

ECONOMIC DIRECTIONS

A Publication of Saint Vincent College's Alex G. McKenna Economic Education Series

CENTER FOR ECONOMIC AND POLICY EDUCATION, SAINT VINCENT COLLEGE, LATROBE, PENNSYLVANIA

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(The following is a lecture delivered by Dr. Burton G. Malkiel, Chemical Bank Chairman's Professor of Economics, Princeton University, at Saint Vincent College, Latrobe, Pennsylvania, on November 17, 1993 in the Center for Economic and Policy Education's Alex G. McKenna Economic Education Series.)

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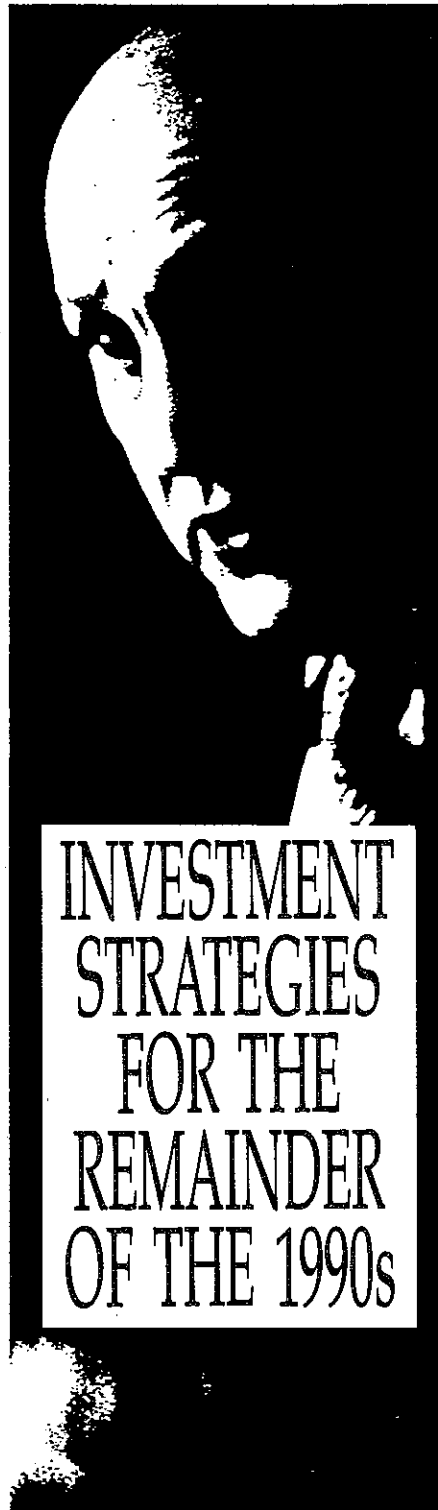
I would like to do two things today. I would like to present five useful principles for individual investors, and then talk about what I think are the sensible ways in which to make asset allocation decisions for the remainder of the 90s.

1. Risk and return are related.

Investment rewards can be increased only by taking on greater risk. This fundamental law of finance is supported by literally centuries of historical data. Exhibit 1 which shows returns from various investments since 1926 illustrates the point. A quick glance shows that over long periods of time common stocks have, on average, provided relatively generous total rates of return of about 10 percent. Stocks of riskier smaller companies have returned about 12 percent. These returns, including dividends and capital gains, have exceeded by a substantial margin the returns from safer long-term corporate bonds and Treasury Bills. The 1980s were particularly good for common stocks--shareowners earned returns over 17 percent per year.

The data shows, however, that common-stock returns are highly variable, as indicated by the range of annual returns, shown in adjacent columns of Exhibit 1. Returns from equities have ranged from a gain of over 50 percent (in 1993) to a loss of almost the same magnitude (in 1931). In 1987 the market lost 1/3 of its value in two weeks. Clearly, the extra returns that have been available to investors from stocks have come at the expense of assuming considerably higher risk. The question you must ask yourself is can you stand that amount of volatility?

J.P. Morgan once had a friend who was so worried about his stock holdings that he could not sleep at night. The friend asked, "What should I do about my stocks?" Morgan replied, "Sell down to the sleeping point." He wasn't kidding. Every in-



vestor must decide the tradeoff he or she is willing to make between eating well and sleeping well.

