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Amir A. Jassim
California State University

Myron E. Hatcher
California State University

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THE CRITICAL FACTORS INFLUENCING THE INVESTMENT DECISIONS OF LIFE AND HEALTH INSURANCE COMPANIES

Amir A. Jassim

Myron E. Hatcher

Introduction

This survey, conducted in July, 1988, was of life and health insurance companies after the stock market crash of October, 1987. Respondents were asked to give the actual distribution of their assets as of December 31, 1987, and what they considered an ideal distribution. Furthermore, they were asked to rank a set of factors that might influence their investments, in general, and their corporate bonds, corporate stocks, and mortgages, in particular. The data were analyzed by investment and company size. The results of the survey show that there was no significant difference between the actual and the ideal distributions of their assets. The major differences in rankings that influence investment decisions were factors due to company size.

The life insurance industry, mainly through the level premium process of whole life insurance policies, has been able to accumulate large sums of funds, making these companies one of the main suppliers of capital in the U.S. In 1970, they provided nine billion dollars in capital; in 1987, they provided approximately 95 billion dollars with an average annual growth rate of about 15 percent. In 1987, life insurance companies (LICS) were ranked third among the major suppliers of funds, after federal loan agencies and commercial banks. Their total assets increased from \$207 billion in 1970 to more than one trillion dollars at the end of 1987 (**1988 Life Insurance Fact Book**, p. 74). For the same period, their investment income increased from \$10 billion to about \$83 billion, for an average annual growth rate of 14.6 percent (**1988 Life Insurance Fact Book**, p. 59).

Generally, in whole life insurance, the policyholder pays a fixed premium every year and in term insurance, the premium increases as the policyholder gets older. Thus, in whole life insurance, policyholders pay more than the cost of the insurance protection in early years of the policy. This leaves the company with most of the premium to be invested to offset the increased cost of insurance protection in the latter years of the policy.

Literature Review

For a general review of the life and health insurance industry, reference is made to a text by Black and Skipper, **Life Insurance**. A variety of other references are also available for the interested reader (Belth, 1985).

Few previous articles have discussed factors that influence investment making decisions. Jassim discussed similar factors in his 1984 article, and read-

ers are encouraged to review that data for comparison purposes (Jassim, 1984).

The LICS' environment has changed considerably in the past 20 years. The period from 1978-83 experienced a major shift from long-term, stable investments to short-term maturities (Schott, 1985). In accordance with this shift, asset/liability matching and equity participation became important investment factors. Competition also became more important as investors had greater choices for investment dollars. Competition is the result of legal changes that pushed deregulation.

From the viewpoint of the investors, the interest sensitive products have become more common since the early 1980s. An example of these products is universal life insurance. Generally, these policies combine term insurance, which provides death benefits, with a tax deferred investment account that pays competitive market interest rates. These products have enhanced the competitiveness of LICS and increased the importance of their products in the area of pensions. Power and Bleeke (1987) discuss management importance for LICS. The message is that management and investment management roles have become more important (Power and Bleeke, 1987). Management issues are explored in this study as the reason that companies of different size have different factor priorities.

Eiden presents a general view of insurance companies and how they were affected by the stock market crash of 1987 (Eiden, 1988). In general, the percent of common stock ownership was low (Table 1), and the impact on the LICS was not significant. Bowers indicates that the loss to insurance companies was approximately 13.5 billion dollars in value, which is slightly over 1% of the approximately one trillion dollars in assets as of 1987. Of this amount, approximately 9.6 billion dollars, or 71%, represent assets where the investment risk is shifted to the policyholders. Variable and universal life policies are examples. Bowers suggested that LICS must be open to new and different types of investments to compete in the changing environment.

Methodology

In order to conduct this study, a questionnaire was mailed to a randomly selected group of 350 L & H companies. A total of 99 usable returns was received (28 percent). Participating companies were divided into small companies (assets of less than one hundred million dollars, 48 companies); medium (assets between one hundred million and one billion dollars, 28 companies); and large (assets of more than one billion dollars, 23 companies). The reason for classifying sampled companies into three sizes is the possibility that size affects investment policies and performance. Therefore, the data obtained should be more homogeneous within each group than in the population as a whole.

