Opportunity: Actively Managed Investment Universes

An investment universe is, in essence, a portfolio of securities constructed to represent a particular risk exposure – such as growth stocks, value stocks, small capitalization stocks, long bonds, intermediates or cash equivalents. These customized universes have been increasingly applied to performance measurement, and the accumulating evidence suggests that their active management is the primary determinant of investment strategy success.

Active management is applied to investment universes by shifting assets in response to prospective changes in the investment outlook. Of critical importance to the decision process are forecasts of key economic variables – business activity, corporate profits and dividends, interest rates and inflation – secured by surveying decision-makers as to their expectations. These short-term changes in expectations are analyzed to estimate their influence on the long-term assumptions underlying securities prices. The resulting implications for total investment return over a one-year time horizon, together with allowances for differences in risk premiums, provide the basis for decisions concerning the relative attractiveness of various investment universes.

IN RECENT YEARS, passive techniques have been used to develop "investment universes." These special-purpose passive funds have been developed to serve as benchmarks for performance measurement. Their application for this purpose, by redefining the contribution of traditional active management, underscores the need for active management of investment universes.

Active management may be applied to investment universes by shifting assets from one to another in response to prospective changes in the investment outlook. Active management thus focuses on broad portfolio issues, such as the relative performance of value stocks versus growth stocks, large capitalization stocks versus small capitalization stocks, stocks versus bonds, or stocks and bonds versus cash. Decisions concerning these broad issues and their associated universes—rather than the choice of individual securities—largely determine the overall success of investment strategy.

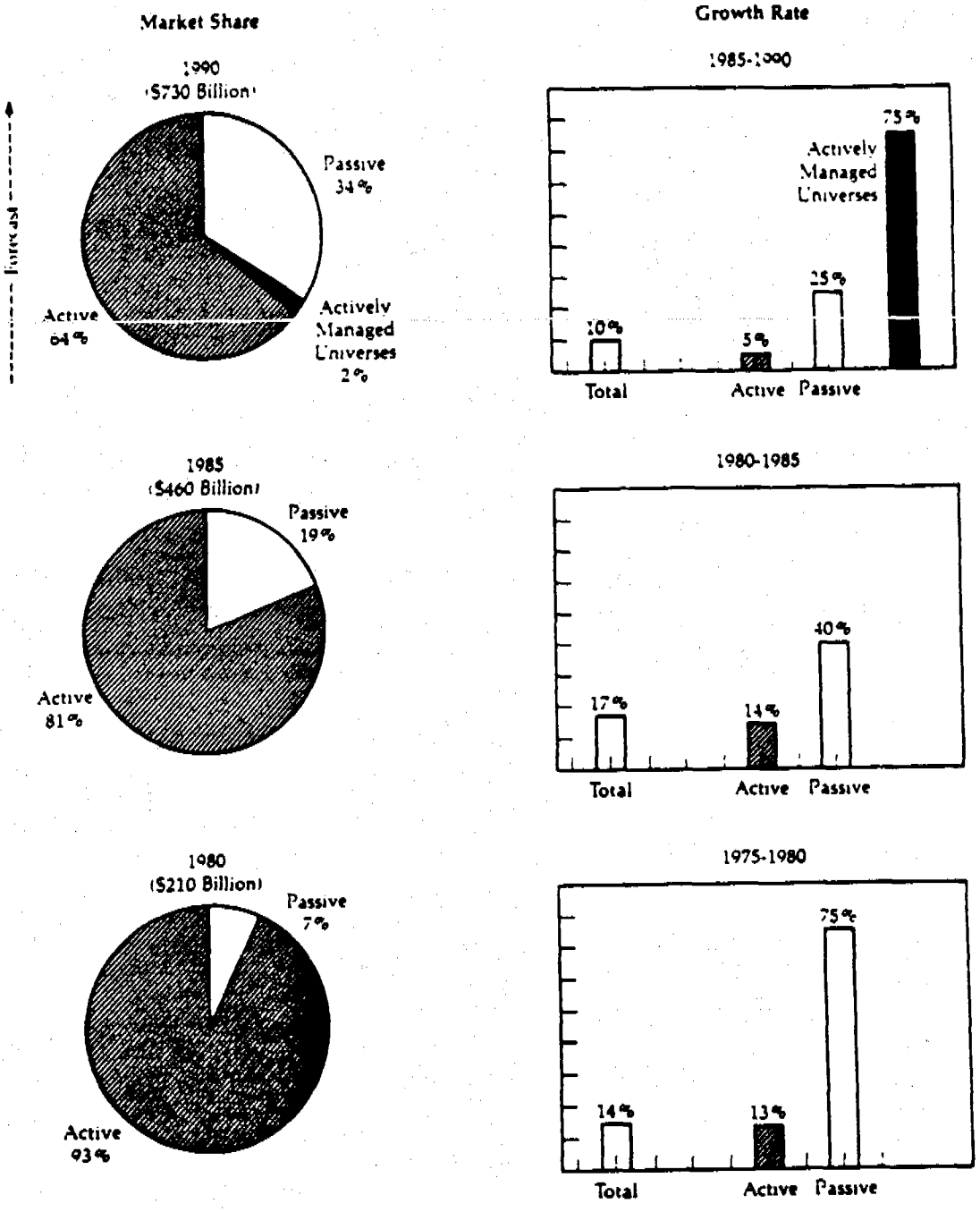
This article reviews the development of passive funds and customized universes for performance measurement and focuses on the value that can be added by active management of investment universes. The growth of actively managed universes may well repeat the pattern for passive funds during the 1975–85 period. Based on this experience, actively managed universes could grow to $15 billion by 1990 and account for approximately 2 per cent of the total equities in retirement funds at that time.

