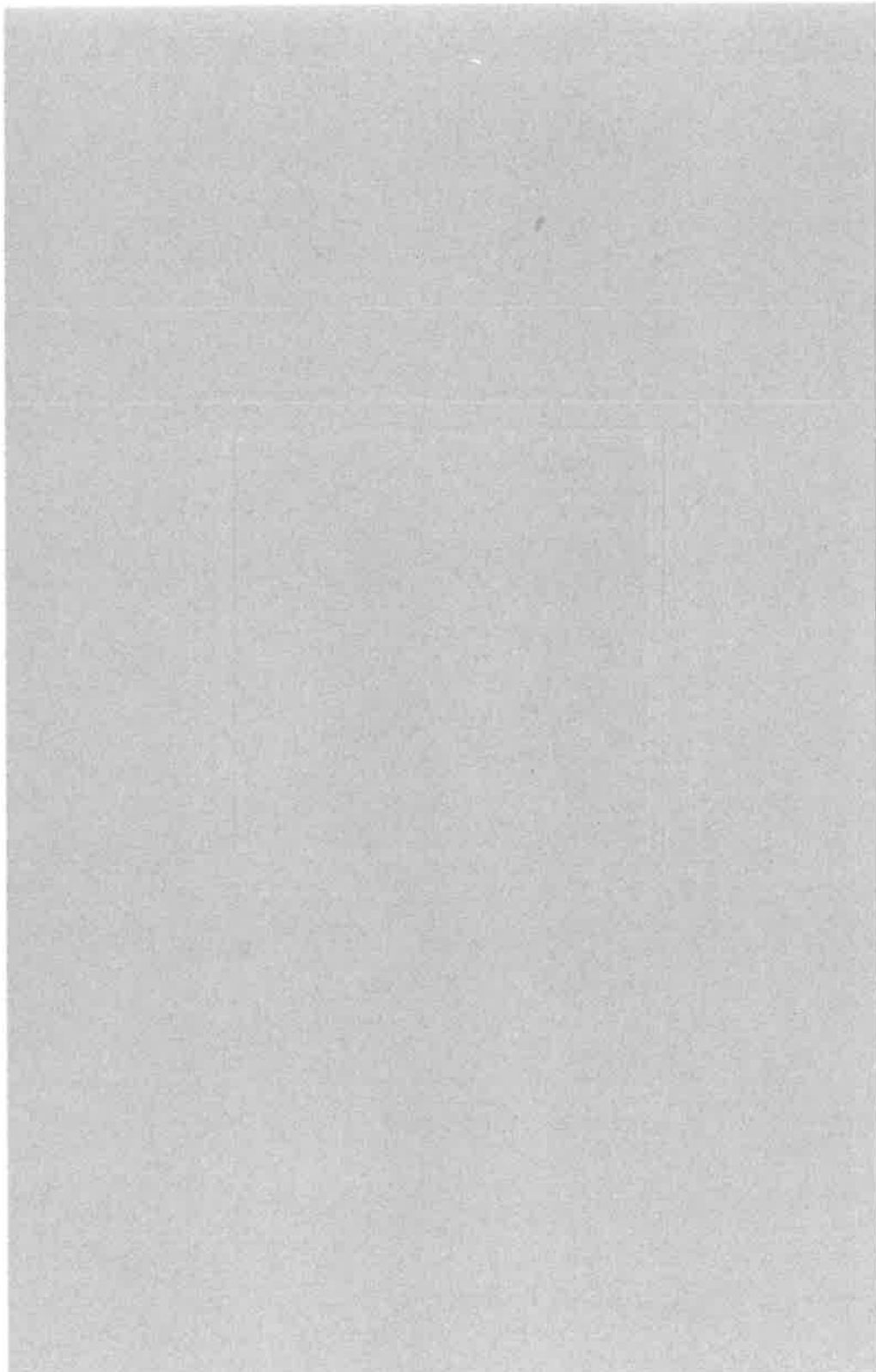


**Measuring
Performance
of
Corporate Pension
and
Profit-Sharing
Plans**

A.G. Becker & Co.
INCORPORATED



**Measuring Performance
of
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and
Profit-Sharing Plans**

The Key To Lower Costs
And Increased Benefits

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“I often say that when you can measure what you are speaking about, and express it in numbers, you know something about it; but when you cannot measure it, when you cannot express it in numbers, your knowledge is of a meager and unsatisfactory kind . . .”