In all likelihood, your sleeping point will be greatly influenced by the way in which a loss would affect your financial survival. That is why the typical "widow in ill health" is often viewed in investment texts as unable to take on much risk. The widow has neither the life expectancy nor the ability to earn, outside her portfolio, the income she would need to recoup losses. Any loss of capital and income will immediately affect her standard of living. At the other end of the spectrum is the "dynamic young businesswoman." She has both the life expectancy and the earning power to maintain her standard of living in the face of any financial loss. Thus your age plays an important role in determining how much risk you will be comfortable taking. Generally the younger you are, the more risk you can comfortably assume and the larger the percentage of your assets should be invested in common stocks.

2. Your actual risk in stock and bond investing depends on the length of time you hold your investment and how well you are diversified.

These are the principles of risk reduction. The length of time you hold on to your investment and thus your "staying power" plays a critical role in the actual risk you assume from any investment decision. It is this important factor that also makes your age such a critical element in determining the allocation of your assets. Let's see why.

We saw in Exhibit 1 that long-term bonds over the past 60 years have provided a 5.3 percent average annual rate of return. In any single year, however, this rate of return could stray far from the yearly average. Indeed, in many individual years, the rate of return from holding long-term bonds has actually been negative. What if I told you that today you could invest in a 6 3/4 percent 25-year bond and that if you promise to hold it for exactly 25 years you will earn exactly 6 3/4 percent. Impossible? Not at all. If you buy a 25-year zero coupon U.S. Government Bond today and if you held it until maturity you will earn exactly 6 3/4 percent - all guaranteed by the U.S.

Treasury. Of course, the rub is that if you find you have to sell it next year, your rate of return could be 20 percent, 0 percent, or even a substantial loss if interest rates rise sharply. I think you can see why your age and the likelihood that you can stay with your investment program not only affects the risks you can assume but even determines the amount of risk involved in any specific investment program.

The situation is similar for investing in common stocks as can be seen in Exhibit 2. A substantial amount of the risk of common stock investment can be eliminated by adopting a program of long-term ownership of common stocks and sticking to it through thick and thin.

If you held a diversified stock portfolio (such as the Standard & Poor's 500 Stock Index) during the period from 1950 through 1990, you would earn, on average, a quite generous return of about 10 percent. But for a one-year holder of common stocks, Exhibit 2 shows the range of outcomes is certainly far too wide for an investor who has trouble sleeping at night. In one year, the rate of return from a typical stock portfolio was 52 1/2 percent, while in another year it was negative by 26 1/2 percent. Clearly, there is no dependability of earning an adequate rate of return in any single year. If you have money to invest for only a single year and



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Mr. Lee J. Weissert
Assistant Professor of Economics

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EXHIBIT 1 Returns from Various Investments, 1926-1992

Series	Average Annual Rate of Return	Number of Years Returns Are Positive	Number of Years Returns Are Negative	Highest Annual Return (and Year)	Lowest Annual Return (and Year)
Common Stocks	10.2	47	20	54.0% (1933)	-43.3% (1931)
Small Company Stocks	12.0	46	21	142.9% (1933)	-49.8% (1931)
Long-Term Corporate Bonds	5.3	52	15	43.8% (1982)	-8.1% (1969)
U.S. Treasury Bills	3.7	66	1	14.7% (1981)	-0.0% (1940)
Inflation Rate	3.1	57	10	18.2% (1946)	-10.3% (1932)

Source: Ibbotson and Sinquefeld, *Stocks, Bonds, Bills, and Inflation*, 1992 Yearbook.

EXHIBIT 2

Range of Annual Percentage Returns on Common Stocks For Various Time Periods: 1950-1992

Number of Years	Highest Return	Lowest Return
1 year	+52.6	-26.5
5 years	+23.9	-2.4
10 years	+19.4	+1.2
15 years	+16.6	+4.3
20 years	+13.4	+6.5
25 years	+11.2	+7.9

