FOR REFERENCE

NOT TO BE TAKEN FROM THIS ROOM

AN INVESTIGATION OF THE INDIVIDUAL INVESTORS IN THE TURKISH SECURITIES MARKET

by

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TABLE OF CONTENTS

ABSTRACT

AN INVESTIGATION OF THE INDIVIDUAL INVESTORS IN THE TURKISH SECURITIES MARKET

In this thesis, differences between the two individual investor groups - bondholders and common stockholders- in their demographic characteristics, basic portfolio objectives, information sources and decision mechanics, instrument selection criteria and market attitudes, and return perceptions have been studied. It has also been possible to find out a general profile of the individual investor in the securities market.

The study included the literature review and a field study which was conducted through a questionnaire. Data was analyzed and the findings were given together with the implications for the marketers and researchers.

The findings of the study showed that same significant differences exist in investment processes of the individuals rather than their demographic characteristics.

Bondholders appeared to be more educated and relatively older than the commonstockholders. They have fixed monthly income and invest relatively greater proportion of their income in securities, mostly seeking "safeness" of investment and "additional income" for their family budget.

Commonstockholders, on the other hand, being more independent in

their decisions invest mainly for protecting their money from inflation and capital appreciation. They are also slightly less sensitive to the "safeness" of investment than their counterparts and emphasize such factors as liquidity of investment, anonimity of investor and tax considerations when choosing among securities.

Knowledge of these differences should help bank and brokerage firms' managers, and researchers to better understand the individual investor and his investment process and to allocate their marketing effort more effectively.

ÖZET

TÜRK MENKUL KIYMETLER PİYASASINDAKİ FERDİ YATIRIMCILAR ÜZERİNE BİR İNCELEME

Bu tezde, iki ferdi yatırımcı gurup -tahvil ve hisse senedi sahipleri- demografik yapıları, temel yatırım objektifleri, bilgi kaynakları, karar yöntemleri, menkul kıymet seçim kriterleri, piyasa yaklaşımları ve gelir algılamaları arasındaki farklılıklar açısından incelenmiştir. Bu araştırma ile menkul kıymetler piyasasındaki yatırımcıların genel bir profilini elde etmek de mümkün olmuştur.

Bu çalışma yazın taraması ve anket yoluyla yapılmış bir alan araştırmasını içermektedir. Toplanan bilgi analiz edilmiş ve sonuçlar pazarlamacı ve araştırmacılar için yönlendirici noktaları ile verilmiştir.

Araştırmanın sonuçları, yatırımcılar arasında demografik özelliklerden çok yatırım yöntemleri açısından bazı önemli farklılıklar bulunduğunu göstermiştir.

Tahvil sahiplerinin hisse senedi sahiplerine göre daha eğitimli ve daha yaşlı, sabit gelirli oldukları, bu gelirin daha büyük kısmını menkul kıymetlere yatırdıkları ve yatırımlarında büyük çoğunlukta "güvence ve aile bütçelerine ek gelir" aradıkları ortaya çıkmıştır.

Diğer taraftan hisse senedi sahipleri yatırım kararlarında daha bağımsız olup, genelde parayı enflasyondan korumak ve sermaye kazancı temini amacı ile yatırım yapmaktadırlar. Bu gurup, tahvil sahiplerine nazaran yatırımın "güvencesi"ne daha az duyarlı olup, menkul kıymet seçimini yaparken yatırımın likiditesi, yatırımcının gizliliği ve vergi muafiyeti gibi faktörlerin önemini vurgulamaktadır.

Bu farklılıkların bilinmesi banka ve bankerlik kuruluşları yöneticilerine ve araştırmacılara ferdi yatırımcının ve onun yatırım kararlarının daha iyi anlaşılmasında ve pazarlama faaliyetlerini daha etkin olarak yönlendirmelerinde yardımcı olacaktır.

LIST OF TABLES

INTRODUCTION

Economic strength of a nation may be measured by the value of its accumulated wealth and the rate at which it grows through savings and investments.

In primitive societies the savers and users of capital were largely the same, although, through barter, some exchange of capital goods for consumer goods occured. There was no financing problem. But in a modern capitalistic economy, instruments representing money and claims to money are necessary for specialization and the division of labor, and for the transfer of savings to those who invest in capital goods. Capital formation would be virtually impossible without money and a market. Extensive institutional mechanism is necessary to channel the money value of savings generated by some units in the economy to those who use there savings (Dougall, 1980).

A highly developed financial system is a hallmark of any modern business enterprise economy. The markets, instruments, and institutions that comprise this system facilitate the efficient production of goods and services. They thereby contribute to the society's wellbeing and to a rising standard of living. The financial system perform this essential function by channeling the nation's saving into its highest and best uses (Henning, Pigott, Scott, 1981).

An elaborate system of markets and institutions provides the mechanism for bringing suppliers and demanders of funds together. These institutions and markets provide borrowers what funds needed now, while at the same time providing lenders with a variety of financial assets with varying degrees of safety, liquidity and yield. Primary markets

enable borrowers to obtain funds, where secondary markets provide liquidity for lenders. Not all types of financial assets have secondary markets but, in general, secondary markets are important. A high proportion of transactions in the capital markets represent transfer of existing instruments among investors rather than raising of funds. In some cases, development of a primary market would be difficult if a secondary market were not developed simultaneously.

The money market provides facilities for the quick and dependable transfer of short-term debt instruments used to finance the needs of business, government and consumers.

The capital markets are the complex of institutions and mechanisms whereby intermediate and long-term funds are pooled and made available to business, governments and individuals. The proceeds of bouds and corporate shares are used to finance a variety of expenditures and types of assets (Dougall, 1980).

Contribution of securities (capital) market to a national economy, to a large extent, reflect prevailing economic conditions in a country. During the early stages of economic development, the large majority of industrial and business units in a country are small in size. Their capital needs are small; the use of corporate form is not widespread; and there is no substantial and widely scattered class of persons with surplus savings. In these circumstances, trading of securities is likely to be restricted, and the principal function of the securities markets is directed towards permitting the corporations to raise funds.

As the economy progresses, national income grows and becomes more widely spread; individuals obtain savings which are increasingly placed

in the shares of new corporations and of established enterprices that were once family owned but notseek a public distribution. Also the rise of financial institutions, such as insurance companies and investment companies, results in a large number of persons having indirect interests in equities as the institutions place the funds entrusted to them in securities. Almost the same scenario has been lived during the improvement of the securities market in Turkey. With the economic stabilization programme introduced in 1980, interest rates applied to savings have been determined rationally and increased over the inflation rate. After that, a large and growing number of bank customers have changed from being "savers" to "investors". Commercial banks had for many years performed the intermediary function of collecting small amounts of debt capital from widely-dispersed individual savers, and repackaging those amounts in larger units for the ultimate borrower. The emergence on a grand scale of a similar mechanism in the securities market, on the other hand, is much more phenomena. Considering high inflation rates to be a "fact of life", many consumers invested their money in financial instruments which have highest yielding in the short run. At this point, the meanings of investment and speculation should be distinguished. Investment and speculation are said to be two different things, and the prudent man is advised to engage in the one and avoid the other. Speculation is an effort, probably unsuccessful, to turn a little money into a lot. Investment, on the other hand, is an effort, which should be successful, to prevent a lot of money from becoming little (Schwed, 1940).

The significant growth in the securities market of Turkey has occured primarily since 1980. But within two years, its sudden growth has reached unexpected dimensions.

Having experienced an unfortunate "broker phenomenon", the emergency for an organized Capital Market in order to collect the funds efficiently and prevent the rights and benefits of the individual investor has been realized. In June 1985, with the enactment of Capital Market Law and establishment of the Capital Market Board (CMB), rules and regulations of Turkish Capital Market have been determined, and all activities and operations in the securities market have been given under the control of CMB. Recently, İstanbul Securities Exchange, which represents the final stage for the commencement of activity by the Capital Market Board, opened its doors at the beginning of 1986, with its 33 members. This number then increased to 38 with the participation of new members. Along these 38 members, as presented in Table 1.1, are 11 brokerage institutions who had obtained licences for that activity, 3 investment and development banks, and 22 of leading banking institutions. In addition, 2 exchange commision agents are also included in the total.

Insufficient funds, limited number and variety of financial instruments and financial institutions influence the improvement of Capital Markets somewhat negatively. It is believed that, realization of continious and efficient flow of funds, and determination of stock prices according to market conditions will be possible by the effective operations of the Securities Market. Recent developments in the Securities Market will also help to the re-establishment of "Confidence" in the market.

Table 1.1

MEMBERS OF ISTANBUL SECURITIES EXCHANGE

BROKERAGE INSTITUTIONS

. ALTAY MENKUL KIYMETLER
. ÇEVİK MENKUL KIYMETLER
. CAM-İŞ
. DERBORSA
. ECZACIBAŞI MENKUL KIYMETLER
. GENBORSA
. NEMA MENKUL KIYMETLER
. OYAK MENKUL KIYMETLER
. SERPA
. SEMİH MENKUL KIYMETLER
. YATIRIM FİNANSMAN

EXCHANGE COMMISSION AGENTS

. CENGİZ EVGİN
. İLHAN İZİBELLİ

BANKS

. AKBANK
. ANADOLU BANKASI
. CITIBANK
. DEMİRBANK
. DESİYAB
. DEVLET YATIRIM B.
. HALK BANKASI
. İKTİSAT BANKASI
. OSMANLI BANKASI
. PAMUKBANK
. ŞEKERBANK
. T.EKONOMİ BANKASI
. T.EMLAK KREDİ BANKASI
. T.İMAR BANKASI
. T.İTHALAT VE İHRACAAT B.
. T.İŞ BANKASI
. T.GARANTİ BANKASI
. TÖBANK
. T.SINAI KALKINMA BANKASI
. T.TİCARET BANKASI
. T.TÜTÜNCÜLER BANKASI
. T.C. ZİRAAT BANKASI
. ULUSLARARASI END.VE TİC.BANKASI
. VAKIFLAR BANKASI
. YAPI VE KREDİ BANKASI

Source: İstanbul Securities Exchange

Table 1.2 presents the trends in the Turkish Securities markets and gives the total worth of securities issued within the last eight years.