Passive Funds

Passive management of investment funds continues to gain market share at the expense of traditional active management. As Figure A illustrates, standard passive funds increased from less than 1 per cent of equities in retirement funds in 1975 to 7 per cent in 1980. They are likely to approach 20 per cent by the end of 1985 and are projected to grow to more than 30 per cent by 1990.

Passively managed funds emerged after the 1973–74 bear market as a less risky alternative to

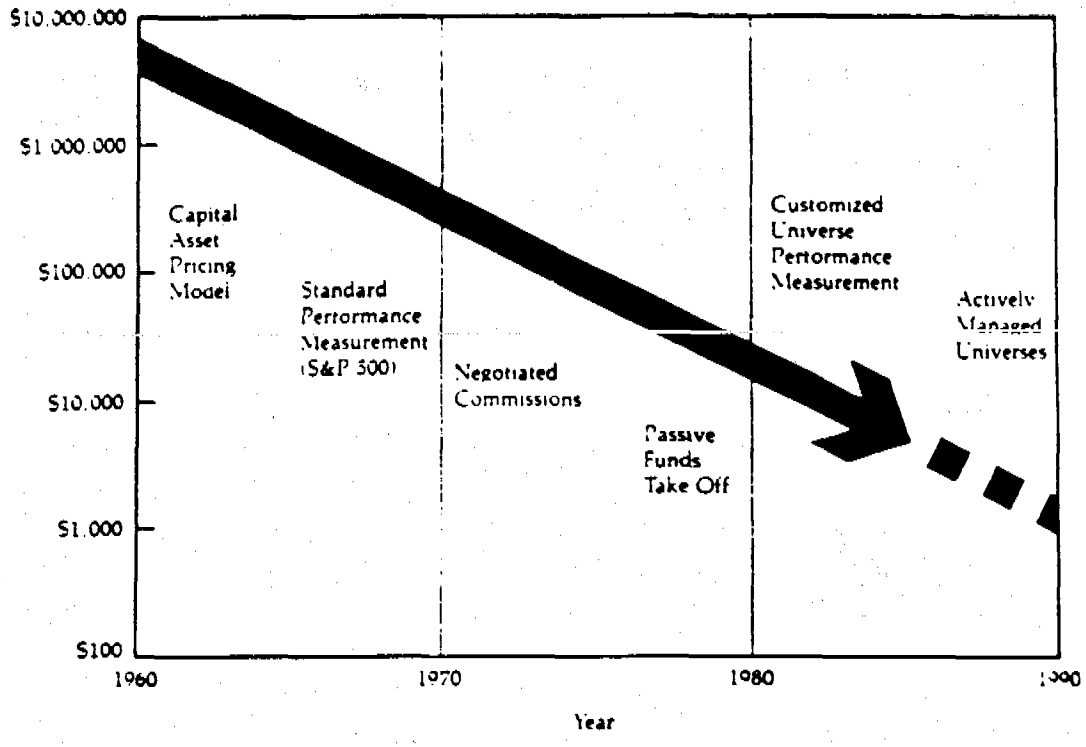
Figure A Investment Management — Equities



traditional active management. The timing of this development reflected the coming together in the mid-1970s of three trends—progress in electronic data processing (EDP), changing concepts of investment management and new opportunities to control transaction costs.