—Lord Kelvin (Sir William Thomson)
English mathematician and physicist
1824-1907

A Statement of Purpose

This booklet has been prepared to acquaint you with the investment performance measurement services for pension and profit-sharing funds provided by the Funds Evaluation Department of A. G. Becker & Co. Incorporated, nationwide investment banking and brokerage firm.

It is important to know at the outset what our Retirement Funds Evaluation Service does and does not provide. This Service provides a series of objective measurements of pension and profit-sharing fund investment performance and includes standards for comparison purposes. Neither this Service nor A. G. Becker & Co. Incorporated offers investment counseling to managers of retirement assets.

Our goal is to provide those charged with the ultimate responsibility for investment performance with objective information which they can use as a management tool to help achieve optimum investment performance for pension and profit-sharing fund assets.

Why Measure Investment Performance?

The assets of private pension and profit-sharing plans in the United States now exceed \$90 billion and cover some 29 million employees. Projections indicate that within fifteen years these assets will exceed \$200 billion and cover more than 45 million employees.

While most corporations today can obtain cost accounting data to the fraction of a penny on their products or services, all too many are still in the dark when it comes to measuring the investment performance of their pension and profit-sharing funds. Yet many such funds have assets ranging between 10 per cent and 50 per cent of net worth and in some cases even exceeding the net worth of the entire corporation.

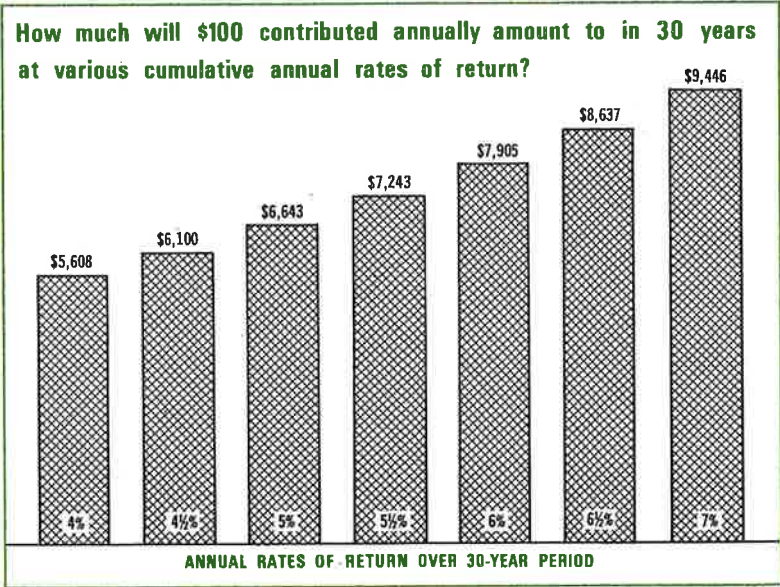
Too few corporate financial officers and pension plan administrators really know what kind of return to expect from their investments. Most merely assume that the return is "adequate," due to the fact that attention in the past has focused on company contributions and actuarial requirements. Today, however, with inflation assumed as a way of life and an irreversible trend toward liberal retirement benefits established, alert fund managers realize that increasing emphasis must be placed upon investment performance—the principal variable affecting fund results.

All industries and all companies are facing the double-barreled problem of a continuously increasing wage scale coupled with increasing benefit levels as a percentage of the wage scale. While current pension objectives range between

40 per cent and 60 per cent of final average annual pay, it is estimated that within the next decade or two these objectives will approximate 80 per cent to 100 per cent of final average pay. During the same period, pay scales could be doubled, largely due to inflation. Therefore, corporations maintaining a constant level of employment may expect a fourfold increase in dollar liabilities for pensions.

To meet the pressure of increasing pension plan costs, corporations have only two options—to increase plan contributions or to increase earnings on pension plan assets. The latter is obviously the more desirable alternative, especially since inflows to most pension funds should exceed outflows for several years, affording greater opportunity for the compounding of fund earnings. This booklet is designed to introduce you to a program to measure investment performance—the first step toward increasing earnings of pension funds.

