

The Impact of Investor Socioeconomic Characteristics on Risk and Return Preferences*

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The balancing of risk and return represents the classic dilemma faced by investors. In theory, the investor seeks to maximize his overall rate of return consistent with the level of risk he feels appropriate. Assuming that the investor largely defines his own risk and return preferences, what factors significantly influence these choices. The literature and a priori reasoning suggest that these preferences are influenced by many factors such as the investor's personal and financial position [1]. Further, it appears reasonable that investors with similar socioeconomic characteristics tend to have similar risk-return preferences. Stated in another way, investors differ significantly regarding their objectives, tastes, and needs; however, most of these differences can be summarized in terms of the risks and returns they perceive as appropriate [7].

Some potential relationships between investor socioeconomic characteristics and their risk and return preferences have been analyzed on either an a priori or empirical basis. However, there has not been a great deal of empiricism on the positive aspects of investor behavior (e.g., [2,3]). A typical statement is that older investors tend to be more interested in income than younger investors [1]. Despite the intuitive appeal of such statements, additional empirical research is needed to determine whether investor socioeconomic characteristics do, in fact, influence their risk and return preferences. The purpose of this study is to provide some empirical evidence on the relationships, if any, of selected socioeconomic characteristics with the importance individual investors assign to the risk and return characteristics of common stock. Specifically, the study examines the relationship between each of eight socioeconomic characteristics and five risk and return preference variables.

Research Design and Method

Although a relatively large array of socioeconomic characteristics might reasonably be expected to influence investor risk and return preferences, the following characteristics were selected for analysis: age; sex; marital status; decision orientation; education; income; occupation; and portfolio size (\$). These characteristics were selected on the basis of a review of the literature and by judgment. While the list is not exhaustive, it does reflect those variables given attention in the investments literature. Of these eight variables, the one labeled "decision orientation" requires some explanation. It may be hypothesized that whether or not an investor usually makes his own investment decisions may influence the risk and return characteristics he seeks in common stock. For example, making decisions regarding common stock transactions may reflect a sense of investor independence and confidence. Investors with confidence in their decision-making ability may tend to be risk takers and seek relatively high returns on their investments.

A large number of risk-return characteristics may be attributed to common stock. To determine the impact of the eight socioeconomic factors on the importance investors assign to the risk and return characteristics of common stock, five variables were selected for study. Three were selected as proxy measures of risk: market risk, the risk of losing money on the stock; marketability, the ease with which the stock can be sold; and price stability, the stability of the market price of the stock. Two additional variables were selected to represent the returns on common stock: expected dividend yield and expected price appreciation. Investor responses concerning their perceptions of the importance of these five variables provide an indication of the risk and return preferences of those sampled.

The data were gathered in late 1971 by means of a mail questionnaire using a systematic sampling procedure. A reasonably proportional sample of 1,623 was drawn from the active customer lists of five brokerage firms in metropolitan Washington, D. C. The inferences of the study may be limited to the investors in this geographic area, who differ somewhat in their socioeconomic characteristics from investors in general [2]. Each investor was requested to indicate the relative importance of each risk and return variable in his common stock decision process on a five-point equal-interval scale. Investors also were asked to classify themselves within each of eight socioeconomic characteristics.

The data obtained from 851 respondents were tabulated and placed in contingency tables for chi-square tests of independence. Chi-square was selected because it makes no assumptions regarding the underlying, general shape of investor preference patterns and socioeconomic

characteristics [6]. Chi-square permits hypothesis testing of the following type: the importance investors attach to a risk-return variable (e.g., expected dividend yield) is either independent of or dependent on investor socioeconomic characteristics (e.g., age category). A .01 level of significance was used to determine whether the test's results were indicative of independence or dependence between the specified variables.