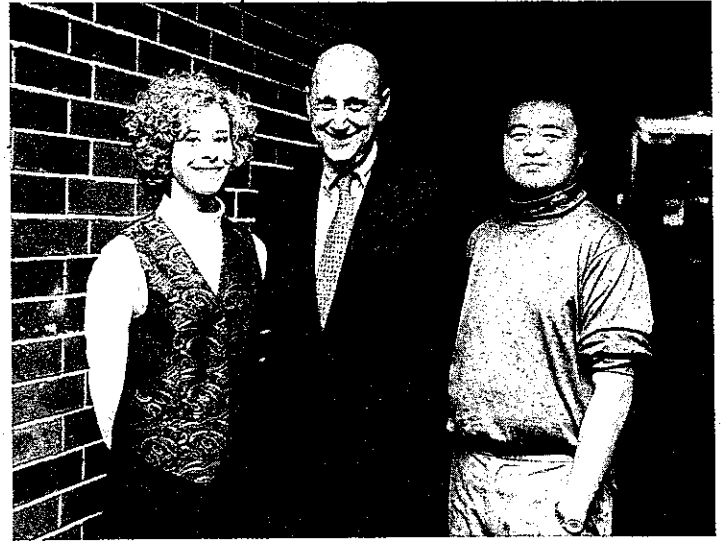
EXHIBIT 3

Subsequent Performance of Top Twenty Mutual Funds From the 1980s

	1970-1980		1980-1990	
	Rank	Average Annual Return (%)	Rank	Average Annual Return (%)
1. Twentieth Century Growth	1	27.12	151	11.24
2. Templeton Growth	2	22.34	101	12.68
3. Quasar Associates	3	20.56	161	10.99
4. 44 Wall Street	4	20.13	260	-16.83
5. Pioneer II	5	20.12	112	12.49
6. Twentieth Century Select	6	19.95	17	15.78
7. Security Ultra	7	19.74	249	2.22
8. Mutual Shares Corp.	8	19.52	29	15.23
9. Charter Fund	9	19.50	97	12.78
10. Magellan Fund	10	18.87	1	21.27
11. Over-the-Counter	11	18.13	210	9.24
12. Amer. Cap. Growth	12	18.11	243	4.90
13. Amer. Cap. Venture	13	17.97	136	11.75
14. Putnam Voyager	14	17.41	65	13.88
15. Janus Fund	15	17.29	18	15.74
16. Weingarten Equity	16	17.28	30	15.21
17. Hartwell Leverage Fund	17	16.92	222	8.44
18. Pace Fund	18	16.82	50	14.53
19. Acorn Fund	19	16.50	147	11.36
20. Stein Roe Special Fund	20	15.75	48	14.54
Average of 20 Funds		19.01		10.87
Overall Fund Average		9.74		11.56
S&P 500		8.45		13.87
No. of Funds with 10-Year Record		211		260



WELCOME — Dr. Burton G. Malkiel, Chemical Bank Chairman's Professor of Economics from Princeton University (center) was welcomed as the Alex G. McKenna Economic Education Series lecturer by Mr. James G. Meredith, C.P.A., (left) executive vice president and chief financial officer of Hefron-Tillotson, Inc. and Dr. Gary M. Quinlivan (right), executive director of the Center for Economic and Policy Education at Saint Vincent College.



STUDENT WELCOME — Welcoming economist Dr. Burton G. Malkiel (center) to Saint Vincent College were Liana M. Swalligan (left), a junior economics major from Johnstown, and Xiaotan Ji (right), an economics major pursuing a second degree from Forest Hills, New York. Dr. Malkiel is the author of seven books including *A Random Walk Down Wall Street*, one of the best-selling investment and financial planning books ever written.

you want to be certain that you will earn a positive rate of return, a one-year U.S. Treasury security or a one-year CD is the investment for you.

But note how the picture changes if you can hold on to your common stock investments for 25 years. While there is some variability in the long-run annual average rate of return achieved, depending upon the exact 25-year period in question, that variability is miniscule. If you invested in the worst 25-year period you still made 8 percent a year. This is true even if we extend the chart back to the 1920s. You are reasonably sure of earning generous returns from common stocks only if you can hold them for a relatively long period of time. Therefore, the longer the time period over which you hold onto your investments, the greater should be the share of common stocks in your portfolios.

Risk can also be reduced by diversification. Stock portfolios should be broadly diversified (domestically and internationally) and should be balanced with bonds, money market funds and real estate (which most investors can achieve with an equity position in a single family home). Distributing your eggs in many baskets will tend to smooth out the year to year variability in your investment returns and allow you to sleep much better at night.