Exactly how much impact does improved investment performance have on fund assets? The following table helps answer this question.



As shown in the table, improvement in performance from a 4% cumulative annual rate of return to 5% provides an additional \$1,035 for each \$100 contributed annually over a 30-year period. This increment can be utilized to reduce pension fund costs approximately 16%, or conversely to increase benefits by approximately 19%, or to achieve some combination of the two.

The A. G. Becker Retirement Funds Evaluation Service is a vital management tool being utilized by corporate managements and trustees of many of the country's largest pension and profit-sharing plans to improve investment performance. Ask yourself the following questions to help you determine your need for this service:

Do you have standards against which to measure the current return on your retirement fund? Are these standards as valid as performance data on pension funds similar to your own?

Can you attempt to improve your fund's investment performance without knowing its current performance?

Since pension funds are investing more and more in equities, rather than in debt issues, what relationship do actuarial rates of return bear to actual rates of return? Do you know the assumed rate your actuary uses to determine contributions? Do you know whether your pension funds earn at a higher rate than this?

Without knowing your present investment performance, can you objectively assess proposals from institutions and advisors who wish to manage the investment of your pension funds?

If you were questioned about the investment performance of your pension fund, could you answer whether it was good or poor? How could you be certain without having a valid comparative measurement?

Will employees look to you or to your investment advisor for assurance that funds held in trust for their retirement are being competently managed? Do they even know who makes the investment decision for your funds?

Has the continuing impact of inflation been taken into account in appraising the return you expect from your pension funds? Are you aware that annual inflation of only 1% can reduce the value of an employee's pension by almost 20% over a period of 15 years?

Do you know that an increase of 3 percentage points in the rate of return achieved by a fund could cut long-term costs by 50 per cent?

How important are better retirement benefits in attracting and keeping employees?

Can you estimate the possible impact of proposed legislation which will affect existing pension cost patterns if you have no reliable method of measuring your investment return?

How We Measure Investment Performance

The A. G. Becker & Co. Retirement Funds Evaluation Service evolved from a desire to improve our own pension results. To satisfy themselves that they were fulfilling their obligations, our trustees contacted a wide variety of sources for fund performance data, only to discover that few pension funds tried to measure investment performance. Those that did employed methods so diverse as to render comparisons meaningless. Because the requirements, objectives and tax considerations of pension funds differ from other types of funds (and market averages, besides being hypothetical, are not subject to the constant pressure which new money exerts on pension funds) it was obvious to us that the most meaningful and valid performance comparisons could best be made by comparing an individual pension fund with other pension funds.

At this point we realized that if we could develop a reliable system of measuring pension fund performance and a large pool of truly comparative performance data, we would have a key management tool that could benefit thousands of pension and profit-sharing funds across the country.

After several years of intensive research and testing, a viable technique for measuring and comparing performance was established. Our efforts developed solutions to two problems which had previously blocked progress in this vital area:

- Adopting a suitable formula to use in measuring rate of return;
- Developing some criteria of performance against which funds could be analyzed and compared.

Our method of measuring rate of return is based upon the compound interest, or discounted cash-flow, concept. In essence, rate of return is the compound rate of interest at which the beginning-of-year fund—adjusted for the flow of income, contributions and payouts—must grow to equal the end-of-year market value. The rate of return is not only computed for the total fund, but is also computed separately for the three major components—common stocks, fixed-income marketable securities, and fixed-income private placements.

Traditional methods, most of which have been actuarially oriented, have not adequately reflected the impact of the price fluctuations of common stocks—a serious limitation in view of the increasing ratio of common stocks now held in corporate pension fund portfolios.

We have tested other methods of measuring performance, but the compound interest approach is the only yardstick by which *actual* rate of return earned on the flow of money represented by a pension fund can be calculated. We will utilize new approaches and other measures in the future as they prove both reliable and advantageous for our clients.

The second problem—that of establishing standards by which performance can be measured—has been resolved by comparing the performance of many funds of comparable size. In other words, we compare pension funds to pension funds; in our opinion this is the most meaningful comparison.