Survey Instrument

The questionnaire asked the respondents to give the actual distribution of their assets at the end of 1987 and what they considered as an ideal distribution at the time of the survey (July, 1988). Also, respondents were asked to assess the degree of influence that each of a given set of factors had on investment decisions in general and on corporate bonds, corporate stocks, and mortgage investments in particular.

The assets included government securities such as treasury bills, notes, and bonds. Corporate bonds, a debt instrument, and corporate stocks, an equity instrument, represent the major assets. Real estate mortgages such as shopping centers, office buildings, etc., are primarily commercial and large in value. Real estate investments, in contrast, represent direct ownership. Policy loans are made to policyholders at preferred rates and secured by the cash values of their policies. One-year-or-less financial instruments include certificates of deposit, commercial paper issued by corporations without collateral, money market funds, etc. Other assets include furniture, private jets, automobiles, computers, etc.

The first set of factors (Table 3) concern all company investments in general. The second set (Table 4) includes factors influencing company corporate bond investments. The third set (Table 5) concerns corporate stock investments. The fourth set (Table 6) concerns mortgage investments. Appendix A presents a description of all these factors.

Statistical Analysis

The participants responded to a scale (1-very weak to 5-very strong). The scores in the tables were calculated by considering the data interval which infers that it can be used in arithmetic operations. SPSS was used to analyze the data (SPSS User's Guide, 1983) and t-tests were calculated. Independent-sample tests were used where variables were studied by company size (Tables 3-6). Paired-sample tests were used where two responses from the same participants were studied (Table 2). The two-tailed significance levels were used at the 5% level.

A Wilcoxon Two-Sample Rank Test was used in Table 1 where the asset distributions for the industry and our sample are compared. The null hypothesis was not rejected, and it is assumed that two populations are identical versus the alternative that they differ by a linear transformation. Ranks were substituted for the observations, which were assigned in order of increasing magnitude. The two samples were combined for the assignment of ranks. This was a non parametric test and the expected values for the mean and variance were calculated and compared with a normal distribution for rejecting or failing to reject the null hypothesis (Brownlee, 1965).

Results

Table 1 verifies that our sample is representative of the industry. The assets distribution at the end of 1987 for our sample was the same as the distribution for the industry, which was proven with a rank order test.

Tables 2 through 6 are self explanatory and present results on actual and ideal portfolio distributions, ranking of factors influencing the investment decisions, selection of corporate bond investments, selection of corporate stock investments, and mortgage investments, respectively.

Discussion

For our conclusions to be generalizable, our sample needs to represent the industry. The "Mortgage Investments" (Table 1) for our sample are 9.9%, versus 20.4% for the industry. This difference is primarily due to our sample being composed of 76% small and medium companies. Large companies dominate the industry in terms of assets, and they have a larger proportion of their assets invested in mortgages. In our sample, large companies had 20.5% (Table 2) in mortgages. This is consistent with the industry's norms. One-year-or-less instruments are included in government securities and corporate bonds for the industry. In our sample, this is a separate classification.

Because of the nature of LICS' liability structure, which represents long-term commitments toward policyholders, government securities, corporate bonds, and mortgages (Table 2), LICS have been traditionally favorite investments. For the industry (Table 1), 73.7% of its assets are invested in these instruments. Within these assets, large companies prefer mortgages, as mentioned, over government securities (Table 2). This is due to larger companies having in-house expertise on mortgage investments. Secondly, mortgages are primarily commercial and require large sums of money. In contrast, small and medium companies achieve investment preservation and income consistency through government securities. Small companies statistically prefer that even more of their assets be invested in government securities (Table 2).

Large companies statistically prefer that more of their assets be in real estate, from 2.4% to 3.7%. Small companies want even less, from 3.0% to 1.9% (Table 2). The amount that a LICS can invest in real estate is limited by state laws.