3. Markets are very efficient.

The consistent finding of years of academic research is that securities markets are extremely efficient in adjusting to all information that arises concerning individual stocks or about the

EXHIBIT 4
How Retirement Funds Can Build:
What Happens to an Investment of \$100. a Month
Earning an 8 Percent Return Compounded Monthly.

Year	Cumulative Investment	Annual Income	Cumulative Income	Total Value
1	\$1,200	\$61	\$61	\$1,261
5	\$6,000	\$531	\$1,435	\$7,435
10	\$12,000	\$1,373	\$6,483	\$18,483
20	\$24,000	\$4,481	\$35,294	\$59,294
30	\$36,000	\$11,343	\$113,408	\$149,408

EXHIBIT 5
Dividend Yield to Predict Real Market Return

Decile	Dividend Yield Range	Average Annualized Real Return			
		1 Year	5 Years	10 Years	15 Years
1	6.51 - 14.90	28.00	16.97	11.13	11.66
2	5.58 - 6.51	10.35	13.71	10.71	10.85
3	5.00 - 5.52	10.11	7.49	9.96	9.90
4	4.61 - 4.97	10.62	6.41	8.98	8.90
5	4.24 - 4.55	16.54	6.34	6.91	5.90
6	3.79 - 4.22	6.88	2.80	5.42	5.61
7	3.50 - 3.79	7.06	4.42	6.05	5.05
8	3.23 - 3.50	8.17	1.35	1.92	2.07
9	3.02 - 3.23	1.30	2.04	1.32	1.25
10	2.67 - 3.02	-6.81	-0.16	-0.67	1.68

stock market as a whole. If market prices efficiently reflect all that is known about individual companies, then random selection of a portfolio of individual stocks will do as well as the professional selections. The way I put it in my 1973 1st edition of *A Random Walk Down Wall Street*, "A

blindfolded chimpanzee throwing darts at the *Wall Street Journal* can select a portfolio that does as well as the experts."

My book was initially treated with derision in some quarters in Wall Street. *Business Week* (always loving a controversy) gave my book to a chartist to review

(I was particularly critical of them) and he predictably did a hatchet job on me. But as time went on professionals became far more humble. I recently asked myself how well the thesis has held up in the years since *Random Walk* was first published. The answer is very well indeed. Over two-thirds of professional investment managers have been outperformed by the unmanaged Standard and Poor's 500-Stock Index. The average pension fund has underperformed the S&P by about 1 1/4 percentage points. If the S&P were an athlete, they would be testing it for steroids.

Aren't there some portfolio managers who have been consistently better than average? An experiment I did (in the 1st edition of *Random Walk*) checked the top portfolio managers in one period of time and then asked if they continued their superiority in the next period. The answer is a resounding no. For example, I made up a list of the 10 best portfolio managers of the 1960s and then followed their performance over the following 5 years. These managers were all almost deified in the press and written up with the awe and respect given to Michael Jordan. At the head of the list were names like Mates and Carr who had achieved more than double the market return during the late 60s. But in retrospect all they had done was to load up their portfolios with the particularly popular and risky "go-go" stocks of the swinging 60s and it was "fly now pay later." Their subsequent performance was absolutely dismal. Their rankings went from the top to near the bottom. In fact, the analysis couldn't be continued for more than 5 years because most of the managers went out of business to pursue other opportunities. For example, Fred Mates went from #1 to around #500. The asset value of the fund went from \$15.51 in 1968 to \$1.12 in 1974. He was later involved in a new fad and opened up a single's bar appropriately named "mates". Fred Carr #11 has recently taken stockholders to the cleaners again as his Executive Life Insurance Company which was overinvested in the most speculative of junk bonds, went bankrupt and was seized by the regulators.