The persistent decline in the cost of EDP, depicted in Figure B, has contributed both directly and indirectly to the development of the market for passive funds. EDP facilitated the studies necessary to support the concepts that encouraged the use of passive funds. Its capacity to handle with speed and accuracy the very large number of necessary details has permitted passive funds to be traded at considerably lower costs than actively managed funds. At the same

Figure B Computer Costs (IBM PC — Equivalent Cost, 1985 $



time, it has provided the technical capability required for the construction and operation of passive funds that replicate a specified index such as the S&P 500.

New concepts of the role of investment management have emerged from the Capital Asset Pricing Model and other elements of modern capital theory. The focus has shifted from the selection of individual issues to the risk-adjusted return of the total portfolio. Consistent with this redefinition of investment management, the Bank Administration Institute introduced in 1968 a standardized method of performance measurement. While modern capital theory stresses the risk reduction advantages attainable by passive management, standardized performance measurement underscores the difficulties encountered by traditional active management in attempting to add value over the long term.

Lower transaction costs for trades initiated by passive managers reflect reduced risks to the broker, together with the economies made possible by EDP. The broker's risks in trades with a passive manager are moderated by two factors. First, the trade is "informationless," because the transaction is unrelated to the outlook for any specific issue. Second, orders are usually well diversified, minimizing the possibility of troublesome concentration in any one issue. Meanwhile, EDP permits passively managed funds, often containing hundreds of issues, to be traded as efficiently as orders concentrated in fewer issues from an active manager.

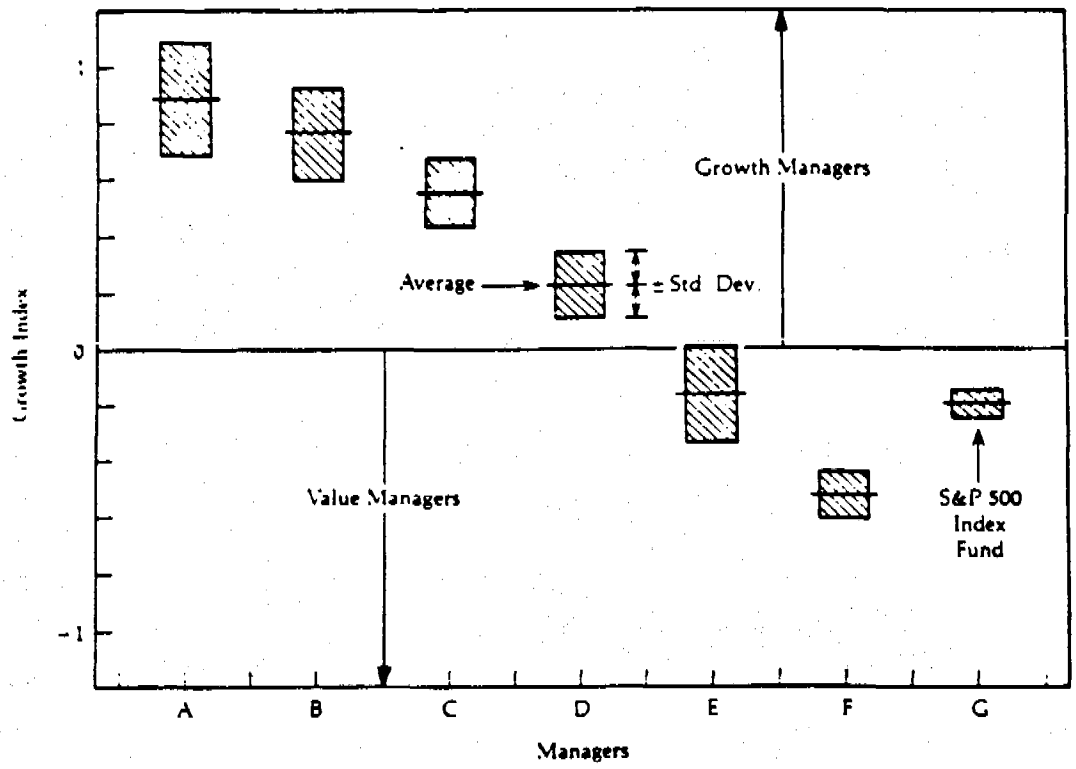
Introduced in the 1970s and primarily modeled on the S&P 500, standardized index funds have experienced rapid growth. They exceeded $15 billion by 1980 and have been growing at an average rate of about 40 per cent annually since that time. By year-end 1985, passively managed index funds will amount to an estimated $85 billion.