Both large and medium companies statistically desire to invest less in policy loans, from 5.0% to 4.2% and 5.2% to 3.4%, respectively. This is primarily because of low return on these loans (Table 2).

Small companies have 18.6% of their investments in one-year-or-less instruments compared to large and medium companies at 5.2% and 3.4%, respectively (Table 2). Small companies need to remain more liquid relative to their total assets. The smaller a company, the more liquid it must be to meet unexpected demands for capital.

Table 3 presents ratings on factors that influence investment decisions. Overall safety of investment and investment expected rate of return were the two most influential factors. Small companies statistically had a higher rating for safety of investment than medium size companies due to more sensitivity for preservation of their capital. Conversely, small companies rate investment expected rate of return less than do large companies, which demonstrates a willingness to trade return for safety. Small companies also

place more emphasis on legal regulations and limitations which are imposed by states for the protection of policyholders. Small companies are influenced less by product mix than are large companies, due to a limited and specialized product mix.

Table 4, which presents factors that influence selection of corporate bond investments, again highlights that small companies are concerned with the safety of the investments (Table 3). They rate credit rating higher than medium or large companies. Conversely, small companies rate callability of the bond lower than medium and large companies. Bond maturity is rated higher by large companies than either medium or small companies. This could be due to larger companies associating bond maturity with uncertainty in expected rate of return, which they ranked as the most important factor influencing the investment decisions (Table 3). All companies agree that fixed versus variable coupon rate and convertibility of the bond to common stocks are the least important factors.

Small companies differ from medium and large companies in ranking of the factors that influence corporate stock investments (Table 5). The exception is earnings growth of issuing company that is ranked first by all size groupings. Debt to asset ratio of issuing company and stock's dividend yield are ranked as second and third, respectively, by small companies. In contrast, medium and large companies ranked debt to asset ratio as fourth while they ranked stock's dividend yield as eighth and sixth, respectively. One explanation is that small companies are more income oriented in their investments.

Concerning mortgage investments (Table 6), large companies gave a higher ranking to location of mortgaged property, length of mortgage, and track record of developer than did medium or small companies. They ranked sharing the mortgage with other lenders lower than medium companies. It should be mentioned that the rank order of these factors is relatively the same regardless of the size of the company. In this context, large companies have about 20% of their assets in mortgages, whereas medium companies have 9.5% and small companies have 5.4% (Table 2). One explanation for this is that large companies have proportionally much more capital invested in large commercial mortgages and more in-house expertise than medium or small companies. This allows more differentiation of factors, which is indicated by the various ranks. Small and medium companies use similar data in making decisions, but with less emphasis on selected information.

Table 6 shows that LICS, especially large LICS, rank length of mortgage as having a very strong influence on their mortgage investments. The trend in the industry is to favor mortgages of under ten years with variable mortgage rates over the traditional twenty years or longer mortgages with fixed mortgage rates. The trend toward variable rates and shorter maturity mortgages is coupled with some provision for additional return in the form of income participation and/or participation in the value appreciation of mortgaged properties. Examples are real estate investments that are becoming an essential part of LICS investments. These investments, through sole owner-

ships or joint venture partnership with developers, are viewed as inflation hedged assets. In 1987, LICS invested \$7.1 billion or about 7% of the total increase in these assets for that year. In 1977, they invested \$2.1 billion in real estate, for an annual growth rate of about 13% for the ten-year period.

Future Research

The two major areas of future research identified by the authors are 1) ideal matching of investments with objectives of the organization and 2) complete analysis of how size of company, staff available, and investment objectives relate to actual investments. Our results provide a good foundation for the design of research projects that can provide answers to these issues.

Conclusions

Small companies, companies with assets of less than one hundred million dollars, desired more assets in government securities (Table 2). They differ from large companies in ranking investment expected rate of return and company's product mix lower. Conversely, small companies rank legal regulations and limitations higher as factors influencing the investment decisions.