Since inaugurating the Retirement Funds Evaluation Service in 1966, more than 300 funds have become sub-

scribers. The funds, which range in size to over \$400 million, represent every major industry category. Every source of fund management, including bank and trust companies, investment counsel, insurance companies, and those which are self administered, is represented in this participation. A truly broad base of comparative data has been developed from this extensive list.

The A. G. Becker Retirement Funds Evaluation Service meets five key criteria for a valid system of evaluating investment performance:

- 1** It adjusts to periodic inflows and outflows of funds. Fund rate of return is calculated on data which reflects the actual flow of monies into and out of the fund on a quarterly basis. The computed fund rate therefore reflects the actual return on assets.
- 2** It includes unrealized gains as well as realized gains and investment income. Performance should be expressed as a rate of return. As far as investment performance is concerned, there is no difference between realized and unrealized gains.
- 3** It measures the total fund as well as separate segments of the fund. The mix of fund components—equities and fixed income—is a major determinant of total fund return. Separate measurement of equities, fixed-income marketable issues and private placements permits an “apples to apples” comparison.
- 4** It measures return over several long and short periods. Performance measurement is most significant when considered on a longer term cumulative basis. We

believe that five years is the minimum length of time to consider long-term trends. On the other hand, the long term is a series of short terms, and a review of several short-term periods provides a good picture of longer term expectations. The short term, however, should be no shorter than one year. Quarterly rates of return show wide variations, and it is not unusual to have a fund's quarterly rate of return vary from minus 40% to plus 70% within a year.

5 It provides valid standards of comparison. Rate of return figures are of greater value when they can be compared with a valid standard of performance. For example, in 1960 one fund in our studies reported a 16.26% rate of return. In 1961 the rate of return increased almost 1½ percentage points. However, our Retirement Funds Evaluation Service showed that its rank actually declined from number 1 out of 14 funds to number 16 out of 17 funds in its assets size group.

Evaluation of Fund Performance

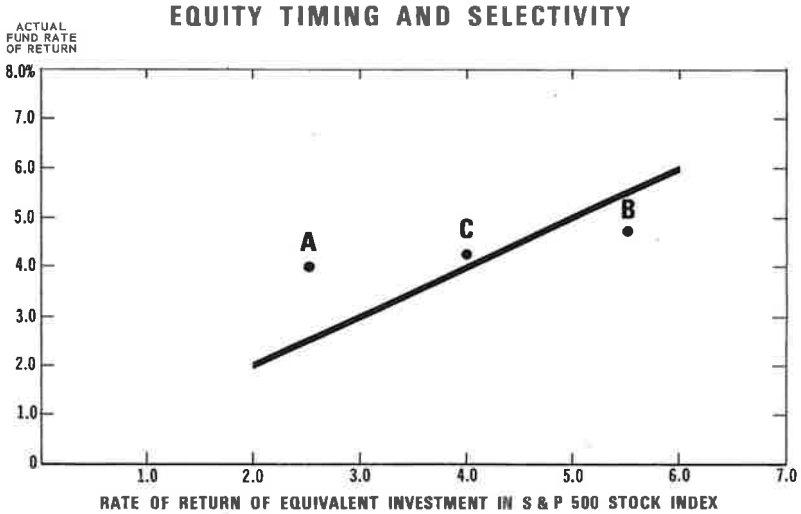
The *measurement* and *comparison* of data provided by the Service, while valuable per se, take on added importance in that they afford managements an opportunity to make evaluative judgments concerning the “whys” of performance.

Our growing bank of comparative data is providing a proprietary analytical tool, available nowhere else, for such evaluation.

In view of the wide range of rates of return shown by different funds within the Service, differences in management objectives and practices are being thoroughly explored. It is the study of these differences that is more apt to explain the variations in fund performance than alternative formulae that are used to measure performance.

Studies currently under way include the optimum size of a fund as it relates to performance; the relationships between fund activity and performance, and the effects of changing the mix of securities in the portfolio, as well as of concentrating fund assets among fewer issues.

The exhibit below illustrates the way in which *timing* and *selectivity*—two key determinants of investment performance and equity commitments—may be studied.