Similarly the portfolio managers of the 1970s failed to out-perform in the 1980s, as is shown in Exhibit 3, and even some of the truly consistent performers -- people for whom I have enormous respect -- have recently stubbed their toes. Even the legendary Warren Buffet, the sage of Omaha, has recently had quite unsatisfactory investment performance with big recent investments such as USAir and Champion International. There is an exception, Peter Lynch (see fund number 10) -- the phenomenally successful portfolio manager of the Magellan Fund -- quit while he was ahead and retired. The

lessons are clear. With large numbers of portfolio predictors there will always be someone who called the last market turns -- who outperformed in a particular period. But no one can consistently beat a buy and hold strategy. So what's a smart investor to do? If you can't beat the market, join it by investing in one of the broad based market indices such as the Standard & Poor's 500 Stock Index or the broader



*"A blindfolded chimpanzee
throwing darts at the Wall
Street Journal can select a
portfolio that does as well as
the experts."*

Wilshire 5000 Index or even international index funds. Low cost no-load mutual funds are available to enable even investors with limited means to do this.

When you buy an index fund you give up the chance of boasting at the golf club about the fantastic gains you've made by picking stock-market winners. Thus many

critics refer to index-fund investing as "guaranteed mediocrity." But experience clearly shows that index-fund buyers actually achieve well above average returns.

Many individuals find that the guarantee of playing the stock-market game at par every round is a very attractive one. Moreover, by investing passively (and not switching from security to security), you will tend to minimize brokerage charges and your tax bill. And now even institutional investors such as the large pension funds have invested over \$250 billion in index funds.

4. What do I do if I have no money?

One of the most common reactions students have to discussions of financial investing is "That's all very interesting -- if only I had money to invest." Many people of limited means believe it is impossible to accumulate a meaningful financial nest egg such as \$50,000, \$100,000 or more. The fact is that proper investment techniques are particularly useful for people who do not have a nest egg to start with -- especially young people who have no accumulated savings.

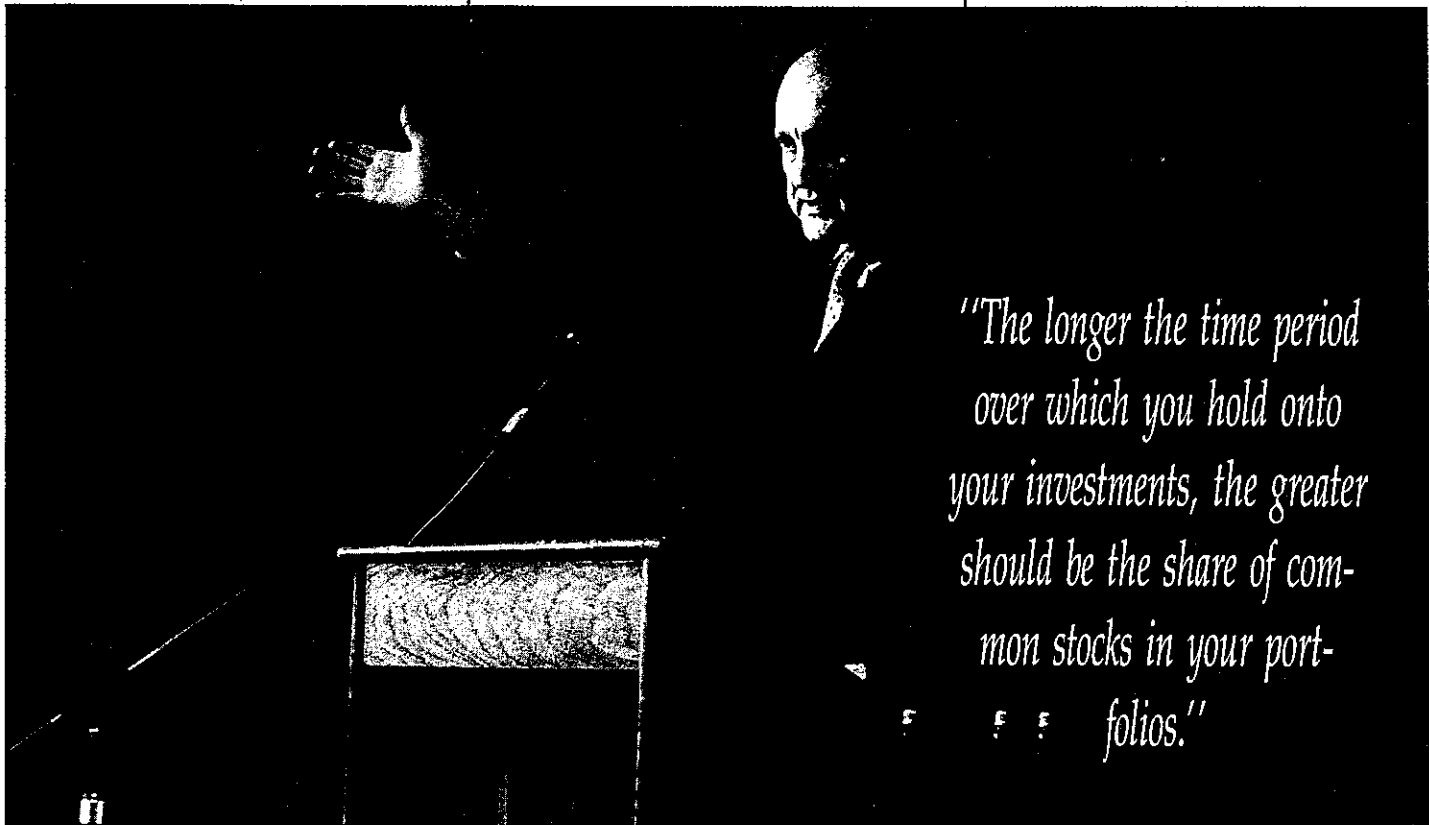
A program of regular savings each week -- persistently followed such as through a payroll savings plan -- can in time produce substantial sums of money. Can you afford to put aside \$23 per week? Or \$11.50 per week? If you can, the possibility of eventually accumulating a large retirement fund is easily attainable. The power of compound interest is one of the most powerful forces ever discovered. I can't tell you how to get rich quick as most late night TV shows do -- but I can tell you how to get rich slowly.