Since safety of the investment is ranked first for small companies, they sacrifice return for safety and feel that they are legally constrained (Table 3). Specifically with corporate bond investments, small companies differ from large companies by ranking bond's credit rating higher and bond's maturity and callability of the bond lower. These contrasts highlight small companies' concern for safety of investment as does the bond's credit rating being ranked first (Table 4). In corporate stock investments, stock's price/earnings ratio factor is lower for small companies than larger companies. Earnings growth of issuing company is ranked first by all size groupings (Table 5). In the selection of mortgages, small companies rank the factors similar to the other companies. However, they rank location of mortgaged property, length of mortgage, and track record of developer lower than large companies. The authors feel this is due to lack of investment management staff in the mortgage area (Table 6).

Medium companies, which have assets between one hundred million and one billion dollars, are best described by contrasting small and large companies. They prefer to have less assets in policy loans and other assets (Table 2). Concerning factors that influence investment decisions, medium companies rank safety of the investment lower than small companies. Its ranking is second, with investment expected rate of return ranked first for both medium and large companies (Table 3). For corporate bond investments, medium and large companies rank bond's credit rating lower and callability of the bond higher than small companies. They both rank bond's maturity first (Table 4). In corporate stock investments, all three size groupings rank earnings growth of issuing company first, and medium and large companies rank stock's price/earnings ratio as second (Table 5). The medium size companies stand out more in factors affecting mortgage investments. Medium and

small companies rank location of mortgaged company, length of mortgage, and track record of developer lower than large companies. These are factors that the authors believe reflect the staff ability of large companies. Medium companies rank the factor of fixed and variable rates first, which is higher than the rank from small companies. The authors feel that medium companies are aggressive and changing in how they look at mortgage investments (Table 6).

Large companies prefer more assets in real estate and less in policy loans (Table 2). They also rank expected rate of return as first in factors influencing investment decisions, and are more interested in company's product mix and less influenced by legal regulations and limitations (Table 3). In selecting corporate bonds investments, bond's maturity is ranked first and is greater than rankings by small or medium size companies. Bond's coupon yield is ranked second. Callability of the bond and bond's credit rating are ranked third and fourth, respectively, and are higher for small companies and lower for larger companies. It appears that yield is the most important factor with the other factors reflecting exposure (Table 4). Earning growth of issuing company and stock's price/earnings ratio are ranked first and second as factors in corporate stock investments (Table 5). And again, the focus on earnings is obvious. Location of mortgaged company and length of mortgage are either first or second regardless of company size. However, large companies rank these factors much higher in absolute value. Also, the track record of developer has a higher ranking for large companies than small or medium companies (Table 6).

Appendix A

Table 3

1. Investment expected rate of return is the sum of the cash income (e.g., stock's dividend income and bond's coupon income) and the capital gain or loss divided by the cost of the investment.
2. Safety of the investment is the safety of the principal amount invested from a decline in monetary value.
3. Liquidity of the investment is the ease to sell the investment without suffering a financial loss.
4. Cash income of the investment refers to the net cash generated by the investment (e.g., dividends from stocks, interest from bonds, and rent from investment properties).
5. Legal regulations and limitations refer to an effort by states to protect policy holders and impose certain legal investment limitations on insurance companies (e.g., bond investments are limited to bonds with a minimum credit rating assigned by credit rating agencies, and insurance companies can not invest more than a certain percentage of their funds in a common stock of a specific company).

6. Company's product mix refers to the type of insurance policies the company sells. A life insurance company's product mix includes whole life policies, term life and health insurance policies.