Customized Universes

The same techniques used in the construction of passive funds are available to produce customized universes that serve as a benchmark for performance measurement. In essence, a customized universe represents a given manager's "normal" portfolio—i.e., the universe of securities in which the manager prefers to operate.

By virtue of such factors as their investment philosophy, decision process or long-standing identification in the marketplace, managers

Figure C Growth and Value, 1980-1984 (Wilshire 5000 = 0)



tend to impose boundaries on themselves.* Even if a manager is highly active in switching among individual securities, he is unlikely to depart very far from the persistent characteristics that define his individual universe. Consequently, an investment manager appears to be performing well when his universe is performing well; when his universe is no longer in style, however, he may suddenly seem to be failing.

Figure C provides data on the universe of the equity managers for the Continental Group Pension Fund over the 1980–84 period. Common risk indexes, available from BARRA, were used to classify each manager according to growth orientation. Those managers with a positive growth orientation are labeled as growth managers; those with a negative growth orientation are classified as value managers.

The horizontal line through the midpoint of each black bar indicates the average level of the growth-orientation index of each manager over the five-year period. The black bar's extension above and below the horizontal line indicates the range of fluctuations over the period; approximately 68 per cent (one standard deviation) of the monthly figures is included in the area covered by the vertical bar.

This figure illustrates how traditional active managers restrict their operations to a segment of the market they themselves have chosen. As shown by the four bars in the upper part of the graph, growth managers remain growth managers year after year, even when growth stocks are no longer in style. Similarly, the value managers represented by the lower segment of the exhibit adhere to their style year after year. However competent these managers may be in selection of individual issues, they do not address the critical issue of when to hold growth stocks and when to hold value stocks.

Definition of a manager's universe permits identification of his contribution to total fund performance. The active manager is credited only for the difference between the returns from his actual portfolio and the index that has been selected, with his full agreement, to replicate his universe. With the aid of this more realistic method of performance measurement, it be-

* See Walter R. Good, "Measuring Performance," *Financial Analysts Journal*, May/June 1983, pp. 19–23 and Good, "Accountability for Pension Fund Performance," *Financial Analysts Journal*, January/February 1984, pp. 39–42.

comes clear that the strategic allocation of funds among investment universes provides the primary determinant of successful strategy. Since almost any universe can be replicated by a passive fund, advancing technology has opened the door to a new opportunity—actively managed universes.

Actively Managed Universes

Highly flexible active management of investment universes can be efficiently implemented by use of a limited number of funds with sharply different performance characteristics. In order to minimize transaction costs and facilitate strategy decisions, we focus on the six universes listed in Table I. They can be replicated readily at relatively low cost, and trading techniques developed in the construction of index funds provide for low transaction costs as adjustments in weightings are made. In selected circumstances, trading costs can be further reduced through use of stock or bond futures.

Decision Process

Successful active management of investment universes begins with the decision process. We focus on the same key variables that have long concerned investment strategists—business activity, corporate profits and dividends, interest rates and inflation. What is different is the way we use this information.

Our decision process, outlined in Figure D, is organized to address three questions. First, how will the key variables change over the coming year? Second, how will these changes affect the long-term assumptions underlying market prices? Third, what is likely to be the net effect on market prices of these changes in the long-term assumptions?

For purposes of illustration, our figures relate to the S&P 500. The valuation of the S&P 500 is basic to decisions concerning value stocks, growth stocks and small capitalization stocks, as well as to comparisons between stocks and bonds or cash. The same method is applied to the valuation of any of the customized universes to which active management is applied.