Findings

The influence of *age* on the importance investors attach to expected dividend yield is shown in Table 1. Expected dividend yield is more important to older than to younger investors, a finding consistent with the literature [1,4,5,9]. Data in the table also reveal that expected price appreciation is more important to younger investors; this finding also is consistent with the literature [1,4,5,9]. Data in the table show that marketability is more important to older than to younger investors. This general finding is expected if one considers older persons as being more risk averse than younger investors (although age did not significantly influence the other two risk variables, price stability and market risk).

The findings indicate that *sex* has a significant impact on two risk-return variables: expected dividend yield and price stability. The results in Table 2 disclose that expected dividend yield is more important to females than to males. This finding supports a conclusion reached by Potter [9]. However, the lack of a significant relationship between sex and expected price appreciation disagrees with the work of Butters et al., who found that the proportion of men investing for capital appreciation is much higher than the proportion of women [4]. A tendency for price stability to be more important for females than for males also is indicated in Table 2.

The tests reveal that *decision orientation* has a significant influence on the importance investors attribute to both return variables, expected dividend yield and expected price appreciation. However, none of the risk variables are significantly influenced by decision orientation. The data shown in Table 3 reveal that expected dividend yield is more important to those who usually obtain assistance in making common stock decisions; and that expected price appreciation is more important to those who usually make their common stock investment decisions without assistance.

Marital status has an impact on one return variable, expected dividend yield. Conversely, marital status was not found to be significantly related to expected price appreciation, price stability, marketability, or market risk. Data in Table 4 show that expected dividend yield is more important to separated, divorced, or widowed investors

Table 1: Age and the Importance of Expected Dividend Yield, Expected Price Appreciation, and Marketability

Variable	Percentage by Age		
	Under 35	35 to 54	Over 54
<u>Importance of Expected Dividend Yield^a</u>			
None	13.5	10.8	7.8
Slight	36.9	27.8	11.2
Moderate	27.5	34.9	32.2
Great	15.8	20.0	34.1
Maximum	$\frac{6.3}{100.0}$	$\frac{6.4}{100.0}$	$\frac{14.6}{100.0}$
<u>Importance of Expected Price Appreciation^b</u>			
None, slight or moderate	9.9	9.2	14.1
Great	23.0	30.0	41.5
Maximum	$\frac{67.1}{100.0}$	$\frac{60.8}{100.0}$	$\frac{44.4}{100.0}$
<u>Importance of Marketability^c</u>			
None	7.7	7.5	7.3
Slight	31.1	19.3	15.6
Moderate	35.6	31.4	29.3
Great	18.0	33.0	33.2
Maximum	$\frac{7.7}{100.0}$	$\frac{8.7}{100.0}$	$\frac{14.6}{100.0}$

$$a \chi^2 = 64.36, p \leq .01, 8 \text{ d.f.}$$

$$b \chi^2 = 25.55, p \leq .01, 4 \text{ d.f.}$$

$$c \chi^2 = 34.28, p \leq .01, 8 \text{ d.f.}$$

than to single or married investors. This general finding supports the findings of Potter [9], but not those of Hoeke [5].

The level of *education* is related only to the importance investors assign to price stability. Conversely, education was not found to be significantly related to investor attitudes concerning expected divi-

Table 2: Sex and the Importance of Expected Dividend Yield and Price Stability

Variable	Percentage by Sex	
	Male	Female
<u>Importance of Expected Dividend Yield^a</u>		
None	11.7	6.0
Slight	27.8	17.9
Moderate	32.1	33.6
Great	21.9	24.6
Maximum	6.6 100.0	17.9 100.0
<u>Importance of Price Stability^b</u>		
None	4.7	6.7
Slight	21.5	6.7
Moderate	40.9	36.6
Great	26.5	32.1
Maximum	6.4 100.0	17.9 100.0

^a $\chi^2 = 25.53, p \leq .01, 4 \text{ d.f.}$

^b $\chi^2 = 33.66, p \leq .01, 4 \text{ d.f.}$

dend yield, expected price appreciation, marketability, or market risk. The finding that those investors with less education find price stability more important than those with at least some college training is shown in Table 5. This finding, though not strictly comparable, is viewed as inconsistent with Potter's finding of a low, yet significant correlation between little education and the desire for quick profits through trading [9].