Table 1.2

SECURITIES ISSUED							Billion TL.	
	1978	1979	1980	1981	1982	1983	1984	1985
Stocks*	3.8	1.7	21.9	25.3	109.5	95.9	151.3	n.a.
Private Sector Bonds	2.2	4.9	18.0	16.0	13.2	16.3	12.8	21.4
State Bonds	35.5	35.9	65.8	70.0	74.7	249.0	225.0	290.0
Treasury Bills	-	-	10.0	65.0	-	-	794.0	-
Profit/Loss part.	-	-	-	-	-	-	-	.5
Revenue partnership	-	-	-	-	-	-	10.0	na

Source: TURKISH ECONOMY 1985-TUSIAD
*Quoted on the Securities Exchange

As seen from Table 1.2, there has been a substantial increase in stock issues since 1980. In the same period on the other hand, private sector bond issues have shown decline except for the last year in which total worth of bond issues has reached over 21 billion TL, while State Securities, especially Treasury bill issues have increased significantly. The increase in the issue of shares of stocks stems from effort on the part of partners to build up their assets through stock exchange, owing to the increased expense of bank funds due to policies of high rate of interest.

Introduction of new form of securities, such as profit-loss

Sharing Certificates and Certificates of Revenue Partnership, are quite important steps towards the widening of the Capital Market's base and the development of more active money and capital markets within the economy. It is deemed important that the rapid economic development can be achieved through strong, well-functioning capital markets.

In its role as the final arbiter for the allocation of our scarce capital resources, the securities market should be the object of continuing close scrunity by both the scholarly community and the architects of public policy. The predominant concern should be to ensure and maintain conditions under which the flow of investment funds will infact be channeled to these enterprises which are most important for the improvement of the economy (Lease, Lewellen, Schlarbaum, 1976).

Though, only a few years ago we have had an unfortunate experience in the securities market, no attention has been directed to the facts of the market and to the questions of who the individual investor is, how he makes his decisions, how he deals with his broker or bank, what his portfolio consists of, and how satisfied he is with his portfolio. The only study which investigates the knowledge and awareness of individual investors on the some issues related to the Turkish Securities Market were conducted by PIAR for GENBORSA A.Ş. in April, 1985. As this study reveals the investors do not know much about the securities market.

As remarked by Friend and Cani (1966), "lack of knowledge about the market experience of different individual investor groups is even more impressive than the gaps in the available data on the performance of the securities market as a whole."

Due to the recent developments in the Turkish Securities Market and increasing competition between the banks and brokerage institutions as an

integral element of their marketing orientation and activities, there is an urgent need for either exploratory or descriptive research on the securities markets, particularly concentrating on individual participation in the market.

As the importance of an efficient securities market and the need for research on the participants of the market are apperant, it is the purpose of this study to explore and describe characteristics, market attitudes, investment objectives, decision mechanics, asset holdings and return perceptions of individual investors.

In particular, the objectives are:

. to identify characteristics which discriminate between two investor groups: Bond Holders and stock-Holders

. to determine the relative importance of different types of variables as discriminators between the two groups of investors.

Knowledge of these difference that may exist between the groups should provide important insights into the factors that affect choices of securities and should be helpful to the institutions for defining market segments meaningfully and more effectively allocate marketing effort.

The plan of the study is as follows: the first section reviews prior emprical and conceptual work on the "individual investor" in capital markets; the second part discusses the research design, methodology, and findings of a field survey conducted among the participating investors. The concluding section summarizes the principal results, indicates some implications to the related parties and suggests needed future research in the area.

CHAPTER I

BACKGROUND OF THE STUDY: A REVIEW OF CONCEPTUAL AND EMPRICAL STUDIES

This section comprises the previous studies on the subject of individual investor and his investment behavior; and outlines the principal results which mainly obtained from a broadbased survey done in the U.S., in 1972. Exploratory results of the only published research on the Turkish Securities Market and its customers have also been included in this section.

1.1. Savings and Investments

Households are one of the most fundamental and diverse behavioral units in an economy. They save, invest, borrow, and lend (Hendershott and Lemmon, 1975).

The level of savings actually achieved by anyone represents the outcome of the conflict between his desire to improve his current standard of living and his desire to obtain future welfare by saving. With a given income one can improve the quality of his living standard only by reducing saving. At low level of income, desires for current consumption are so strong that they overcome all considerations of the future. In order to explain the struggle between desires to increase expenditure and desires to save or balance the budget, the nature of the forces in both sides have to be discovered. The social goal of a high standart of living converts the drive for selfesteem in to a drive to get high quality goods(Duesenberry 1972). Motivations for savings may be to accumulate a reserve fund against

unforseen contingencies as the future is uncertain with regard to health, employment, etc., or to spend the money later for a specific purpose. A considerable part of all savings is done with a view to future liquidation for retirement, protection of dependents, contingencies or future purchases of durable goods.

An individual's investment decision is based on much the same considerations for both real and financial assets and is closely related to his saving decisions (J.Crokett and I.Friend, 1967).

The paper by Hendershott and Lemmon, (1975) analyzes the financial behavior of households during 1957-71. This behavior includes purchasing money, saving accounts, short-term and long-term securities and issuing consumer credit, home mortgages and policy loans from insurance companies. The emprical results of the regression equations employed were found quite consistent with common knowledge of the working of financial markets. Housing and consumer durable purchases, respectively, were largely financed by issuing home mortgages and consumer credits; borrowing against insurance reserves was closely related to market interest rates and the level of revenues; and savings was primarily channelled into financial assets. The division of financial assets depended largely on income (saving accounts positively, and marketable securities negatively) and relative interest rates. Capital gains of equities were partially used both to repay liabilities and to build up other financial assets.

From the point of view of investors, investment is the committment of present funds for the purpose of deriving future income in the form of interest, dividends, rent or of appreciation in the value of the principal (Dougall, 1973, p.1).

The saving-investment process is facilitated by number of institutions that offer savers a variety of substitudes for real capital or money, thus encouraging the flow and diversification of saving, and methods of providing borrowers with funds to meet their requirements, thus promoting investment spending (Henning, Pigott, Scott, 1982).

Once an individual has identified a need for the services of a financial institution for money transmission, saving or borrowing, than he or she has to initially choose an investment and institution type.

Investors may also have reasons to switch between and within type of investments and institutions as financial and economical circumstances, social and cultural influences and satisfactions change.

1.2. Saving Trends in the Turkish Economy

In economic sense, "Savings" is the most important performance indication of the "development". Studies on saving trends indicate that under improving circumstances, average saving ratio is proportional to per capita income and increases as the Gross National Product increases.

Table 1.2.1 shows the "savings" as a percentage of the GNP for twelve years period, from 1972 to 1984.

table 1.2.1

Savings as a percentage of GNP

	Personal	Public	Foreign	Total
1972-1975	10.55	8.52	1.29	20.36
1976-1979	11.75	5.60	4.27	21.62
1980 -1983	9.61	7.53	3.83	20.97
1984	11.34	5.28	3.50	20.12

Source - Para ve Sermaye Piyasası, Haz. 1985.

Despite the conflict between the personal and public savings, within this 12-year period total savings have not been changed significantly and remained around 21 percent of the GNP.

The ratio of personal saving to disposable personal income has also been stable over the years at an average rate of 13 percent.

While the increase in time deposits reached over 8 percent of the GNP, in 1984, one-fourth of the personal savings (which is equal to 3 percent of the GNP) were invested in securities market (D.Demirgil, 1985).

1.3. A Field Study on the Turkish Security Market

Intellegent investment in to a considerable degree a matter of adequate knowledge. Although all investment committments involves estimates of future developments, the greater the knowledge of investor has of facts and the market, the more satisfactory his experience should be (H.Daugall, 1973, p. 237).

The only published research on the Turkish securities Market and its individual customers which was done by PIAR and GENBORSA A.Ş. in April, 1985 investigates the avareness of the investors on the issues of the TSM, such as recent regulations, institutions and instruments introduced to the securities market (Para ve Sermaye Piyasası, 1985).

The research was based on the data obtained by personal interviewing of total 856 investors among the customers of banks and retail brokerage firms (25.7 percent of the sample was brokerage firms' customers) in Istanbul and Ankara.

Seventy-five percent of the respondents were male and two-third of them were married. Bank customers were found somewhat distinct from the

brokerage firm customers in terms of age, education and occupation. 66 percent of bank customers were younger than 40 years, whereas, 68 percent of the brokerage firm customers were 50 years or older. Bank customers appeared to have less schooling than the customers of brokerage firms. Half of the brokerage firms customers were retired compared to 18 percent of the bank customers.

Findings revealed that an important percentage of (~60%) the both customer groups do not know, even haven't heard about the stated issues of the Turkish Securities Market.

Furthermore, the respondents who claimed that they knew or heard about the inquired subjects were found to have us idea when they were asked to explain what the "Capital Market Board", "Securities Exchange", "Certificates of Revenue Participation" and "Profit/Loss Sharing Certificates" are.

1.4. Individual and Institutional Investors

Individuals and institutonal investors are the two main investor groups which constitude the customers of securities markets. Ofcourse, most institutions are the representatives of individual investors. Institutions function as the investment intermediaries for the individuals who invest in through pension funds, life insurance companies, property insurance companies, and investment companies.

In recent years, while a substantial amount of attention has been directed in the literature of economics and finance to the question of the investment behavior and portfolio performance of institutional investors, the individual investor has been an object of investigation in very few

studies (Lease, Lewellen, and Schlarbaum, 1977, p. 296).

There has been a widespread concern about the disappearance of the individual investors from direct participation in the American equity marketplace.

The pernicious effects attributed to the individual investor's withdrawal from direct market participation as expressed by Lease, Lewellen, and Schlarbaum (1976) are: (1) that, in the short run, market price volatility is accentuated by the large-scale trades of institutions and (2) that, over the long term, the capital allocation process will be less efficient and less appropriate since institutions have typically tended to concentrate their holdings in a relatively small number of companies.

Charles D.Ellis (Ellis, 1985, p.35) points out that, today, the typical investor is not individual. Individual investors account for less that one-quarter of investment activity in the U.S.; three-quarters of all the buying and selling on the NYSE is done by institutions.