Table 4

1. Bond's coupon yield is the annual coupon (interest) payment divided by the price of the bond.
2. Fixed coupon rate bonds provide the same interest income regardless of the changes in interest rates in the capital market. Variable coupon rate bonds provide an interest income that is tied to market interest rates as represented by the prime rate or a specific index of market interest rates.
3. Corporate bonds maturity range from one to fifty years. At maturity, the bond holder receives the face value of the bond (majority of corporate bonds have a face value of \$1,000) regardless of the purchase price of the bond. Therefore, the bondholder at maturity will have a capital gain if the purchase price was lower than the face value and a capital loss if the purchase price was higher than the par value.
4. Most corporate bonds are assigned a credit rating by commercial credit rating companies like Standard and Poors and Moody's. These are letter ratings (ranging from a low of C for bonds in default or of a speculative nature to a high of AAA for bonds with the highest quality). The rating is given after an extensive review of company's financial and business conditions. Generally, the rate of return on bonds is inversely related to the bond rating to compensate for the risk assumed by the bondholder.
5. Convertible bonds give the bondholders the right to convert it into a specified number of shares of the issuing company's common stock within a specified period of time. Some bond issues give the company the right to force this conversion on bondholders.
6. Callable bonds allow the issuing company to retire the bond issue prematurely. The bondholders will receive a call price that is made up of face value plus call premium. Companies might call existing bonds when interest rates are declining since it will be cheaper to issue a new bond with a lower coupon rate. It is similar to refinancing a home mortgage when mortgage rates are falling.

Table 5

1. Price/Earnings (P/E) ratio is a measure of how the market is pricing the company's common stock. It is calculated by dividing the price per share by earnings per share (EPS). Earnings per share is company's net profit after taxes divided by the number of shares of common stock outstanding.
2. Liquidity of the stock is the ability to sell a common stock without a capital loss.
3. Stock's dividend yield is the annual cash dividend received from a stock divided by the price of the stock.

Table 6

1. Fixed rate mortgage is a mortgage with a fixed interest rate and level monthly payments over a mortgage term generally extended 15 to 30 years. In variable rate mortgages, the interest rate may be changed in an amount dictated by some specified index. When the rate is changed, either the term of the loan or the payment amount fluctuates accordingly to consider the change in amortization.*
2. Equity and income participation, also called "equity kickers," is an arrangement whereby the lender structures the payments to meet the minimum debt amortization schedule, and then requires a participation in gross income, net operating income, or any other income over a predetermined break even point, and/or taking a percent of the price appreciation of the mortgaged property.*

*Sirmans, C.F., **Real Estate Finance**, (New York, McGraw-Hill Book Company, 1985), pp. 218, 353.

Table 1¹

The Assets Distribution of the Life and Health Insurance Companies as of December 31, 1987 (percent)

Asset Categories	Industry*	Sampled Companies
Government Securities	14.5	18.4
Corporate Bonds	38.8	32.3
Corporate Stocks	9.3	11.7
Mortgages	20.4	9.9
Real Estate	3.3	2.7
Policy Loans	5.1	4.2
1 Year or Less Instruments		11.3
Other Assets	8.6	8.6
TOTAL	100%	100%

***1987 Life Insurance Fact Book.**

¹A rank order test failed to reject the null hypothesis and supports the assumption that the sample and industry data are for the same population.

Table 2

**The Actual and The Ideal Portfolios'
Distribution of Life and Health Insurance Companies**

Investment Categories	Small Cos.		Medium Cos.		Large Cos.		All Samples Cos.	
	Actual	Ideal	Actual	Ideal	Actual	Ideal	Actual	Ideal
Government Securities	19.8*	26.4*	19.9	21.3	9.5	11.7	18.0	22.1*
Corporate Bonds	27.6	25.7	33.4	34.3	46.8	42.4	32.9	31.4
Mortgages	5.4	7.5 ¹	9.5	11.1	20.5	22.3 ¹	9.5	11.3*
Corporate Stocks	12.4	11.0	15.8	10.5	5.8	6.6	12.2	10.0 ¹
Real Estate	3.0	1.9	2.8	3.0	2.4	3.7*	2.8	2.6
Policy Loans	2.9	2.6	5.2	3.4*	5.0	4.2*	4.0	3.1*
1 year or less instruments	18.6	16.8	3.4	6.0 ¹	5.2	5.8	11.4	11.4
Other Assets	9.8	7.7*	9.4	5.5*	4.9	3.7	8.7	6.3*
Total	100%	100%	100%	100%	100%	100%	100%	100%

*Significant at the 5% level or less.