Rates of return for the equity portion of Funds A, B and C are compared not only with each other but also with the rate of return that would have been earned if each of the funds had, as an alternative, bought and sold the Standard & Poor's 500 Stock Composite Index. The diagonal line represents all points where actual rate of return (left, or vertical, axis) exactly equals what the fund would have earned by investing in the S & P index (horizontal axis).

The performance of a fund as regards *selectivity* is measured by the distance between its actual rate of return and the diagonal line. Thus, Fund A evidenced somewhat better selectivity than Fund C, which did only slightly better than equivalent investment in the Standard & Poor's index, and than Fund B, which did not equal equivalent S & P performance.

The performance of a fund as influenced by *timing* is viewed by the horizontal axis. Thus Fund B, which was investing at times which produced the highest equivalent earnings, evidenced better timing than either Fund A or Fund C. (It is recognized that good timing might reflect a fortuitous flow of funds rather than controlled planning.)

The performance of a fund as regards a combination of *timing* and *selectivity* is measured by the vertical axis. Thus Fund B achieved the greatest actual return, its good timing offsetting the fact that its selectivity was below par.

Other factors influencing fund performance are being studied. Additional measurements and supplementary services derived from these investigations will be furnished to subscribers as they become available.

Your investment data is processed by electronic computers. Measurements are computed without requiring you to identify individual investments in your portfolio. All funds are coded to maintain the confidential nature of all information supplied, and your results are not identified to any other fund.

Here's What You Receive

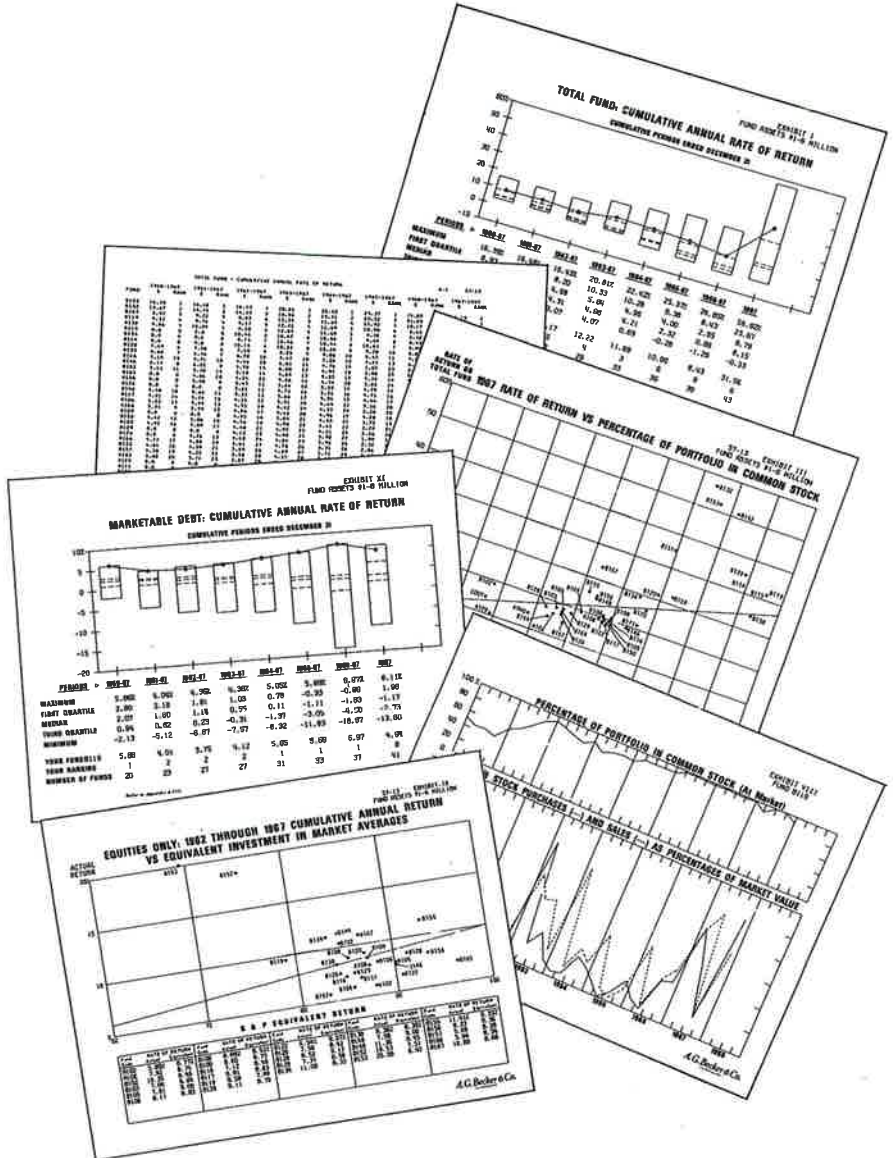
Data gathered from all subscribers is recorded on Investment Summary Sheets provided by A. G. Becker & Co. Gathering information in this manner insures that all fund performance measurements are calculated in precisely the same way for every fund. All of the necessary fund information is derived from trustee reports that every fund has readily available. No identification of individual securities is required; measurements are calculated by investment categories only.