1.5. Studies Related to Individual Investors

The gap in the knowledge of the individual investor's circumstances and decision processes merits investigation because he has been and should be a significant contribution to the allocational and liquidity functions of the security markets.

Accordingly it is important that to understand who he is, why he invests and what he invests in.

Marketing research in the securities market has customarily defined investors in purely quantitive terms, such as age, income, geographic location, length of time securities were held, and use of brokers and

banks (NYSE, Fact Book, 1971).

There have, of course, been some broadbased survey efforts, but these have not dealt with investment strategies and decision processes.

Depending on the data from NYSE survey, the paper by Charles D. Ellis defines the average individual investor as the one who has a median income of $30.000, holds less than $5000 worth of stock and rarely trades it. Less than half of all individual shareowners have an account with a broker; and of shareholders with brokerage accounts, only half look to their brokers for investment advice and recommendations. The other half make all their own decisions, expecting their brokers only to execute the trade.

NYSE, Fact Book (1971) emphasizes the differences that exist between the new investor and the experienced investor in terms of demographic characteristics and financial profile. An average investor was found as one who had 12 years of investment experience, compared with two years for the new investor. According to the Fact Book, (1971) the typical new investor was about 10 years younger than the experienced investor and had less annual income and education. The contrast between the financial profiles of the new and experienced investor reflects the sophistication and financial accomplishments of the experienced investor. The new investor appeared as having relatively lower portfolio value and less transaction volume when compared with the experienced investor. Very few studies add another dimensions in seeking to explain the behavior of individual investors, that is, determining investment motivations and decision processes.

The research done by Lease, Lewellen, and Schlarbaum (1976), provides

a broad description of a 990-man sample of individual customers of a large brokerage firm in the period between 1964-70; and brings insights into different aspects of individuals investment behavior.

The survey subjects were chosen at random from the brokerage firm's lists and stratified according to the geographical distribution of all American shareholders, as reported by the NYSE Surveys.

Of the 2500 questionnaire sent to these individuals, just under 1000 responses were received and utilized in the study for a return rate of roughly 40 percent.

These data were matched with the complete record from the brokerage firm's files of transaction activity in each account between 1964 and 1970. The latter included statistics on trading frequency, trading volume, number of different securities traded, and percentage breakdowns by particular transaction types-e.g. margin trades, short sales, odd-lot transactions, etc.

The result is a comprehensive picture of both the circumstances and market participation of the individuals surveyed.

Organized around this data base, the thrust of the investigation was two fold: first, to identify the small investor's personal situation, his self perceptions, and the nature of his investment strategy deliberations; second, to create from the account transactions file an historical record of portfolio positions and realized investment returns for the group, spanning a range of market conditions over a 6-year period.

Within this project, a number of investigations which attempted to provide information relevant to such appraisals were issued in different journals beginning from May, 1974.

As stated by Lease, Lewellen, and Schlarbaum, the initial results of the study which were published in May, 1974, provides a unique body of data on the characteristics, motives, style, and make up of the active individual participant in the American securities market.

a) Demographic Characteristics

The survey group were found to be heavily male, relatively old, and reasonably affluent.

Being more specific, the authors found that

. four out of five of the respondents were men,

. four out of five were married,

. nearly a third were age 65 or older,

. just under half enjoyed an annual income exceeding $ 25.000,

. the great majority of those employed worked in professional and managerial occupations,

. one-third were either retired or housewives,

and

. more than half had attained at least the bachelor's degree level in their educational background.

b) Investment Objectives and Strategies

As the results of the survey revealed, almost two out of every three respondents described themselves as using either entirely or heavily fundamental personal approach to the evaluation of individual securities. Approximately one-fourth typically relied instead on their brokers or some other professional source of advice for recommendations.

According to the respondents, long term capital appreciation was the main investment concern, with short-term gains clearly at the bottom

of the list.

They had a well-diversified portfolio of income and capital appreciation securities in roughly 40/60 proportions.

They were proven to use one of the broad-based market indexes as the benchmark by which to judge their personal investment performance results.

c) Decision Process

Examination of the certain dimensions of the decision process suggested that

. roughly half of the sample spent less than five hours a month and less than $15 a year, on collecting the information for and making decisions about the securities in its portfolios.

. the most majority of the respondents transacted their securities business through a brokerage firm. 80 percent of those tried more than one such house over the years.

. a substantial percentage of the group, in their activities, engaged in one or more of the "sophisticated" forms of market participation: short sales, margin purchases, and the like.

d) Perceptions and Opinions

When the investor's subjective evaluation of his market environment and of his self-defined personal role therein were asked, the respondents claimed to enjoy investing, and to feel they would have sacrificed a fair portion of that pleasure if they had let institutions administer their funds.

It was also claimed that they were ready to expose themselves to substantial risks in order to achieve significant portfolio returns.

Depending on the same survey data, in their thirdly published study, Lease, Lewellen, and Schlarbaum (1977) focused on key bi-or tri-variate relationships among the important constituents of investment strategy and style through cross-classifications.

In order to manifest the multidimensional nature of the process and summarize their findings the authors then used the Automatic Interaction Detection (AID) analysis which provides an especially convenient vehicle for both executing and displaying such an overview.

The AID algorithm was developed specifically for use in situations where there is some reason to believe that the impacts of the possible candidate independent variables are not uniform across all segments of the population being sampled, where a number of those proposed variables are neither ordinal nor continuous, and where the assumptions of additivity and linearity in the underlying influences may not be appropriate. The result of the analysis is a series of partitions of the sample that indicate which independent variables have the most powerful influences, and in which order.

In the three AID runs made, (1) the percentage of the individual investor's portfolio he reports as committed to "income" securities; (2) the fraction of his actual total transactions over the 7-year study interval which appear in the file "solicited" trades; and (3) the average annual return he believes is attainable from his portfolio were treated as dependent variables. Independent variables were seven demographic attributes plus 22 variables related to the investment decision process.

The first of the dependent variables is an effective proxy for basic investment objectives and philosophy. The second encapsulates

the essence of differences in security-analytic and decision-making styles within the sample. And the third is a central element in the investor's evaluation of his surrounding market environment and opportunities. Table 1.5.1 conveys the findings of the first AID run which are closely related to the objectives of the present thesis.

With regard to the income-security component of the portfolio, the most powerful influence on the allocation decision was found to be the investor's age.

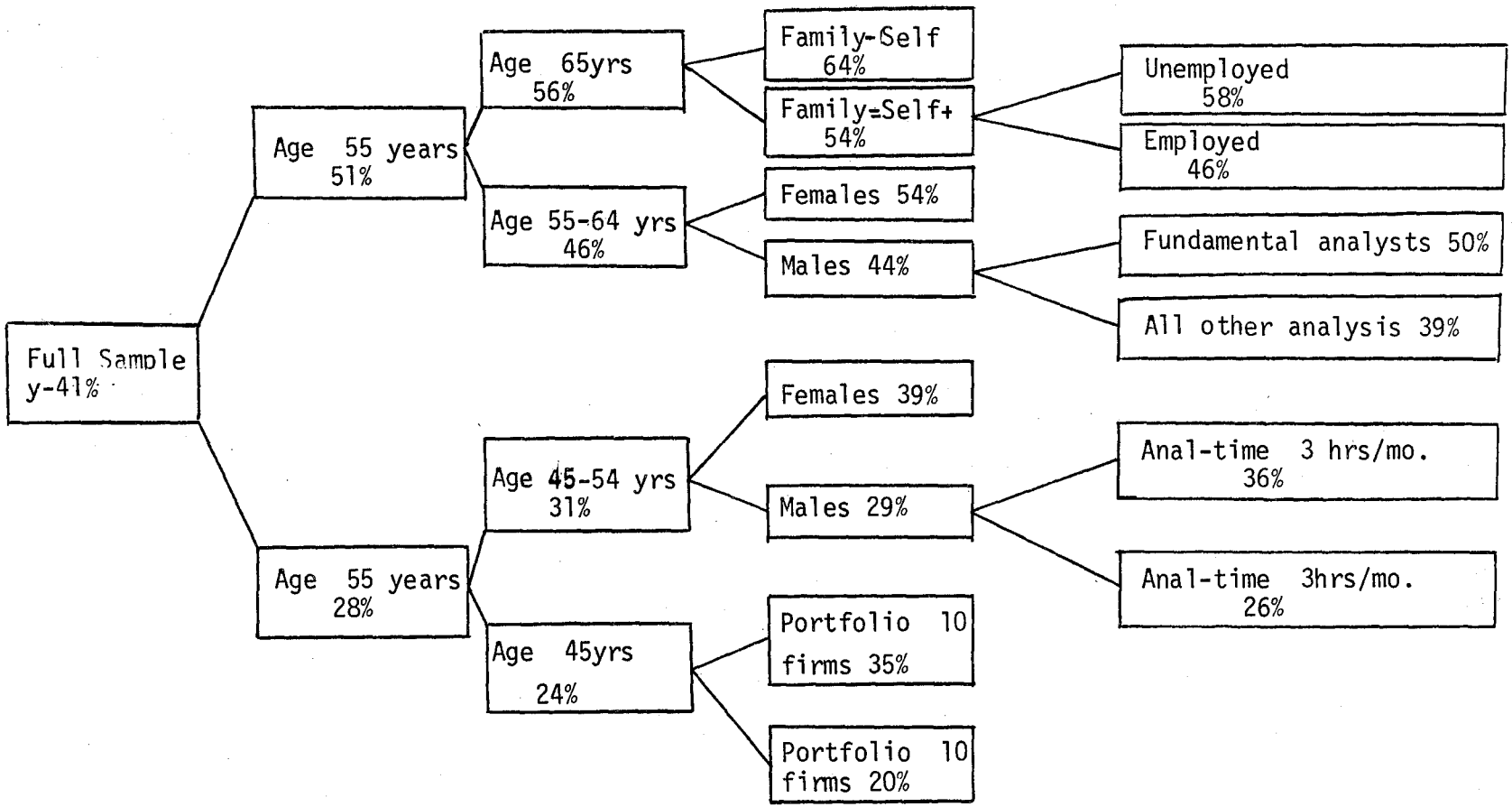

Table 1.5.1. Percentage of the investment portfolio allocated to securities designed primarily to produce dividend income (overall R^2= .223)

(Lease, Lewellen, Schlarbaum, 1977)

Further, within both age groups (below-55; and 55 and over), the next best predictor of the individual observations was also age. In the resulting four-way split, the income-security percentages were seen to rise steadily with age.