We develop forecasts of year-to-year changes in the key variables from inputs provided by a broad sample of forecasters selected to represent both leading financial institutions and the full range of widely used approaches to forecasting. All forecasts must be submitted on a specified day each month and must provide estimates of the same precisely defined varia-

Table I Investment Universes

Common Stocks	*Fixed Income*
Growth	Long Bonds (Over 10 Years)
Value	Intermediates (1–10 Years)
Small Capitalization	Cash Equivalents (Under 1 Year)

Figure D Decision Process

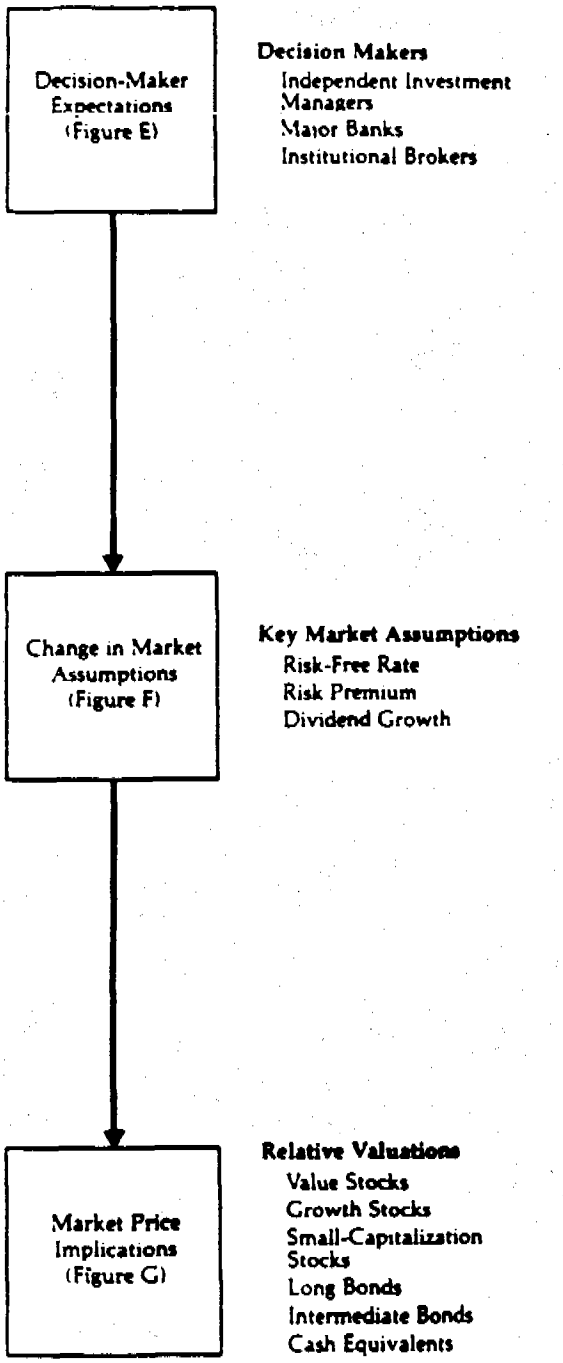
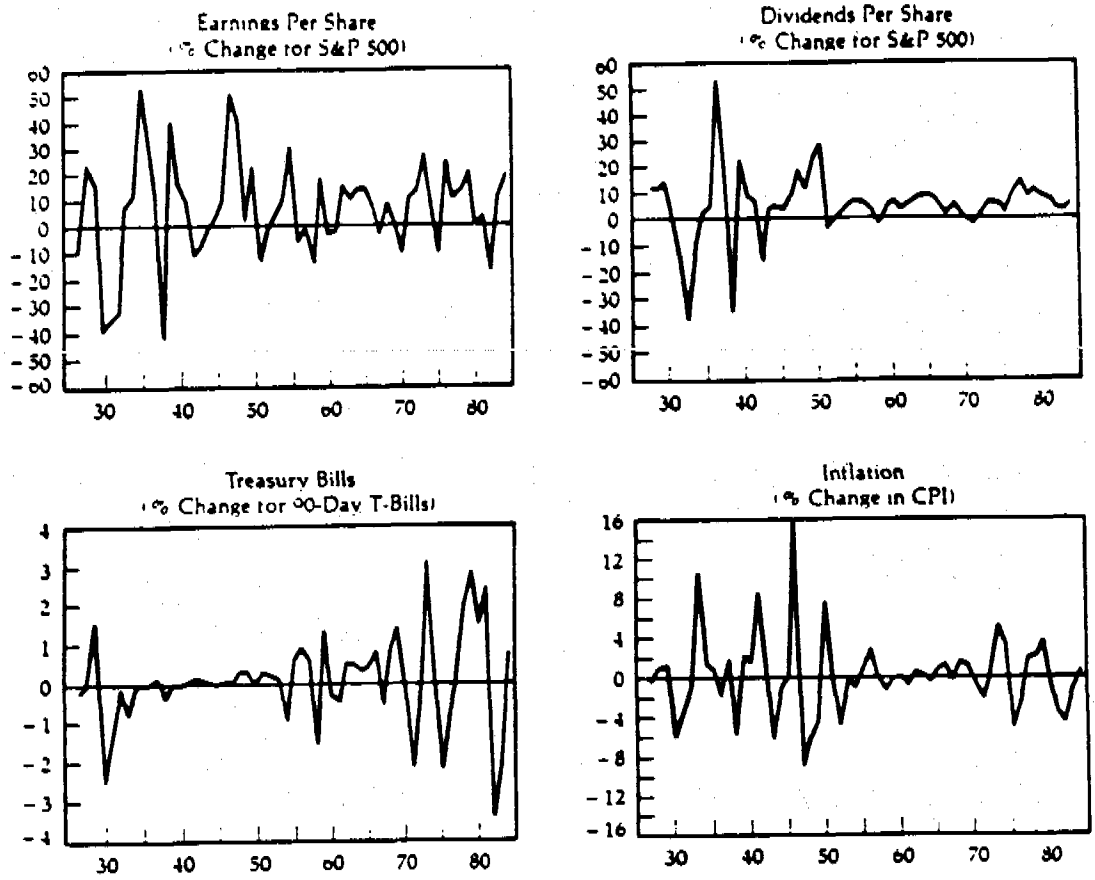