Exhibit 4 shows the results from a regular savings program of \$100 per month. The last column of the table shows the total values that will be accumulated over various time periods at an 8 percent interest rate. I assume that the savings can be made in an IRA or other tax-favored savings vehicle so income taxes on interest earnings can be avoided. It is clear that regular savings of moderate amounts of

About the Series

The Alex G. McKenna Economic Education Series is presented by the Center for Economic and Policy Education at Saint Vincent College. These periodic lectures are open to the general public and their purpose is to explore the role of free markets in solving many of the social problems confronting the United States and the world today. Dr. Gary M. Quinlivan, professor of economics at Saint Vincent, directs the series.

The Alex G. McKenna Economic Education Series is made possible by a grant from the Philip M. McKenna Foundation Inc. of Latrobe, Pennsylvania.



"The longer the time period over which you hold onto your investments, the greater should be the share of common stocks in your portfolios."

money make the attainment of meaningful sums of money entirely possible, even for those who start off with no nest egg at all.

You will need to pick no-load mutual funds to accumulate your nest egg since direct investments of small sums of money would be prohibitively expensive. Also mutual funds permit automatic reinvestment of interest, or dividends and capital gains, as is assumed in the table.

Finally, make sure you check if your employer has a matched savings plan. Obviously, if by saving through a company sponsored payroll savings plan you are able to leverage your savings with company contributions and gain tax deductions as well, your nest egg will grow that much faster. A company savings program, such as a 403b plan, can shelter your earnings from tax.

5. Match your investment to your needs.

It is incredible how many people go astray by mismatching the types of securities they buy with their risk tolerance and their income and tax needs. You can't seek safety of principal and then take a plunge with an undiversified portfolio of small high technology common stocks -- you need a diversified portfolio. You can't shelter your income from high marginal tax rates and then buy taxable corporate bonds outside of your retirement plan, no matter how attractive these may be -- you need tax-exempt bonds. You can't prepare for your daughter's first college tuition bill next year by buying a common-stock index fund --

you need a one-year Certificate of Deposit. Yet, the annals of investment counselors are replete with stories of investors whose security holdings are inconsistent with their investment goals. By recognizing the kinds of risks and rewards involved with different classes of securities and matching those securities to your income needs and risk tolerances you can remove much of the pain that is often associated with investing.

Financial Returns for the Remainder of the 1990s

Let me make now some comments about the financial markets today and the returns that are likely for the remainder of the century. No one can predict short-term movements in the market with any consistent degree of accuracy. I want to emphasize I am not making a short-run forecast for the stock market. Nevertheless, I believe that it is possible to judge the appropriateness of prices and yields for the long-run holder of financial assets. And I am convinced that investors are likely to be quite disappointed with the investment returns they are likely to receive from them over the next several years.