For individuals who were 65 or older, family size had an effect on strategy. Single investors in that bracket were found to seek income more heavily than the persons having families. Within the group having families, those employed were less concerned with investment income than those who are not.

In both the 45-54 and 55-64 subsamples female investors concentrated more on income securities than did their male counterparts.

For males of both age brackets, the "fundamental analysts, and those who spent very little time each mouth on managing their portfolios, appeared to granitate toward income securities.

Finally, in the below-45 age category, well diversified investors of both sexes were the ones who preferred dividend returns.

According to the results of the second and third AID runs, the most potent influence on behavior was again age.

The older the investor, the less the relience on broker's advice. Females were more broker reliant.

The rationale for the education and occupation influences detected for females was more transparent; presumably, greater education should enchance analytical prowess and encourage a more independent decision mode.

All the results appeared consistent with the messages from the cross-classification analyses placed in the first part of the paper.

1.6 Market Segmentation

Market segmentation is one of the most hotly debated and intensively pursued topics in the field of marketing. Segmentation is based upon developments on the demand side of the market and represents a rational and more precise adjustment of product and marketing effort to consumer or user requirements.

The marketing literature views consumer segmentation as providing an opportunity rather than posing a problem, in that product sales effort can be profitably differentiated.

Engel, Fiorillo, and Cayley (1972) hold out substantial benefits from a concept of segmentation based on three propositions:

(1) Consumers are different;

(2) Their differences are reflected in product demand differences; and

(3) The consumer groups can, in practice, be successfully isolated.

Research on market segmentation can often be associated with one of two general schools of thought. These are

(a) the behaviorally oriented school, and

(b) the decision-oriented school.

The differences between the behaviorist and decision-oriented schools of market segmentation research can be summarized as follows:

(a) the behaviorally oriented research

- identifies and documents group differences
- researches for predictors of such differences
- contributes to theory of why such differences occur

(b) the decision-oriented research

- assumes that some differences do infact exist and focuses on how meaningful segments can be "carved out" from the heteregeneous population.
- searches for good predictors to aid in the "carving out" process.
- develops procedures for allocating marketing resources to segments (Frank, Marry, and Wind; 1972, p. 14).

1.7 Marketing Activities in Service Industries

In an analysis of marketing activities in service industries, George and Barksdale (1974) concluded that although service industries have experienced unprecedented expansion in recent years, "the marketing function appears to be less structured in service companies than in manufacturing firms.... Fragmentation of marketing activities in service firms holds true for all components of the marketing mix." Moreover, service firms appear to allocate a relatively smaller proportion of their operating budgets to marketing activity than manufacturing firms. Marketing has traditionally been the neglected stepsister in most service industries (Anderson, Cox III, and Fulcker, 1976).

Donald H.Gerds (1973), a New York banking consultant, concurs:

> "No matter how many computers you install, what sort of management structure you use, or what kind of economic planning you do, it's all for nothing unless you know how to package and sell your product and to position it in the marketplace. Packaged-good companies call it "product differentiation". Many bankers don't call it anything, because they still haven't discovered what it is all about".

Only recently has the commercial banking industry begun to learn and implement marketing techniques that other industries applied decades ago. Where the banking community has accepted marketing practices, marketing research aimed at delineating market targets for programming purposes is often focused on consumer demographic and sociopsychological characteristics rather than on the criteria used by customers in making bank selection decisions (Anderson, Cox III, and Fulcher, 1976).

In the study, where the characteristics and savings behavior of two customer groups (those who held thrift deposits in commercial banks, in saving and loan associations) and the implications of the discriminator variables for competitive marketing strategies of commercial banks and saving and loan associations were investigated, Henry Claycamp (1965) has showed that frequently used socioeconomic variables (except age) were of little value indiscriminating between the customer groups and the differences in psychological variables that can be related to marketing strategies existed between the two groups. These variables, such as used for affiliation, achievement, and autonomy were found more closely related to savings and loan associations' customers. Result of the study also showed that savings motives did not prove to be important discriminators between the two groups. Thus, there might be little competitive advantage to be gained by an institution appealing directly to these motives.

1.8 Market Segmentation in Securities Markets

Much of contemporary capital market theory assumes that the participants in the marketplace are homogenous- in the nature of their search for information, and in their consequent securities trading patterns.

The capital asset pricing model rests on the following assumptions:

. All investors are riskaverse, expected utility maximizers
. Investors have homogeneous expectations about future returns for each security
. Investors may lend or borrow as much as they like at a single risk-free rate
. Investors have identical time horizons
. Information is freely available
. There are no transaction costs or taxes and each security is perfectly divisible.

(Schwendiman, Pinches, 1975; Harrington, 1983).

In the present study, it is assumed and examined that the markets for particular assets are segmented, in the sense that different groups of investors concentrate on different groups of assets.

The paper by Lease, Lewellen, and Schlarbaum (1976) which constitutes another part of their broadbased investigation project, also offers evidence on the investment behavior of the individual investor that, in general, supports the notion that segmentation does indeed exist and discuss its implications for market theory, the marketing of financial services, and the future demand for various financial assets. Having examined the demographic backgrounds, investment attitudes, and portfolio compositions of a retail broker's clients, the authors found that individuals did appear to partition themselves into distinct groups according to their individual circumstances. A standard cluster-analysis procedure neatly sorted the sample into five demographic groups. Group I was comprized almost entirely of retired male investors and Group II of

BOĞAZİÇİ ÜNİVERSİTESİ KÜTÜPHANESİ

relatively old- but still employed-males with a heavy representation of partnership occupational activities. Group III consisted predominantly of younger professional men with substantial educational backgrounds. Group IV was exclusively female, many of its members past retirement age and few actively employed. Finally, Group V was made up completely of unmarried individuals, young, and engaged generally in professional and managerial job responsibilities.

Application of multiple discriminant analysis revealed that there were sizable differences among the fine investor groups in their investment goals, the kind of information they used, and the number and kind of assets in their portfolios.

In general, the older investor was more conservative in his investment behavior, placed less emphasis on shortterm capital gains and more on dividend income, relied less on broker advice, spent more time on security analysis, and had a more diversified portfolios containing fewer high-risk assets. The portfolios of older females were especially conservative, diversified, and dividend oriented.

The respondents' brokerage transactions over the period 1964 to 1970 revealed that the compositions of the portfolios produced by those trades varied significantly across the five groups.Groups I (retired males) IV (older females), and V (unmarried professionals and managerial perosns) all held corporate securities, but Group I especially emphasized savings accounts and fixed income securities. Groups II (older employed males) and III (highly educated young professionals) were strongly invested in real estate and their own businesses.

This evidence of market fragmentation suggests that purveyors of

financial services have much to gain by being selective in their appeals to various classes of customers.

CHAPTER II

A FIELD STUDY ON THE INDIVIDUAL INVESTORS OF THE TURKISH SECURITIES MARKET

2.1 RESEARCH DESIGN AND METHODOLOGY

2.1.1 Problem formulation and research objectives

When investigating the individual investors we should except to be confronted with a rich body of evidence about their characteristics, self perceptions, attitudes, objectives, and selection rules.

This study is a descriptive research. In particular, it addresses emprically the matter of the customer profile, decision process and satisfaction of the individual investor with respect to the type of the security selected.

Due to their popularity and relatively high transaction volume two main groups of securities taken into consideration in the study were bonds (corporate and Government) and common stocks.

From the viewpoint of investor, bonds represents longterm debt, as contrasted with stocks which represent ownership. Claims of all bondholders have priority over the interest of the stockholders, both preferred and common. Bonds usually contain a promise to pay a fixed rate of interest, and their principal is payable on a definite date. Bonds normally give the holder no voice in management, except in case of default. The bond holder takes risk-but relatively less risk than the stockholder, in the same corporation. The quality of his bond, as reflected in price and yield, depends on the degree to which the debtor can be expected to fulfill these promises (Dougall, 1980). Cohn, Lease,

Lewellen, and Schlarbaum (1975) states that, though the notion of the "riskless asset" has been an important one in the development of modern capital market theory, it is difficult in real world terms to designate in general a particular asset or asset category as truly "riskless".

Four important differences exist between stocks and debt securities and markets where they are traded. First corporate stocks are in effect perpetual securities, with no maturity date. Second, in large part because of the first difference, most of the trading is in the secondary market, where the already outstanding securities are sold or exchanged. Relatively small amounts of new issues are sold, especially in relation to the total volume of stock outstanding. Third, trading in the secondary market is divided into two major segments, the over-the-counter market and the organized exchanges, whereas trading in bonds and mortgages is chiefly over the counter. Fourth, whereas bonds have fixed interest rates and maturity values, so that their yields are affected by price changes occuring during their life, common stocks have no fixed yields. Thus changes in prices of common stocks may result from either changes in yields or changes in discount rates.

Individuals who heavily invest in bonds, and those who primarily have common stocks in their portfolio constitutes the two main individual investor groups that the study focuses on.

The first objective of the study is to distinquish the bond and stock customers interms of demographic and psychographic characteristics and portray the customer profiles of these investor groups.

It will also be available to find out who the individual investors of the Turkish Securities Market are.

The second objective of the research is the investigation of individual investor's decision process when he is making his portfolio and choosing the type of the security to invest; and find out how bond customers and common-stock holders differ in terms of their investment objectives and strategies, information patterns, attitudes, expectations and selection criteria.

Identifying the principal decision factors used and their relative determinance in security selection decisions is another objective of the study.

The final objective is focused on the individual investor's satisfaction with the performance of his securities portfolio, and his future intentions.

2.1.2 Data Collection Procedure and Instrument

The necessary data for this study were collected from primary sources by a structured and undisquised questionnaire, which is presented in Appendix A.

Personal interviewing method of data collection was chosen, since it possesses the general advantages of versatility, flexibility and accuracy over mail and telephone surveys (Churchill, 1979). This method of data collection permits a good deal of variation with respect to the type of question that can be asked (Churchill, 1979). Depending on the information, questionnaires can also be longer and more complex with personal interviews.