¹Significant at the 10% level or less.

Note: The percentages for size groupings and total include only companies that responded to both the actual and ideal questions for each investment category.

Note: Actual portfolios may not add to 100 percent due to rounding errors. Ideal portfolios may not add to 100 percent due to some sampled companies not wishing to invest all their funds in the listed assets.

Table 3^{1,2}

Ranking of Factors Influencing the Investment Decisions of Sampled
Life and Health Companies
(Ranking)

Statistical Significance			Description of the factor	Small Mean/Rank	Medium Mean/Rank	Large Mean/Rank	Total Mean/Rank
SMALL VERSUS MEDIUM	SMALL VERSUS LARGE	MEDIUM VERSUS LARGE					
*			Safety of the investment	4.8 (1)	4.4 (2)	4.5 (2)	4.6 (1)
	*		Investment expected rate of return	4.3 (3)	4.5 (1)	4.6 (1)	4.4 (2)
t	*		Legal regulations and limitations	4.5 (2)	4.0 (3)	3.8 (5)	4.2 (3)
			Cash income of the investment	3.8 (4)	3.8 (4)	3.9 (4)	3.8 (4)
	*		Company's product mix	3.5 (6)	3.8 (4)	4.1 (3)	3.7 (5)
			Liquidity of the investment	3.6 (5)	3.6 (7)	3.3 (10)	3.6 (6)
			General economic conditions	3.5 (6)	3.7 (6)	3.4 (8)	3.5 (7)
			The present distribution of company's investments	3.5 (6)	3.3 (10)	3.6 (6)	3.5 (7)
			Expectations about inflation rate	3.3 (9)	3.5 (9)	3.4 (8)	3.4 (9)
			Tax considerations	3.3 (9)	3.6 (7)	3.6 (6)	3.3 (10)
			Investment possible capital gains	3.0 (11)	3.2 (11)	3.0 (11)	3.0 (11)
			Holding and affiliated company relationships	2.9 (12)	2.9 (12)	2.5 (13)	2.8 (12)
			Company's past investment policies	2.7 (14)	2.8 (13)	2.5 (13)	2.7 (13)
			Lack of investment staff/expertise	2.8 (13)	2.4 (14)	2.7 (12)	2.7 (13)
			Investment policies of other insurers	2.3 (16)	2.3 (15)	2.4 (15)	2.3 (15)
			Public relation considerations	2.4 (15)	2.3 (15)	2.0 (16)	2.3 (15)

¹Factor's mean was computed using the formula $X = \frac{\sum WX}{\sum W}$ where W = number of companies and X = factor's degree of influence:

very strong = 5 strong = 4 modest = 3 weak = 2 very weak = 1

²Ranking is based on rank order with ties being given the small rank value.

*Significant at the 5% level or less.

³Significant at the 10% level or less.

Table 4^{1,2}

**Ranking of Factors Influencing the Selection of Corporate Bond Investments
of Sampled Life and Health Insurance Companies
(Ranking)**

Statistical Significants			Description of the factor	Small Mean/Rank	Medium Mean/Rank	Large Mean/Rank	Total Mean/Rank
SMALL VERSUS MEDIUM	SMALL VERSUS LARGE	MEDIUM VERSUS LARGE					
*	*		Bond's credit rating	4.7 (1)	4.2 (2)	4.1 (4)	4.4 (1)
		t	Bond's coupon yield	4.4 (2)	4.2 (2)	4.5 (2)	4.4 (1)
	*	*	Bond's maturity	4.3 (3)	4.3 (1)	4.7 (1)	4.4 (1)
*	*		Callability of the bond	3.5 (4)	4.0 (4)	4.2 (3)	3.9 (4)
			Fixed vs. variable	3.3 (5)	3.6 (5)	3.7 (5)	3.5 (5)
			Convertibility of the bond to common stocks	2.1 (6)	2.3 (6)	2.4 (6)	2.5 (6)

Note: Factors listed in rank order by total.