A variety of indicators suggest that common stocks in the United States today are at best only moderately attractive. Investors in common stocks during the remainder of the 1990s will be fortunate to earn as much as 10 percent total return that has been typical of the century as a whole. Price-earnings multiples have come down with improved earnings but

are still well above the midpoint of their recent historical range. And when you look at the subsequent returns from the S&P when you buy stocks at relatively high P/E multiples, we find that investors have received below average returns.

Dividend yields, now at about 2.8 percent for the Standard & Poor's 500 Stock Index, are just about at their lows for the century. Initial dividend yields are an excellent predictor of future returns. When you buy stocks at initial dividend yields below 3 percent, the subsequent returns have tended to be very low. (Exhibit 5) And the ratio of stock prices to book values and to the replacement cost of corporate assets no longer seems especially cheap as it did at the start of the 1980s. Thus, a variety of measures suggest that stocks seem in the pricey range of their historical valuations and with respect to dividend yields and P/Es they seem rich. Moreover, there is some evidence of reversion to the mean in stock returns. When you have a decade like the 1980s with above average returns, you are more likely to see realized returns fall rather than rise. So valuations are rich and reversion from recent high returns is likely.

Let me now say a word about the economic outlook. I believe that corporate profits will grow more slowly during the 1990s than during the 1980s. I expect that the recovery will continue to be less vigorous than normal and the economic expansion of the 1990s will be much slower than in the eighties. In addition,

corporate profit growth which has been helped by downsizing will be restrained by the new FASB regulations which will require accruing expenses for post-retirement health benefits and by the small increase in corporate tax rates as well as by possible taxes or mandated insurance coverage to fund the new health care system.

Bond yields have also come down quite sharply in recent months making the bond market considerably less attractive. Long-

term governments now yield about 6 1/4 percent. Even if inflation stays at the 3-3 1/2 percent level over the long pull--this leaves a real return of only 3 percent. While 3 percent is better than the Ibbotson numbers have shown historically, it must be noted that the historical figures include 10 years of pegged rates and currently bond prices are far more volatile. Also great worldwide needs for capital including the need to rebuild Eastern Europe and Russia suggest to me that we have probably seen the end of a multi-year

rally in bonds.

In sum, the rest of the 1990s won't be like the 1980s. Returns are going to be very much poorer--more likely to be below average than above. But even if interest rates stay low, I don't think we will get further price appreciation from falling rates and, just as is the case for stocks, bond returns will be far below the 12 1/2 percent returns that were earned by investors during the 1980s. The bottom line is: Caution for remainder of the 1990s.

Center Announcements

Future Alex G. McKenna Economic Education Series lecturers include: Dr. Karen I. Vaughn of George Mason University (February 16, 1994, "Did We Learn the Right Lessons from the Fall of Communism?") and Dr. Frederick S. Mishkin of Columbia University (March 25, 1994, "Preventing Financial Crises".)

On December 1, 1993, the Center hosted the second lecture in its Public Policy Lecture Series. Dr. Thomas E. Mann of the Brookings Institution delivered a lecture entitled "Institutional Reform and Democratic Renewal." The theme for the 1993/94 academic year is **The Reinventing of Government.**

Congratulations to the following winners of the Alex G. McKenna Economic and Policy Scholarship Awards: Faye L. Carpenter of Belle Vernon, PA; Carl W. Banks of Oakmont, PA; and Ann Marie Lund of Gibsonia, PA.



PLAQUE HONORS SCHOLARSHIP WINNERS — A custom-designed plaque has been acquired by the Saint Vincent College Economics Department to recognize the distinguished alumni recipients of the Alex G. McKenna Economic and Policy Scholarship. Dr. Gary M. Quinlivan (right), professor and chairperson of the Saint Vincent College Economics Department, shows the new plaque to two current student recipients, Mr. Grant R. Gulibon, C'94, of Stahlstown, Pennsylvania, (left) and Ms. Jennifer A. Klimko, C'94, of Uniontown, Pennsylvania, (center). Prior award recipients honored include Adrienne M. Geis, C'89; Randall J. Geitner, C'89; John P. Beer, C'90; Virginia I. Robson, C'92; and Robert C. Baldini, C'93. ▲



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