The questionnaires were handed personally. The respondents names were not solicited and they were assured of anonymity in the survey.

Seventy-five percent of the distributed 60 questionnaires were completed by the respondents in private, and returned directly to the brokerage firms and the bank involved where they were then, collected by the researcher.

The remaining of the questionnaires were administrated by personal, face-to-face interviewing method.

Each of the interviewing approaches has their own advantages and disadvantages:

> Personel interview" represents a social interaction situation. Thus, the replies of the person being questioned are conditioned by the individual's perceptions of the interviewer. This removes the opportunity for the person to tell the interviewer what he thinks the interviewer wants to hear or the respondents that make him look good (Churchill, 1979, p. 165).

Personal interviewing may remove the respondents unwillingness and reluctance for cooperation to provide the information desired. Additionally, interviewer's presence creates an opportunity for the respondents to seek clasification on points of confusion from the interviewer (Churchill, 1979, p. 175).

These last two factors help to increase the amount and accuracy of the information that can be obtained from respondents.

Self administrated method, on the other hand, permits greater control of the bias due to interviewer-interviewee interaction; but introduces a danger of sequence bias stems from the exposure of the whole questionnaire (Churchill, 1979).

2.1.3 Questionnaire

A structured-undisquised questionnaire which solicited information on demographic characteristics, market attitudes, investment objectives, decision mechanics, asset holdings, and return perceptions of individual investors was utilized in this study.

The questionnaire was designed carefully to collect the desired data and capture most of the critical aspects of investment behavior of individuals, screening the relevant literature and previous research.

The survey instrument consisted of two main parts. In the first part, questions covered four broad elements of investment activity in the logical directional model of the overall investment process:

(1) Basic portfolio objectives

(2) Information collection and decision processes

(3) Instrument selection

(4) Return perceptions, market attitudes and future intentions

Second part of the questionnaire included seven demographic attributes as descriptors of investor characteristics: age, sex, marital status, educational attainment, occupation, income, and possessions.

Required responses included the checking of multiple-choise categories, frequency, ranking and scaled rating evaluations, and the insertion of numbers and percentages.

Ordinal and interval scales were utilized in addition to nominal and ratio scales. Ordinal-interval scales were of four-points, removing the mid-point to reduce the indecisive responses.

In constructing the final format, the questionnaire has been pretested to ensure that the questions, scales and instructions were clear to respondents. Having tested the initial questionnaire with a typical sample of four respondents, wording and sequence of some questions were changed in order to increase the reliability of the questionnaire insuring stability, consistency, and accuracy of the information.

2.1.4 Sampling

Individual investors' demographic and socio-economic characteristics, market attitudes and perceptions, and investment decision process have been investigated among the clientele of four brokerage firms and the securities department of T.İş Bank in Istanbul.

A combination of judgement and convenience sampling was used to select the respondents for the study.

The population in this study was purposively selected, and considered to be all individual customers of the following five members of Istanbul Securities Exchange:

Eczacıbaşı Menkul Kıymetler A.Ş.

Semih Menkul Kıymetler A.Ş.

Yatırım Finansman A.Ş.

İlhan İzibelli-Cengiz Engin

T.İş Bankası Menkul Kıymetler

It is believed that these firms and their clientele are quite representative when the whole Turkish Securities Market is concerned.

The sample is comprised specifically of individuals who have been "in the market" long enough-more than 4 years- in order to deal with

investors who have developed both a behavior pattern, and a store of experiences from which to respond.

The sample size is determined by using the following formula which takes into account the required precision and confidence necessary to answer the research problem:

$$n=p(1-p)\ (Z/E)^2$$

where

n=sample size

p=percentage of customers who have been in the market more than four years. The value of P is assumed to be 65%

Z-Standard error for 90 %confidence

E-the difference between the expected proportion (P) and the universe proportion; 10% was chosen

$$n=0.65\ (1-0.65)\ (1.64/0.10)^2=61$$

The sample size is found 60, approximately.

They were planned to be drawn from the clientele of the firms proportional to their customer numbers.

Sample elements were contacted by convenience. More than 100 individual investors were asked for their collaboration. Many of them refused to participate.

Questionnaire were then presented to 60 investors who accepted to participate voluntarily. 15 of those were interviewed personally, while the others filled the questionnaire in their convenience and returned later. Of 45 distributed questionnaire 16 have been returned, and total

26 questionnaire were utilized in data analysis.

Despite the personal interviewing method and assurance of anonymty, very low response rate has occured. Refurals and low response rate happened to be due to individuals' reluctance and hesitation to respond to crucial questions about their income and asset position.

2.1.5 Hypotheses

2.1.5.1 First Hypothesis

Individual investors who manifest differences in concern with their demographic and psychographic characteristics, do also differ interms of the security type selected to invest primarily.

a. Sub Hypotheses

Individual investors who manifest differences in

1) Sex
2) Age
3) Marital Status
4) Occupation
5) Educational Attainment
6) Annual income
7) Percentage of income invested in securities
8) Home ownership
9) General self confidence
10)Attitude toward risk taking

do differ interms of the selected security type- either bond or common stock.

b. Operational Definitions

The questionnaire asked the investors to specify the respective percentages of the securities in their portfolio. These percentages asked in question number four (See Appx. A) were used to identify the two main investor groups which the investigation focused on:

(1) Bond Holders, and (2) Common Stock Holders. In the case that the percentage of an investor's security holdings invested in Common Stocks (or bonds) exceeded 50% of his total portfolio, he was regarded as Common Stock (or bond) holder.

General Self Confidence: the extent to which the investor believes himself to be capable in making important decisions. It is measured in the study utilizing Question number 11 (Appx.A) "How often do you hesitate in making important decision?" Four point scale was employed for answers: (1) Not at all (2) Rarely (3) Often (4) Always. Attitude toward risk taking: The investors' attitude toward risk taking, as embodied in his degree of agreement with the statement "one should take substantial financial risks to realize significant financial gains from investments". Degree of agreement was measured on a scale of one to four: (1) Strongly disagree (2) disagree (3) agree (4) strongly agree

Table 2.1.1. summarizes the questions, scales, and variables utilized in the hypothesis.

VARIABLES UTILIZED IN THE FIRST HYPOTHESIS Table 2.1.1

Question Number	Dep. Variable	Indep. Variables	Scales
4	VAR 91		2-point scale of selected sec.type
18		VAR 76	2-point scale of sex
19		VAR 77	5-point scale of age
20		VAR 78	3-point scale of marital status
21		VAR 79	4-point scale of income
22		VAR 80	4-point scale of occupation
23		VAR 81	6-point scale of education
25		VAR 90	2-point scale of homeownership
3		VAR 12	percentage of income invested in sec.
12		VAR 63	4-point frequency scale
8		VAR 41	4-point agreement scale

2.1.5.2 Second Hypothesis

The individual investors who primarily invest in bonds do differ from those who primarily invest in common stocks in terms of their

Subhypotheses 1 Investment Objectives

2 Porfolio performance evaluation criterion

3 Information patterns

4 Investment approaches

5 Percentage of annual income invested in securities

6 Hours spent on investment decisions

7 Portfolio composition

a. Operational Definitons

. Investment Objectives - Investment objectives are thought of as the most important factor determining the choice of an investor when composing his securities portfolio. The questionnaire required the respondents to rank, from one to four (where one denoted as primarily goal), preventing money from inflation, additional income, short-term capital gain and long-term capital appreciation as portfolio objectives.

. Performance evaluation criterion- to determine the benchmark an individual uses in setting his portfolio return goal, the respondents were asked to indicate the primary standard against which an investor compares his portfolio performance.

. Information Patterns - perceived quality and usefulness of seven different investment information sources were rated on a four-point "usefulness" scale, where a rating of one denoted "not useful" and a rating of four "very useful". Banks, brokerage firms, professional investment counselor, financial papers and periodicals, operation reports of corporations, TV/newspapers, and recommendations of friends and relatives were considered as the information sources used in investment decisions.

. Investment Approaches - to determine the utilization rate of different investment approaches by the investor groups, the respondents were asked to indicate how frequently they take the following approaches in reaching investment decisions, on a four-point scale ranging from never (1) to always (4).

a) Fundamental Approach - defined as analysis of such fundamental factors as general business conditions, industry outlook, earnings, dividends,

quality of management, etc. (Hazard, Christie, 1964).

b) Technical Approach - defined as analysis of market factors such as stock price movements, supply vs. demand, charts, indexes, etc. (Hazard, Christie, 1964).

. Portfolio Composition - number of different type of securities in one's portfolio.

2.1.5.3 Third Hypothesis

The individual investors who are distinguished in terms of the selected security type that ultimately comprise their portfolio do possess different opinions and investment attitudes.

a. Operational Definitions

Attitude: The concept "attitude" is used here to denote the sum of an investor's inclinations, feelings, prejudice, ideas and convictions about the securities market and investment concept.

To discern the attitudional basis of the observed group differences, a series of "opinion" statements were included in the questionnaire using the question number eight to which the respondents were asked to indicate the extent of their agreement on a scale of one to four, where a rating of one denoted "strong disagreement" and a rating of four "strong agreement".

2.1.5.4 Fourth Hypothesis

Perceived importance of the attributes as security selection criteria are different for the individual investors who differ in terms of the selected security type (bonds vs. common stocks) that primarily

constitute their portfolio.

a. Operational Definitions

Determinant attributes: Attitudes toward features which are most closely related to preference or actual purchase decisions are said to be determinant.

Perceived importance of each security selection criterion was measured in the study utilizing question number seven.

Each respondent was asked to indicate the importance of each attribute along a four-point scale ranging from (1) Not Important at all to (4) Very Important.

2.1.5.5 Fifth Hypothesis

The individual investors who differ interms of the security type - bond or common stock - invested in are more likely manifest differences in their

1) Level of satisfaction with the realized return of their securities portfolios; and
2) Future intentions related to investment decisions.

a. Operational Definitions

Level of satisfaction with realized return was measured by utilizing question number thirteen "How satisfied are you with your securities portfolio?" Four-point scale was utilized for answers. The values of the scale are as follows: (1) Very Dissatisfied (2) Somewhat Dissatisfied (3) Somewhat Satisfied (4) Very Satisfied.