¹Factor's mean was computed using the formula $X = \frac{\sum WX}{\sum W}$ where W = number of companies
and X = factor's degree of influence:

very strong = 5 strong = 4 modest = 3 weak = 2 very weak = 1

²Ranking is based on rank order with ties being given the small rank value.

*Significant at the 5% level or less.

³Significant at the 10% level or less.

Table 5^{1,2}

Ranking of Factors Influencing the Selection of Corporate Stock Investments
of Sampled Life and Health Insurance Companies
(Ranking)

Statistical Significance			Description of the factor	Small Mean/Rank	Medium Mean/Rank	Large Mean/Rank	Total Mean/Rank
SMALL VERSUS MEDIUM	SMALL VERSUS LARGE	MEDIUM VERSUS LARGE					
		t	Earnings Growth of issuing company	4.1 (1)	3.9 (1)	4.4 (1)	4.1 (1)
	*		Stock's price/earnings ratio	3.5 (4)	3.8 (2)	4.1 (2)	3.7 (2)
			Debt to asset ratio of issuing company	3.8 (2)	3.4 (4)	3.8 (4)	3.7 (2)
		t	The industry of the issuing company	3.4 (7)	3.5 (3)	3.9 (3)	3.6 (4)
		t	Sales growth of issuing company	3.5 (4)	3.3 (7)	3.8 (4)	3.5 (5)
			Liquidity of the stock	3.5 (4)	3.4 (4)	3.4 (7)	3.5 (5)
			Stock's dividend yield	3.6 (3)	3.2 (8)	3.6 (6)	3.5 (5)
			Stock's price fluctuation	3.4 (7)	3.4 (4)	2.9 (8)	3.3 (8)

¹Factor's mean was computed using the formula $X = \frac{\sum WX}{\sum W}$ where W = number of companies
and X = factor's degree of influence:

very strong = 5 strong = 4 modest = 3 weak = 2 very weak = 1

²Ranking is based on rank order with ties being given the small rank value.

*Significant at the 5% level or less.

³Significant at the 10% level or less.

Table 6¹

Ranking of Factors Influencing Mortgage Investments of Sampled
Life and Health Insurance Companies
(Ranking)

Statistical Significants			Description of the factor	Small Mean/Rank	Medium Mean/Rank	Large Mean/Rank	Total Mean/Rank
SMALL VERSUS MEDIUM	SMALL VERSUS LARGE	MEDIUM VERSUS LARGE					
	*	*	Location of mortgaged company	4.1 (1)	3.9 (2)	4.6 (2)	4.2/1
	*	*	Length of mortgage	3.9 (2)	3.9 (2)	4.7 (1)	4.1/2
			Percentage of owner's equity	3.8 (3)	3.8 (4)	4.1 (4)	3.9/3
		t	Quality of tenants	3.7 (4)	3.6 (5)	4.2 (3)	3.8/4
*			Fixed vs. variable rates	3.4 (5)	4.0 (1)	3.9 (6)	3.7/5
	*	*	Track record of developer	3.4 (5)	3.4 (6)	4.1 (4)	3.6/6
			Income participation	3.1 (8)	3.0 (9)	2.9 (7)	3.0/7
			Equity participation	2.9 (7)	2.9 (7)	2.8 (8)	2.9/8
		*	Sharing the mortgage with other lenders	2.5 (9)	2.9 (7)	2.1 (9)	2.5/9

¹Factor's mean was computed using the formula $X = \frac{\sum WX}{\sum W}$ where W = number of companies and X = factor's degree of influence:

very strong = 5 strong = 4 modest = 3 weak = 2 very weak = 1

²Ranking is based on rank order with ties being given the small rank value.

*Significant at the 5% level or less.

³Significant at the 10% level or less.

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Amir A. Jassim is Professor of Finance and Business Law, School of Business and Administrative Sciences at California State University. Myron E. Hatcher is Professor of Information Systems and Decision Sciences, School of Business and Administrative Sciences at California State University.