | MILLE LACS SD 4/1 BOCK   | 03/01/1989 | 3.900%    | 14,073          |
| 236,000              | MOORE-MCCORMACK LINES    | 04/01/1987 | 5.750%    | 231,943         |
| 15,000               | MORRISON/TODD ISD 486    | 02/01/1988 | 3.800%    | 14,513          |
| 11,400,000           | NORWEST CORP             | 09/15/1986 | 7.875%    | 11,343,000      |
| 10,000               | RICE ISD 656 FARIBAULT   | 01/01/1987 | 3.400%    | 9,887           |
| 9,000                | SHERBURNE/VIL BIG LAKE   | 07/01/1986 | 4.500%    | 9,000           |
| 20,000               | STEARNS CTY ISD 93       | 07/01/1987 | 4.750%    | 19,902          |
| 200,000              | TRAILMOBILE FINANCE      | 11/15/1987 | 8.200%    | 199,500         |
| 7,500,000            | U.S.A. TREASURY NOTE     | 02/15/1987 | 9.000%    | 7,607,775       |
| 2,000,000            | U.S.A. TREASURY NOTE     | 02/15/1988 | 10.375%   | 2,104,380       |
| 1,190,000            | U.S.A. TREASURY NOTE     | 06/30/1988 | 13.625%   | 1,335,406       |
| 10,000               | WABASHA/OLMSTEAD 806     | 06/01/1987 | 4.100%    | 9,901           |
| TOTAL BOND PORTFOLIO |                          |            |           | \$ 31,712,447   |

MINNESOTA STATE BOARD OF INVESMENT  
MINNESOTA VENTURE CAPITAL FUND  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES       | SECURITY                  |    | MARKET<br>VALUE |
|------------------------|---------------------------|----|-----------------|
| 1,655,565              | ALLIED VENTURE PARTNERS   | \$ | 1,655,565       |
| 2,500,000              | CENTURY PTN III           |    | 2,604,220       |
| 7,000,000              | DSV PARTNERS IV           |    | 7,047,957       |
| 1,875,000              | G & K VENTURE PARTNERSHIP |    | 1,820,006       |
| 25,375,000             | K K R INVT. FD            |    | 25,375,000      |
| 7,111,000              | KKR INVT FUND II          |    | 7,111,000       |
| 4,000,000              | MATRIX PARTNERS II L.P.   |    | 3,861,000       |
| 6,682                  | NORTHWEST VENTURE PARTNER |    | 6,722,618       |
| 7,497,878              | SUMMIT VENTURE LTD PARTN  |    | 7,421,475       |
| 1,500,000              | SUPERIOR VENTURE PARTNERS |    | 1,500,000       |
| TOTAL EQUITY PORTFOLIO |                           | \$ | 65,118,841      |

MINNESOTA STATE BOARD OF INVESMENT  
MINNESOTA REAL ESTATE POOL  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES       | SECURITY                   |    | MARKET<br>VALUE |
|------------------------|----------------------------|----|-----------------|
| 6,000                  | HEITMAN ADVISORY REALTY I  | \$ | 30,755,559      |
| 19,783                 | SSB REAL ESTATE FD III     |    | 20,752,459      |
| 8,000                  | TCW REALTY FUND III        |    | 39,573,253      |
| 47,000,000             | THE RREEF FUNDS USA III    |    | 49,067,013      |
| 13,844                 | { EQUIT. LIFE ASSUR. SOCI  |    | 59,295,887      |
| 20,000                 | } HEITMAN ADVISORY CORP.   |    | 22,010,034      |
| 20,777                 | } AETNA REAL ESTATE FUND   |    | 51,680,688      |
| 10,447                 | } PRUDENTIAL REAL ESTATE F |    | 56,656,086      |
| TOTAL EQUITY PORTFOLIO |                            | \$ | 329,790,980     |

MINNESOTA STATE BOARD OF INVESMENT  
MINNESOTA RESOURCES FUND  
ALPHABETICAL EQUITY HOLDINGS  
JUNE 30 , 1986

| NO. OF<br>SHARES       | SECURITY                   |    | MARKET<br>VALUE |
|------------------------|----------------------------|----|-----------------|
| 17,017                 | { AMGO I                   | \$ | 4,500,000       |
| 2,255,466              | { AMGO II                  |    | 5,500,000       |
| 21,955,067             | { APACHE CORP LTD PART II  |    | 21,840,067      |
| 537,617                | { APACHE CORP LTD PARTNERS |    | 537,617         |
| TOTAL EQUITY PORTFOLIO |                            | \$ | 32,377,684      |