After the complete investment data on your pension fund is submitted, you will receive a comprehensive report which statistically and graphically interprets the performance of your fund and which compares this performance with that of many similar funds. Presentation of your report will be personally provided by a representative of our Service who will assist you in interpreting your report and answer any questions you may have.

The typical contents of a subscriber's annual report include:

- Rate of return figures computed for the total fund, and also for the three major components of most funds—common stocks and other equity investments; fixed-income marketable issues; and fixed-income private placements;

Helpful information is clearly presented in statistical and chart form



- Rate of return figures computed on a cumulative basis from 1960 to the present date and for each year from 1960 to date;
- Precise comparative performance figures for a wide number of other funds (typically 25-40) compared in your category;
- Computed fund performance characteristics derived from data on all funds subscribing to the A. G. Becker Retirement Funds Evaluation Service.

The rate of return measurement you receive will reflect realized and unrealized capital gains or losses and investment income (dividends or interest). Measurements are updated each year until cumulative ten- or fifteen-year results are available.

In addition to the annual reports, quarterly and other interim reports are available to clients upon request. Special studies analyzing the "whys" of investment performance and tailored to meet the particular needs of our clients are also available.

We Anticipate Your Questions

Q Our contribution requirements are set by actuaries, and a trust company handles our investments. Why should we get involved in these areas?

A Because you bear the responsibility for doing the best possible job for your company, your employees and your stockholders. How do you know you couldn't reduce your pension plan costs and/or increase its benefits by improving your investment performance—especially if you could determine that it wasn't up to the level of other comparable plans? You have both the right and responsibility to know how your fund is being managed.

Q Doesn't measurement imply putting our trustees under pressure?

A Our Service is a management tool designed to objectively measure investment results and to provide data which can help improve those results. We assume that every trustee is interested in doing the best possible job for his clients and will welcome the data we can provide. In fact, a growing number of banks and trust companies are utilizing our Service to evaluate both their own pension funds and

...and Answer Them

their commingled trust funds. Many also have referred their clients to our Service.

Q Doesn't directing a percentage of our normal brokerage transactions as payment for your Service interfere with the investment decision authority of either the trustee, investment advisor or internal investment committee?

A Absolutely not. We are not investment advisors or managers. The option of paying for our Service through directed business simply means that as a member of all principal stock exchanges, we execute your orders.

Q What's wrong with comparing our performance with various market and mutual fund averages?

A You are comparing apples to oranges. Pension funds should properly be compared only to other pension funds. Also, because pension funds accrue on a tax-free basis, investment income has as much value as capital gains. Other investors, because they seek out the tax benefits of capital gains, may have different methods and objectives.

Q We have several funds which we already compare with each other. What more can your service offer?

A A more reliable comparative base, plus the fact that our methods of measurement are more meaningful and efficient than others presently available. Since we deal with a large number of funds, additional measurements, evaluations, and supplementary services are constantly being researched and are furnished to our subscribers as they are developed.

Q How do I know you have enough comparative data?

A We already measure billions of dollars from more than 300 funds of non-insured pension assets administered by banks and trust companies. This obviously reflects the increasing recognition of the need for and value of such a management tool. The interest in measuring performance as a means of meeting responsibilities indicates sharply accelerating growth for measurement services.