Family income influences only the importance investors assign to expected dividend yield. Thus, income does not significantly influence expected price appreciation and the risk variables, price stability, marketability, and market risk. These findings are not totally consistent with the results of other studies. For example, Butters et al. found that the proportion of investors desiring capital appreciation increased with higher income levels [4].

Table 3: Decision Orientation and the Importance of Expected Dividend Yield and Expected Price Appreciation

Variable	Percentage by Decision Orientation	
	Usually Receive Help	Usually Make Own Decision
Importance of Expected Dividend Yield^a		
None	9.2	13.6
Slight	23.6	30.7
Moderate	33.0	31.1
Great	24.2	19.1
Maximum	<u>10.0</u> 100.0	<u>5.5</u> 100.0
Importance of Expected Price Appreciation^b		
None, slight, or moderate	12.0	8.1
Great	33.6	26.2
Maximum	<u>54.4</u> 100.0	<u>65.7</u> 100.0

^a $\chi^2 = 14.49, p \leq .01, 4 \text{ d.f.}$

^b $\chi^2 = 10.56, p \leq .01, 2 \text{ d.f.}$

Table 4: Marital Status and the Importance of Expected Dividend Yield

Importance of Expected Dividend Yield ^a	Percentage by Marital Status		
	Single	Married	Other ^b
None	14.9	10.9	2.9
Slight	24.8	26.5	26.1
Moderate	26.4	34.0	26.1
Great	22.3	22.1	24.6
Maximum	<u>11.6</u> 100.0	<u>6.5</u> 100.0	<u>20.3</u> 100.0

^a $\chi^2 = 24.86, p \leq .01, 8 \text{ d.f.}$

^bSeparated, divorced, or widowed

Table 5: Education and the Importance of Price Stability

Importance of Price Stability ^a	Percentage by Education	
	Four or Less Years of High School	One or More Years of College
None or slight	12.5	25.4
Moderate	30.0	41.2
Great	40.0	26.1
Maximum	17.5 100.0	7.3 100.0

$$^a \chi^2 = 21.65, p \leq .01, 3 \text{ d.f.}$$

The tendency for those investors with family incomes of less than \$20,000 to place more importance on dividend yield than those with higher incomes is revealed in Table 6. Interestingly, however, those investors who place no importance on dividend yield tend to be in the

Table 6: Family Income and the Importance of Expected Dividend Yield.

Importance of Expected Dividend Yield ^a	Percentage by Annual Family Income (before taxes)		
	Under \$20,000	\$20,000 to \$34,999	\$35,000 and Over
None	9.9	9.9	15.4
Slight	25.9	26.4	26.5
Moderate	28.3	37.1	28.7
Great	23.8	22.2	19.1
Maximum	12.0 100.0	4.4 100.0	10.3 100.0

$$^a \chi^2 = 22.15, p \leq .01, 8 \text{ d.f.}$$

two lowest income categories while those who place maximum importance on yield tend to be in the lowest and highest income categories.

Occupation and portfolio size were not found to be significantly related to the importance investors assign to any of the five risk and return variables. The finding on occupation is inconsistent with Hoeke's finding of a significant correlation between individuals with nonprofessional occupations and the desire for high current profits through speculation [5]. The finding relating to portfolio size is inconsistent

with a NYSE study indicating that investors with large stock holdings are appreciation oriented [8].

Conclusions

The findings of this study suggest that some socioeconomic characteristics have a greater impact on investor common stock risk and return preferences than do others. When viewed in terms of the number of significant relationships found, the most important socioeconomic characteristic investigated was age, followed by sex, decision orientation, marital status, education, and income.

Because of the limited nature of the sample and the fact that some of the findings are inconsistent with previous observations and tests, additional research is needed to generalize the findings. Nonetheless, the findings do strongly suggest that certain socioeconomic characteristics of individual investors reflect their risk and return preferences for common stock.

Footnotes

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