Figure E Annual Change in Key Variables



bles. We review the forecast daily and update it as necessary, frequently rechecking the reactions of the forecasters as new information becomes available.

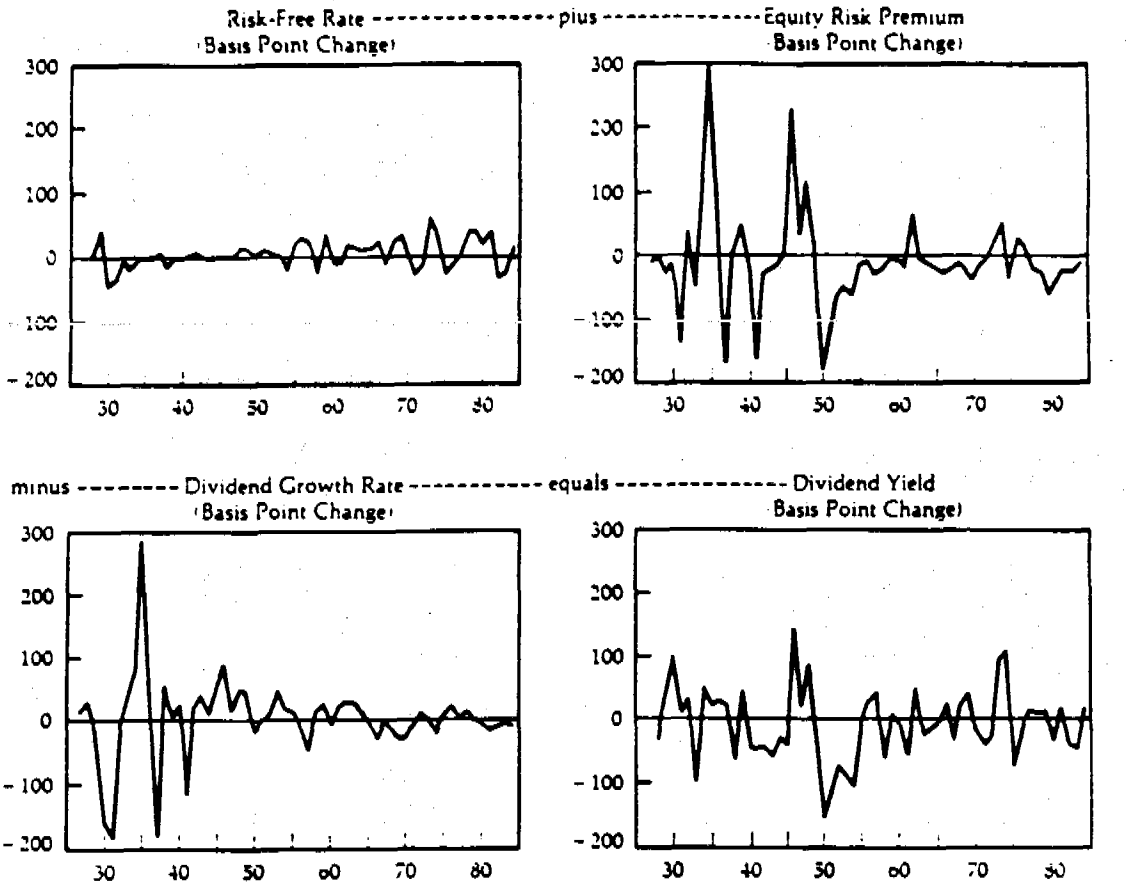
Figure E summarizes year-to-year changes in four key variables crucial to the valuation of the stock market. In practice, our decision process uses probability-weighted forecasts. The figure uses historical data—in place of forecasts—for changes in earnings, dividends, interest rates and inflation.