Q How can I be assured that our pension fund's identity and performance will be kept confidential?

A We would jeopardize the existence of our service if we did not keep your identity and performance confidential. All information is reported by code number only.

Q Just what kind of information will we have to provide?

A Quarterly information, by major categories of investments, as to assets held and a dollar-value summary of transactions and net contributions. Computations are made on the basis of investment categories; information as to individual holdings is not required.

Q What if we can't compile quarterly data?

A We can still provide you with significant measurements based on semi-annual or annual data, but, of course, not to the same degree of precision as is possible with quarterly data.

Q Won't it be more trouble than it's worth to reconstruct the data necessary to determine past performance?

A Nothing compared to the potential reduction in fund costs and/or increase in employee benefits. A representative of our service can assist you in gathering and preparing necessary information. The time to begin is now.

For further details regarding the A. G. Becker & Co. Retirement Funds Evaluation Service and how it can work for you, write or call (collect) our Funds Evaluation Department in Chicago, 120 South La Salle Street, (312) 372-6100; in New York City, 60 Broad Street, (212) 363-4790; in San Francisco, Russ Building, (415) 981-4200.

About A. G. Becker & Co...

It is our constant endeavor to render professional, distinctive and valuable investment services to a select clientele.

Individual investors are served by account managers carefully selected for qualities of basic intelligence, judgment and empathy with clients and who are trained and supervised to meet the varying investment objectives of sophisticated and knowledgeable investors. They are supported by our institutional research, by corporate contacts and credit studies developed through our investment banking and commercial paper activities, and by transactional capabilities in listed and unlisted securities provided by our own floor personnel on all principal stock exchanges and continuous contact with a nationwide network of over-the-counter dealers.

Our service to **institutional investors** calls upon our investment research capabilities, our competence in order executions, and our facilities and capital for block trading. As one of the few firms with its own personnel on the floors of the important national and regional exchanges, we have unique capability in executing orders in dually listed securities. As an important underwriter, we are able to offer primary and secondary distributions to our institutional clients. These factors, in addition to our historic leadership in money market instruments and rapidly expanding facilities and personnel for underwriting and marketing municipal securities, provide a truly broad base for servicing the investment needs of all types of institutions.

Since our founding in 1893 as a commercial paper dealer, we have served a wide range of industrial, utility, and financial corporations in their short-term credit, general investment banking and financial planning needs. We are a leader in the commercial paper market and are also agent for the Federal National Mortgage Association and the Export Import Bank of the United States in the distribution of short-term discount notes. Our services to corporations include the management of publicly distributed underwritings; private placements; maintenance of over-the-counter markets in unlisted securities; and analysis and negotiation of consolidations or divestments. Our Retirement Funds Evaluation Service, which measures the investment performance of pension and profit-sharing funds, numbers among its subscribers more than 300 funds, whose combined assets exceed \$7 billion.

Domestic and foreign investment dealers are provided with a variety of exchange execution and operating services, supported by our exchange memberships, well trained floor and communications personnel, and modern operating methods and facilities. In addition, we are specialists in the trading of more than 125 security issues on the Midwest and Pacific Coast Stock Exchanges. We are in continuous contact with a substantial number of dealers as manager and participant in the underwriting of corporate and municipal securities and through maintenance of active over-the-counter markets for the securities of many companies.

Offices

CHICAGO, ILLINOIS 60603
120 SOUTH LA SALLE STREET
Area Code 312-372-6100

NEW YORK, NEW YORK 10004
60 BROAD STREET
Area Code 212-363-2800

SAN FRANCISCO, CALIFORNIA 94104
RUSS BUILDING
Area Code 415-981-4200

BOSTON, MASSACHUSETTS 02110
70 FEDERAL STREET
Area Code 617-542-3465

LOS ANGELES, CALIFORNIA 90005
3810 WILSHIRE BOULEVARD
Area Code 213-385-3441

PHILADELPHIA, PENNSYLVANIA 19102
1500 WALNUT STREET
Area Code 215-545-2777

MILWAUKEE, WISCONSIN 53202
MARINE PLAZA
Area Code 414-276-5946

MIAMI, FLORIDA 33131
INGRAHAM BUILDING
Area Code 305-358-3991