Intention was defined as the expression of what a person "thinks" he would do if he were confronted with a given situation (Frank, Marry, and Wind, 1972).

Question number fifteen "If you were given a substantial amount of money to invest in securities which of the security type you would prefer?" and question number sixteen "Are you planning to change your investment type in the future?" were utilized in the study to measure the investment tendencies of the individuals in the future.

2.1.6 Data Analyzing Methods

In this study, parametric or non-parametric several analysis methods were utilized for testing the stated hypothesis.

The following table shows the analysis techniques used to test the five main hypothesis.

Table 2.1.2.

Hypothesis	Analysis technique
1	Chi-square
2	t-test; chi-square; spearman rank
3	Multiple Discriminant Analysis
4	Multiple Discriminant Analysis Factor Analysis
5	Chi-square

a) Frequency Distribution

Frequency distribution is a technique for systematically arranging collection of measures on a given variable to indicate the frequency of

occurance of the different values of the variable. It is used in the study to manifest some differences exist between the groups and portray investor profiles.

b) Chi-Square Analysis

Cross-classification analysis is a convenient device for partitioning a sample across variables into groups for purposes of exposing bivariate relationships (Lease, Lewellen, and Schlarbaum, 1976, p. 301).

The analysis involves cross-tabulation matrices with significance test applied to determine whether the two variables in question are related, holding all other variables constant. The underlying test is a simple X^2 on the differences between the observed cell size as predicted values assuming homogenity across categories.

While the test explicitly addresses only the issue of whether a relationship is present, does not measure its strength, the tabulations provide a sense of the latter. To measure the strength of relationship Contingency Coefficient or Cramer's V are used.

Chi-square Analysis is employed mainly to test first and fifth hypothesis.

c) t-test

t-test analysis focuses on the differences in the means between two groups. It is suitable when the variables are measured in at least on interval scale. The null hypothesis is stated as "the means are equal".

A nondirectional, two-tailed, test is conducted for testing the differences between the mean ratings of the two investor groups on a number of variables related to investment decision process.

Since the size of both samples was below 30, and population variances were unknown in this study, a different calculation method was used to determine the standart error of the differences between two means, and the value of t-statistics (See Appendix B).

d) Discriminant Analysis

Multiple Discriminant Analysis is utilized to discriminate the investor groups who primarily invest in bonds and those who invest in common stocks concerning several investor attitudes and security selection criteria as hypothesized in the third and fourth hypothesis.

MDA involves deriving a linear combination of the independent variables that will discriminate best between the two a priori groupings (Statistical Package for the Social Science, p. 435). This is done by maximizing the between-group variance relative to the within group variance (SPSS, p. 439).

$$\text{Discriminant SCore } Z = \sum_{i=1}^{n} (\text{Disc.Coefficient}_i \times \text{Ind.Var}_i)$$

The discriminant coefficients are assigned according to the discriminating power of independent variables (Hair and Anderson, 1979, p. 110). Disregarding signs, the higher the discriminant coefficient, the more important the independent variable.

As such, the coefficients are more sensitive measures of investor attitudes and security selection criteria than a similar table of means of the variables. Moreover, the discriminant coefficients take into account correlations among variables (Massy, 1965). In this regard, MDA minimizes the multicollinearity among the independent variables.

To assist in interpretation, the average Z score is calculated for each group which is referred to as a centroid. Each respondent in the analysis is classified to where its Z score is in relation to the single cutting score, which is the Z value used to classify an individual into a group. Confusion matrix summarizes the number of correct and incorrect classifications, and overall accuracy of the discriminant function that were obtained by the discriminant analysis.

e) Factor Analysis

Factor analysis is utilized to determine the dimensions of security selection criteria for the two main investor groups.

Factor analysis is primarily a tool to reduce a large number of variables to a few interpretable constructs. It is useful when there is a large number of variables and the correlations among these are distributed from very high to very low levels (Aaker, 1971, p. 209).

The primary purpose of factor analysis is the resolution of a set of observed variables in terms of new categories called factors with minimum loss of information (Wells and Sheth, 1971).

To interpret a factor, the variables that are highly correlated with it are identified from the factor structure. These variables then hopefully offer clues as to what the factor represents (Aaker, 1971, p.209).

2.1.7 Limitations of the Study

This study has certain limitations which should be taken into account when to read.

Interpretation of the results must be subject to the following

limitations, regarding the sample:

The sample was taken from one point in time, nonprobabilistic, and too small in size.

This was mainly due to a high rate of refusals and very low response rate caused by individuals' reluctance and hesitation to respond to questions about their income and asset positions.

The fact that the sample was nonprobabilistic and small in size had implications for the validity of statistical analysis.

Although validation problems which can be raised for each of the purposes of discriminant analysis

first, is actual classification potential as high as sample estimates indicate?

second, are the true population profiles what they appear to be from the sample results?

third, are the underlying sample-based dimensions generalizable to the population?

are not restricted to small-sample research, the issue becomes critical as the sample size decreased (Crash and Perrault, 1977).

Due to limited sample size, cost and time considerations, two known methods (U-method, Jackknife analysis) for validition of discriminant analysis could not be used.

Since the conclusions drawn from the results reflected the attitudes and opinions of a certain group of people, the generalizations of these conclusions may not be relevant to all individual investors of the Turkish securities market.

The limitations regarding the nonsampling errors arise because of response bias and questionnaire design.

Some cricual questions about income and assets, which were asked in direct manner, made some respondents feel uneasy when answering, and led them to give answers that may not be very accurate.

Some fixed alternative questions, although they are more reliable and productive, may not have been able to cover the range of possible replies adequately and capture the respondents true feelings on the issue.

It is likely possible that the investment approches were not understood well by the respondents, though they all attempted to respond for some reason causing a response bias.

The lack of literature regarding the securities market and investors in Turkey was another limitation of the study, which could have been helpful to the writer with this study.

2.2 RESEARCH FINDINGS

Results on Data Analysis

Data Analysis presents the major findings of the study which include the following:

. Frequencies of the variables related to each hypothesis.
. The results of testing each hypothesis and significance behind the findings.
. The most important factors considered by two investor groups in selecting security type to invest.

It should be noted that these findings are the facts of the study.

Since the sample size is too small, they are not much available and appropriate for generalizations.

2.2.1 Testing First Hypothesis

The first hypothesis states that individual investors who manifest differences in concern with their demographic and psychographic characteristics and risk taking behavior, do differ in terms of the security (either bond or common stock) which ultimately comprise their portfolio.

In testing the hypothesis, chi-square test was used to analyse the data related to the degree of association between the type of security where the individual investor primarily invested in and his demographic and psychographic characteristics. To test the hypothesis, data from two groups of investors namely Bond-Holders and Common Stock Holders were cross tabulated. The analysis attempts to distinguish between the two groups of investors on the basis of 10 variables listed in Table 2.2.1.

X^2- tests of the ten Subhypothesis were performed seperately, and in each instance, the investor groups were tested against a demographic or psychographic variable.

Table 2.2.1

Investor Group Differences on Demographic and Psychographic Characteristics

DEPENDENT VARIABLE	INDEPENDENT VARIABLE	d.f.	X^2	Cramer's V	Contingency Coefficient	Significance
.Investor Groupings based on the type of the security primarily selected	. Sex	1	.317		.234	.5736
	. Age	2	2.486	.309		.2885
	. Marital Status	1	0.462		.132	.4966
	. Income	1	0.073		.053	.7858
	. Occupation	2	2.645	.319		.2664
	. Education	2	7.051	.521		.0294
	. Percentage of Income invested in securities	1	3.864		.359	.0500
	. Home ownership	1	.963		.189	.3204
	. General Self Confidence	2	.506	.139		.7763
	. Attitude toward risk taking	2	.012			.99

Table 2.2.1 summarizes the results of X^2 tests of differences between the Bond Holders and Common Stock Holders.

Of the 10 subhypothesis tested, fifth and seventh supported. Statistically significant relationships were found between an investor's primary instrument choise and:

. his educational level (X^2=7.051, d.f.2 ,α<0.03)

. percentage of his annual income invested in securities (X^2=3.864, d.f.1 ,α<0.05)

As indicated by the Contingency Coefficent and Cramer's V values, strength of the relationships were moderate.

A more detailed presentation of the significant findings appear in Cross-Classification tables 2.2.2. and 2.2.3.

Table 2.2.2 Investor groups vs. educational attainment

	Educational Attainment			
Investor Groups	H.S.Graduate	BA/BS	Master or Ph.D.	
Bond-Holders	22.2%	50.0%	27.8%	100%(18)
Common Stock-Holders	75.0%	25.0%	0.0%	100%(8)
X^2=7.051 d.f. 2	Cramer's V=0.52		α<0.03	

Among the "bond holder" investors, 77.8% had at least a college degree and 27.8% got their masters or Ph.D.. Conversely, 75% of the common stock-Holders graduated from high-school, and only 25% of them had a college degree.

Table 2.2.3 Investor groups vs % of income invested in securities

Investor Groups	Percentage of income invested in securities*		
	0-25%	Over 25%	
Bond Holders	33.3%	66.7%	100% (18)
Common Stock Holders	75.0%	25.0%	100% (8)

*Collapsed into two categories

X^2=3.864 d.f.=1 C.C.=0.359 $\alpha < 0.05$

Percentage of the income invested in securities differentiated the Bond Holders from the Commonstock Holders at the 0.05 level. 75% of the CSH, claimed that they invest one-fourth of their annual income in securities, and remaining of them said they exceed 25%. On the other hand, 67% of the Bond Holders were found to be investing more than 25% of their income in securities.

Table 2.2.4 represents frequencies of a number of demographic and psychographic variables that "failed" to significantly differentiate the Bond Holders and Common Stock Holders.

Though they were found insignificant, they might help to portray the customers of the securities market, and investor group profiles.

An overview of the table reveals that almost all the individual investors in the study were male, married, had their own home, and earned more than 250.000.-TL. in a month. It also appeared that half of the investors can be described as "risk averse", whereas the other half expressed desire to take substantial financial risks to gain more from investing in securities. Nearly 70 percent of the investors were found

to have general-self confidence compared to 30 percent of those who generally hesitate when making important decisions.