These short-term changes in the key variables are analyzed to estimate the long-term assumptions underlying security prices. A one-year change in any one of the variables will almost always translate into a much smaller change in the long-term market assumptions. There are three reasons for this.

1. The market consensus may have already anticipated all or part of the change. New information can affect market prices only to the extent it differs from expectations. Good news, if less favorable than expected, will affect market prices adversely. Similarly, bad news can be highly bullish if it is less negative than anticipated.
2. The market consensus will consider a portion of an unanticipated change to represent a temporary fluctuation. The market reaction will be heavily influenced by distortions in the relation of the variable in question to other variables and to its own recent history.
3. The market consensus allows for the changing volatility of the variable in assessing the significance of an unanticipated change. Other things equal, the higher the volatility, the less significance will be assigned to a given fluctuation in the variable.

Figure F shows calculated changes in the underlying long-term assumptions stemming from changes in the key variables. The first panel indicates the change in the long-term market assumption concerning the risk-free rate, which is influenced by the short-term

Figure F Change in Long-Term Market Assumptions



changes in interest rates shown in Figure E. The second panel traces changes in the market assumption concerning the risk premium in excess of the risk-free rate. Changes in the inflation rate are a primary factor affecting this calculation, but other factors, such as the level of market price relative to earnings and dividends, are also involved. We have therefore combined these factors to estimate the change in the risk premium. The third panel summarizes the change in the long-term assumption concerning dividend growth.

