

The predictions of Reaganomics, that tax reforms would resurrect thriftiness, were shown to be simply false by Mr. Feldstein's statistics. The theory of the "rational-expectationist," Professor Robert Barro of the University of Chicago--that our citizenry would take cognizance of (1) the structural deficit ahead and (2) the future tax burdens this would involve and, in anticipation, (3) would cut down now on their consumption so that (4) no net total thriftlessness would result from the structural deficit--was too preposterous for Mr. Feldstein's intellect to accept. Even ivory tower David Ricardo knew better than that in 1817.

Paul Samuelson  
The New York Times  
July 8, 1984

Or, to put it another way:

The pronouncements of academics who espouse the theory of rational/efficient markets--the notion that the prices of individual stocks differ little from their intrinsic values--because investors take cognizance of (1) the fact that a share of stock represents a perpetual claim on all future earnings and dividends of a company that (2) must be discounted over an infinite horizon with allowance for varying levels of "risk" which (3) can be "addressed" in a properly specified mean/variance efficient portfolio is too preposterous for most experienced investors to accept--even John Maynard Keynes knew that in 1937.

$$P_t = \frac{D_1}{1+k} + \frac{D_2}{(1+k)^2} + \frac{D_3}{(1+k)^3} + \dots + \frac{D_t}{(1+k)^t} = \sum_{t=1}^T \frac{D_t}{(1+k)^t}$$

CONVERGENCE TENDENCY OF PROFITABILITY AND GROWTH  
Five Year Average

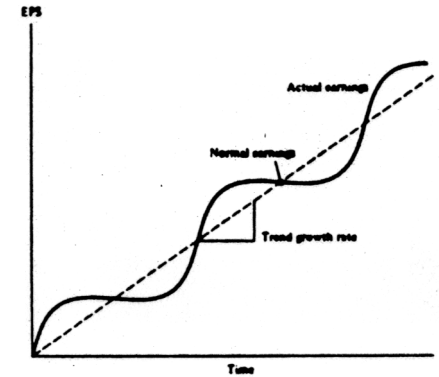
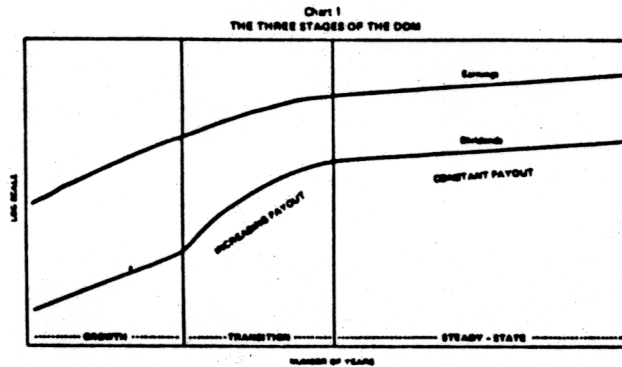
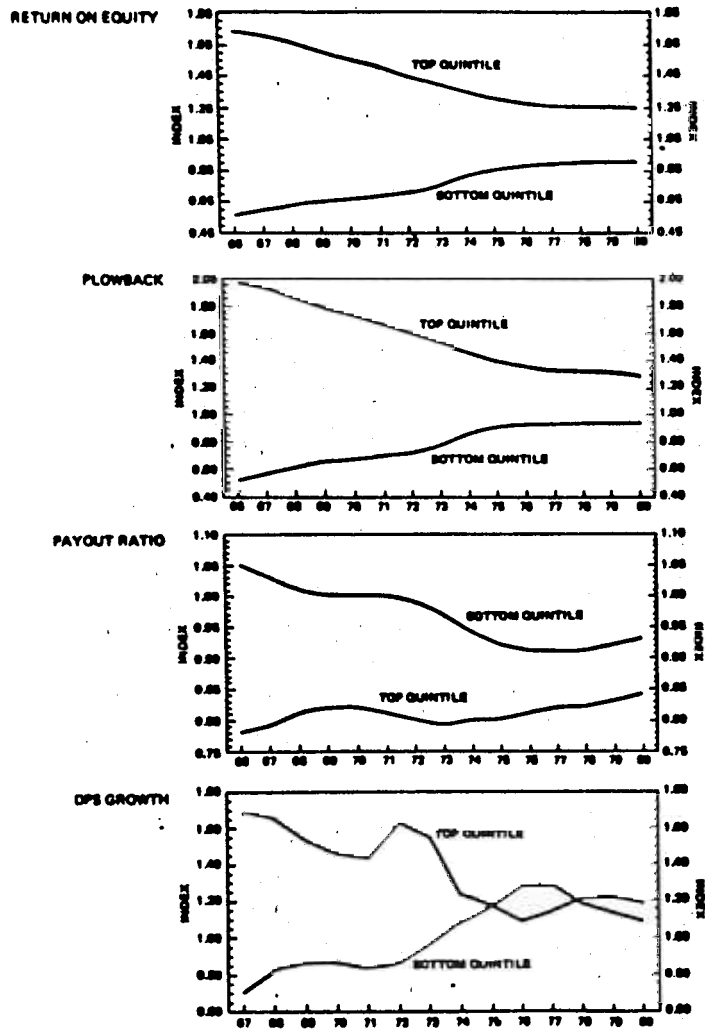


Figure 5-1 Cyclical growth pattern.

Assuming equal weights ( $W_A = W_B = W_C = 1/3$ ), and using the data in Table 1-3, we calculate the expected return and variance as follows:

$$(1-7) \quad S_p^2 = \sum_{i=1}^n S_i^2 W_i^2 + 2 \sum_{i < j} C_{ij} W_i W_j$$

$$S_{abc}^2 = S_A^2 W_A^2 + S_B^2 W_B^2 + S_C^2 W_C^2 + 2C_{AB} W_A W_B + C_{AC} W_A W_C + C_{BC} W_B W_C$$

$$= (378.00)(1/3)^2 + (245.00)(1/3)^2 + (138.50)(1/3)^2 + 2[(150.00)(1/3)(1/3) + (142.00)(1/3)(1/3) + (124.00)(1/3)(1/3)]$$

$$= 41.77 + 27.22 + 15.17 + 2(46.22) = 178.61$$

$$S_{abc} = \sqrt{S_{abc}^2} = \sqrt{174.30} = 13.29\%$$

The calculation of the expected portfolio return is straightforward. For the equal-weighted three-stock example,

$$(1-5b) \quad E(\bar{R}_p) = \sum_{i=1}^n E(\bar{R}_i) W_i$$

$$E(\bar{R}_{abc}) = E(\bar{R}_A) W_A + E(\bar{R}_B) W_B + E(\bar{R}_C) W_C$$

$$= (14\%)(1/3) + (14\%)(1/3) + (10\%)(1/3) = 12.67\%$$

Now that we have examined how to quantify a portfolio's expected return, variance, and standard deviation, let's consider again why investors hold portfolios.