It is appearent that both groups were almost identical on these variables.

Though the majority (65%) of the investors were elderly people, 37 percent of the common stock-holders were found to be younger and below 34 years old.

Approximately 38 percent of the groups were retired. While 50 percent of the Common Stock-Holders had their own business, 40 percent of the Bond-Holders were salary earners.

Table 2.2.4

FREQUENCIES OF THE INVESTOR SAMPLE

Variable	Total Sample	Bond Holders	CommonStock Holders	Test X^2	Significance
Sex				3.16	.573
Male	88.5%	88.3%	100.0%		
Female	11.5%	16.7%	0.0%		
Age				2.486	.290
Under 34	19.2%	11.1%	37.5%		
35-54	15.4%	16.7%	12.5%		
55 and over	65.4%	72.2%	50.0%		
Marital Status				.462	.496
Married	96.2%	94.4%	100.0%		
Single	3.8%	5.6%	0.0%		
Income (monthly)				.073	.786
Under 250.000.-	15.4%	16.7%	12.5%		
Over 250.000.-	84.6%	83.3%	87.5%		
Occupation				2.645	.266
Self employed	30.8%	22.2%	50.0%		
Salary earner	30.8%	38.9%	12.5%		
Retired	38.5%	38.9%	37.5%		
Education				7.051	.0294
H.S.Graduate	38.5%	22.2%	75.0%		
BA/BS	42.3%	50.0%	25.0%		
Master or Ph.D.	19.2%	27.8%	0.0%		
Personal Possessions				.963	.320
Own Home	92.3%	88.9%	100.0%		
Rent	7.7%	10.1%	0.0%		
% of income invested in securities				3.864	.05
1-25	46.2%	33.3%	75.0%		
26-50	42.3%	50.0%	25.0%		
Over 50	11.5%	16.7%	0.0%		

2.2.2 Testing Second Hypothesis

The second hypothesis states that individual investors who primarily invest in bonds do differ from those who primarily invest in commonstocks with respect to their investment strategy dimensions. Seven subhypotheses attempt to cover the major dimensions of investment decision process.

In the analysis of the second hypothesis, t-statistics were utilized for testing the subhypotheses. Subhypothesis two was tested by Chi-square analysis.

Differences on the investment strategy dimensions were also tabulated as frequencies (percentages) on Table 2.2.5, expecting that they might provide some additional information on group differences.

Table 2.2.5

Differences on Investment Strategy Dimensions

Variable	Total Sample	Bond Holders	CommonStock Holders	test statistics
I. Primary-Investment Objective				t
Present money from inflation	50.0%	44.4%	62.5%	
Provide additional income	30.8	38.9	12.5	
Capital appreciation in S-Term	7.7	5.6	12.5	
Capital appreciation in L-Term	11.5	11.1	12.5	
II. Primary standard to compare portfolio performance				X^2
Interest rate on saving accounts	53.8%	61.1%	25.0%	
Inflation rate	26.9	27.8	25.0	
Personal standard or pre-dete .rate	19.3	11.1	50.0	
III. Usefulness of information sources				
a) Banks				t
Not useful	26.9%	16.7%	50.0%	
Occasionally useful	30.8	38.9	12.5	
Generally useful	38.4	44.4	25.0	
Always useful	3.9	0.0	12.5	

Table 2.2.5 (Cont'd)

Variable	Total Sample	Bond Holders	CommonStock Holders	test statistics
b) Brokerage firms				t
Not useful	15.4%	16.7%	12.5%	
Occasionally useful	15.4	11.1	25.0	
Generally useful	38.4	33.3	50.0	
Always useful	30.8	38.9	12.5	
c) Investment Counselor				t
Not useful	42.3%	44.4%	37.5%	
Occasionally useful	23.0	16.7	37.5%	
Generally useful	23.0	27.8	12.5%	
Always useful	11.7	11.1	12.5%	
d) Financial papers and periodicals				t
Not useful	23.0%	22.2%	25.0%	
Occasionally useful	7.7	0.0	25.0	
Generally useful	53.8	55.6	50.0	
Always useful	15.5	22.2	0.0	

Table 2.2.5 (Cont'd)

Variable	Total Sample	Bond Holders	CommonStock Holders	test statistic
e)Operation reports of firms				t
Not useful	23.0%	27.8%	12.5%	
Occasionally useful	7.8	5.5	12.5	
Generally useful	23.0	22.2	25.0	
Always useful	11.7	16.7	0.0	
f) Advertisements on TV/Newspaper				t
Not useful	42.3%	33.3%	62.5%	
Occasionally useful	23.0	27.8	12.5	
Generally useful	23.0	22.2	25.0	
Always useful	11.7	16.7	0.0	
g) Friends and relatives				t
Not useful	30.8%	27.8%	37.5%	
Occasionally useful	23.0	27.8	12.5	
Generally useful	30.8	27.8	37.5	
Always useful	15.4	6.6	12.5	
IV: Investment approach utilization				
a) Relying primarily on investment counselor's advice				t
Never	42.3%	44.4%	37.5%	
Rarely	15.4	16.7	12.5	
Frequently	26.9	22.2	37.5	
Always	15.4	16.7	12.5	

Table 2.2.5 (Cont'd)

Variable	Total Sample	Bond Holders	CommonStock Holders	test statistics
b) Fundamental Approach				t
Never	26.9%	22.2%	37.5%	
Rarely	11.5%	16.7	12.5	
Frequently	34.6	44.4	12.5	
Always	26.9	16.7	37.5	
c) Technical Approach				t
Never	38.5%	33.4%	50.0%	
Rarely	15.4	22.2	0.0	
Frequently	26.9	22.2	37.5	
Always	19.2	22.2	12.5	
d) Relying primarily on bank or brokerage firm for recommendations				t
Never	23.1%	22.2%	25.0%	
Rarely	19.2	16.7	25.0	
Frequently	42.3	44.4	50.0	
Always	15.4	16.7	0.0	
V. Percentage of income invested in securities				t
1-25%	46.2%	33.3%	75.0%	
26-50%	42.3	50.0	25.0	
Over 50%	11.5	16.7	0.0	

Table 2.2.5 (Cont'd)

Variable	Total Sample	Bond Holders	CommonStock Holders	test statistics
VI . Hours/month spent on investment decisions				t
0-6 hours/month	61.5%	77.8%	25.0%	
7-23 hours/month	30.8	16.7	62.5	
24 hours and over	7.7	5.5	12.5	
VII . Number of security types in portfolio				t
one	34.6%	38.9%	25.0%	
two	34.6	27.8	50.0	
three and more	30.8	33.3	25.0	

2.2.2.1. Testing Subhypothesis 1

The differences between the means of the reported investment objectives of the investor groups were tested by t-statistics.

In testing the hypothesis respondents were asked to rank the portfolio objectives, posed on the questionnaire, from 1 to 4, where "one" denoted the primary goal. The mean rankings to each of the four objectives were then calculated for the Bond Holder and CommonStock Holder groups seperately (Appx.C).

Table 2.2.6 presents the results of two-tailed t-tests of the group means on each objectives.

The differences between the two investor groups in their reported investment goals did not appear statistically significant except for the objective "provide additional income".

It was found that, a statistically significant (at the 0.05 level) difference exist in the mean rankings of "additional income" objective for the two groups. Additional income for family budget seemed to be more important as a portfolio goal for the bond holders than that for the commonstock holders.

Table 2.2.6 also contains the rank orders of the investment objectives for the two investor groups.

As an overall assessment of investment objectives. "Spearman Rank Correlation" analysis on ranks for the two groups was performed.

Since the calculated t (1.88) was found below the critical t (4.303) for α =0.05 and 2 d.f., the null hypothesis no agreement was rejected.

There was a quite strong agreement in the rankings (r_s=0.8) of the investment objectives of the bondholders and commonstock holders (App.D).

Although the differences were not significant in statistical sense, examination of Table 2.2.5 may provide some insights into the investment goals of different investor groups.

According to the both groups, preventing money from inflation appeared to be the paramount investment concern. 62 percent of the commonstock holders gave more emphasis on this objective compared to 44 percent of the bondholders.

While 39 percent of the bondholders are primarily concerned with additional income when investing in securities, only 12.5 percent of the commonstock holders invested for additional income.

Twenty five percent of the commonstock holder's, on the other hand, asserted that they invested predominantly for capital appreciation. Half of those chose short-term capital gain as primary investment goal.

Table 2.2.6

Investment Objectives	t-test							
	BONDHOLDERS			COMMON STOCK HOLDERS				
Variable	$\bar{X}_1$	rank order	σ_1	$\bar{X}_2$	rank order	σ_2	t	α
* Prevent money from inflation	1.78	(1)	3.33	1.63	(1)	2.00	.44	
* Provide additional income for family budget	1.89	(2)	4.07	2.75	(2)	2.73	-2.11	0.05
* Capital appreciation in short-term	3.33	(3)	3.16	3.13	(4)	2.98	.55	
* Capital appreciation in long-term	3.50	(4)	4.30	2.88	(3)	3.30	.63	

Rank order 1 to 4

where (1) = primary objective

(4) = least important objective

2.2.2.2. testing Subhypothesis 2

Chi-square analysis was utilized to determine the degree of association between the type of security which ultimately comprise an individual's portfolio and his primary performance criterion used in assessing his investment success.

As shown in the Contingency table 2.2.7, the relationship between the variables are significant below the 0.1 level. The value of Contingency Coefficient suggests that there is moderate association between the "portfolio performance criterion" and individual investor groupings based on their portfolio composition.

In short, the two main investor groups have different criterion to judge their investment performance results.