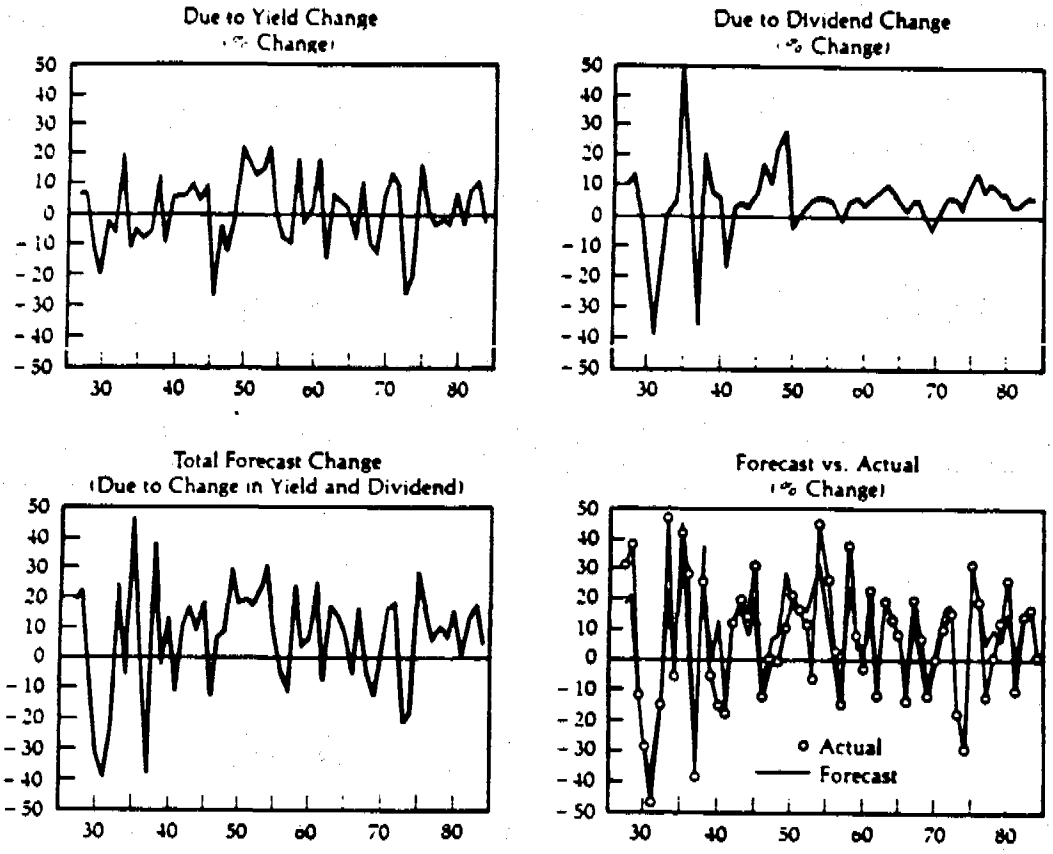
The fourth panel of Figure F shows the forecast change in dividend yield resulting from the changes in the assumptions indicated in the other three panels. We calculate changes in yield by adding changes in the assumptions concerning the risk-free rate and the risk premium and subtracting changes in the assumption for the dividend growth rate. This calculation is based on the principle that market prices adjust so that the required return (risk-free rate plus risk premium) is equal to the expected return (dividend yield plus dividend growth rate).

Figure G indicates the implications for market prices of the information included in Figure F. The first panel shows the changes in forecast market price resulting from the forecast change in yield. The second panel traces the indicated percentage change in the dividend for a year ahead. The sum of these two estimates provides our estimate of the one-year change in the S&P 500, as shown in the third panel. The fourth panel indicates the closeness of fit over the 58 years ended 1984 between our projected year-to-year changes in market price and the actual changes.

The Process in Action

In contrast to the projections based on historical data shown in the previous figures, Figure H illustrates the results attained over the 1982–84 period when the decision process was applied to forecasts secured from our survey partici-

Figure G Market Price Implications (Change in S&P 500)



pants. The previous figures represent only one decision each year. In practice, we routinely recalculate valuations at least once a month, more often if required. Consequently, the results in actual operation are consistent with those based on historical data.

The Record

For the five years ended 1984, we applied active management to the universes making up the Continental Group pension fund. Total fund performance for the five years amounted to 15.1 per cent, compared with 13.1 per cent for the median of our benchmark sample of pension funds. The two percentage point advantage added about $100 million to our pension fund, which amounted to close to $1 billion at the end of the period. More important, however, is how this performance advantage was attained.

Table II breaks down the sources of the fund's performance from October 1, 1981 through the end of 1984. During this 13-quarter period, the aggregate performance of the managers approximated the aggregate returns of their normal portfolios; the shortfall of one percentage point is partly attributable to transaction costs.

Table II Sources of Fund Performance

	Oct. 1, 1981–Dec. 31, 1984
Investment Policy	16.[illegible]
Investment Strategy	
Actively Managed Universes	+2.1%
Investment Managers	−1.1%
Total Fund	1.0[illegible]

During this same period, we consistently applied the decision process to the normal portfolios constituting our pension fund. As Table II shows, the active management of the investment universes added more than two percentage points to total fund performance. ■

Figure H S&P 500 Excess Return Index
(Total Return – T-Bills, December 1981 = 1.0)