Table 2.2.7 Inv. Groups vs. Portfolio Performance Criterion

Invester groupings based on primarily selected security type	Primary Portfolio Performance Criterion			
	Interest rate on savings acc.	Inflation Rate	Personal Standards	
Bond Holders	61.1%	27.8%	11.1%	100.0%
Com.Stock Holders	25.0%	25.0%	50.0%	100.0%
X^2=5.09	2 d.f.	$\alpha > 0.08$	C=0.404	

When asked about the performance criterion used in evaluating their portfolios success, some 61% of the Bond Holders indicated that they employed interest rates on savings accounts as benchmark. 50% of the CommonStock Holders, on the other hand, selected their personal standard

and pre-determined rate of return as an amalgam of experience, evidence, and concepts of "fair" yield. Nearly 25% of the both groups stated "inflation rate" as their primary standard against which to compare their portfolio performance.

2.2.2.3. testing Subhypothesis 3

Subhypothesis 3 states that the usefulness of information sources differs from one investor group (Bound Holders) to another (CommonStock Holders).

The investors were asked to rate the value of the various information sources (on a scale one to four) according to usefulness to them.

The results of the t-tests utilized in testing the subhypothesis indicated that, for all of the information sources posed on the Table 2.2.8, the investor groups were consistent in their opinions, and they did not differ significantly with respect to the perceived quality of information obtained.

Spearman Rank Correlation analysis also proved that there was a relatively strong (r_s=0.562) correlation between the rankings of the information sources for the two investor groups (Appendix D).

It is also noteworthy that, with regard to the usefulness of the information gathered, majority of the both groups (over 60 percent) appeared to consider the most valuable information they get from brokerage firms and annual operation reports of firms, with almost equally credibility and usefulness. As seen from Table 2.2.5, annual operation reports of the firms were regarded as almost always useful by 75 percent of the

Commonstok holders. 72% of the bond holders, on the other hand, claimed that brokerage firms were the most useful information source for their investment decisions.

Approximately 78 percent of the bondholders considered financial papers and periodicals as the third most useful source, whereas 50 percent of the common stock holders shared the same opinion.

Over 35 percent of the both investor groups (44.4% of Bond holders and 37.5% CommonStock holders) claimed that banks are useful in sending advice. However, half of the commonstok holders regarded this information soruce as "not useful".

TV/newspaper advertisements and private investment counselors were thought of as unuseful in making investment decisions by 42.3 percent of the total sample.

Table 2.2.8

Variable	Perceived usefulness of information sources: BOND HOLDERS $\bar{X}_1$	rank order	σ_1	COM.STOCK HOLDERS $\bar{X}_2$	rank order	σ_2	t-test: t	α
Banks	2.17	(6)	.79	2.00	(6)	1.19	.42	1.675
Brokerage Firms	2.94	(1)	1.11	2.62	(2)	.92	.71	.484
Professional Investment Counselor	2.06	(7)	1.11	2.00	(5)	1.07	.12	.906
Financial papers and periodicals	2.78	(2)	1.06	2.25	(3)	.88	1.23	.232
Operation reports of firms	2.67	(3)	1.19	3.00	(1)	1.07	-.68	.503
Advertisements on TV/Newspapers	2.22	(5)	1.11	1.62	(7)	.92	1.33	.197
Friends and relatives	2.33	(4)	1.09	2.25	(4)	1.17	.18	.861

Scale Values

(1) Not useful
(2) Occasionally useful
(3) Generally useful
(4) Always useful

2.2.2.4 testing Subhypothesis 4

Subhypothesis four states that the investor groups, namely bond holders and commonstock holders, differ in terms of the utilization rate of different investment approaches.

To determine the utilization rates of the four main investment approaches, the respondents were asked to indicate "how frequently" they take each approaches in reaching investment decision, on a four-point scale.

t-test analysis applied on each of the four approaches did not result in statistically significant differences between the investor groups based on their mean approach utilization ratings. Each of the four approaches was found to be utilized by the two investor groups almost equally. Fundamental approach was the most commanly used technique among the investors. Relying on banks and brokerage firms appeared to be the second way used by the investors in their investment decisions.

Spearman Rank Correlation on the ranks of the four approaches for the two investor groups, given in appendix D, also revealed that there were a strong agreement between the bondholders and commonstock holders in their rankings of the (rank order of means) investment approaches.

As seen from Table 2.2.5, 61 percent of the bondholders and 50 percent of the commonstock holders described themselves as using heavily fundamental personal approach to the investment decisions, and relied primarily on banks or their brokerage firms for recommendations.

Technical approach was found to be used by 44 percent of the bond holders and half of the common stockholders.

Fifty percent of the commonstock holders claimed that they rely primarily on their investment counselor's advice, whereas 39 percent of the bondholders used counselors' advice in their investment decision, frequently.

Table 2.2.9

Investment Approach Utilization	BONDHOLDERS			COM.STOCK HOLDERS			t-test	
Variables	$\bar{X}_1$	rank order	σ_1	$\bar{X}_2$	rank order	σ_2	t	α
Fundamental Approach	2.55	(1)	1.085	2.50	(1)	1.414	.33	.745
Technical Approach	2.33	(2)	1.188	2.13	(3)	1.246	.41	.688
Rely primarily on bank or brokerage firm for recommendations	2.55	(1)	1.092	2.25	(2)	.886	.82	.420
Rely primarily on investment counselor's advice	2.11	(3)	1.183	2.25	(2)	1.165	-.28	.784

Scale Values

(1) Never (2) Rarely

(3) Frequently (4) Always

2.2.2.5 testing Subhypotheses 5, 6, and 7

Subhypotheses five, six, and seven state that the two investor groups (Bondholders and CommonStock Holders) differ in terms of their

. percentage of annual income invested in securities
. time spent on investment decisions
. portfolio composition which based on the number of different types of securities.

In testing these hypotheses, t-test analysis produced significant result only for the fifth hypothesis. Table 2.2.10 presents the results of the tested hypotheses.

The two investor groups invested different percentage of their annual income in securities: the bondholders allocated 34 percent of their income for investing in securities, while the commonstock holders invested 22 percent of their annual income in securities.

As seen in Table 2.25, 75 percent of the common stockholders claimed that they could invest one-fourth of their income in securities, on the other hand, over 80 percent of the bondholders allocated up to 50 percent of their income for securities, annually.

As already indicated, testing the subhypotheses 5 and 7 did not result in statistically significant differences between the two groups.

Examination of the frequencies given in Table 2.2.5 manifest some differences exist between the BondHolders and CommonStock Holder groups: The commonstock holders spent more time on investment analysis and decision making when compared with the bondholders. 78 percent of the bond holders spent less than 6 hours permonth for investment decisions.

62.5 percent of the commonstock holders, on the other hand, gave their 7-23 hours in a month, and 12.5 percent of those exceeded 24 hours.

Though the mean values were almost same for the two investor groups, it is appearent from table 2.2.5 that 75 percent of the commonstock holders had at least one other type of instrument in their securities portfolio and 25 percent of them invested in three or more types of securities when making their portfolios. 39 percent of the bondholders, on the other hand, had only fixed income securities in their portfolios. However, 33 percent of them were seeking more diversified portfolios.

Table 2.2.10

Testing Subhypotheses 5, 6, and 7	BOND HOLDERS		COM.STOCK HOLDERS		t-test results	
Variable	$\bar{X}_1$	σ_1	$\bar{X}_2$	σ_2	t	α
% income invested in securities[1]	34.2	16.75	22.5	13.0	6.9	0.01
Hours/month spent on investment decision[2]	8.77	12.55	12.37	9.6	-.72	.479
Number of diff. types of securities in portfolio[3]	1.94	3.60	2.00	2.0	-.174	0.8

1. min 5% max 70%

2. min 0 max 50 hours

3. min 1 max 3 types

2.2.3 Testing Third Hypothesis

For testing the third hypothesis, Multiple Discriminant Analysis (MDA) was utulized to discriminate between the individual investor groups (BondHolders and CommonStock Holders) according to several investing opinions and attitudes.

In the analysis of the importance of specific variables in discriminating between the two groups, comparisons between the means of the groups were first made on a univariate basis, then all variables were included in a multivariate two-way discriminant analysis.

As seen from the Table 2.2.11, the discriminant function was found statistically significant (X^2=23.26) at the 0.01 level, suggesting that substantial intergroup attitude variations do infact prevail. As indicated by the values of Canonical Correlation and Wilks' Lambda which are equal 0.84, and 0.294 respectively, ten independent variables accounted for 70.6 percent of discrimination between the groups.

Although univariate comparisons of group means do not produce information about the net contribution of the variables in discriminating between the groups, they provide profile information which aid the interpretation of results of multivariate analysis (Claycamp, 1965, p.165).

Table 2.2.12 summarizes the outcome of a MDA of group differences based on investor attitudes.

Test of differences between means of each variable included in the analysis revealed that variables 3, 4, 6, and 9 were themselves statistically significant, as indicated in Table 2.12.12.

Table 2.2.11

Canonical Discriminant Function of BondHolder and CommonStock Holder Groups in relation to Investor Attitudes

Canonical Correlation	Wilks' Lambda	Chi Square	d.f.	Significance
.840	.294	23.264	10	.0098

Table 2.2.13

Standardized Canonical Discriminant Function Coefficients

Opinion Statements	Coefficient	Opinion Statements	Coefficient
1	- .9231	6	1.1655
2	.9848	7	1.0244
3	1.0109	8	- .9366
4	- .0224	9	.4402
5	- .0176	10	.2661

Group Centroids :		
	Bond Holders	-.99275
	CommonStock Holders	2.23368

Table 2.2.12

Multiple Discriminant Analysis of Investor Attitudes

Opinion Statement	Mean agreement rating		WILKS' LAMBDA	Univariate F	Significance
	BOND HOLDERS	COM.STOCK HOLDERS			
1. An invester should take substantial financial risks to realize significant financial gains	2.56	2.38	.99024	.2365	.6311
2. Investment is an effort to prevent "a lot of" money from becoming "little" by the time.	2.89	2.87	.99995	.0011	.9737
3. An investor should share not only the "profit" but also the "loss" as well.	2.33	3.63	.65922	12.4100	.0017
4. I enjoy managing my securities portfolio by myself.	3.00	3.63	.82029	5.2580	.0309
5. I am better informed about the securities market than most of the individual investors.	2.67	2.75	.99803	.0473	.8296
6. The individual investor who regularly trades his securities is likely to fare better than the individual who holds out for the long run.	2.44	3.13	.87100	3.555	.0715
7. Given the risk level of my portfolio, my average realized return has been quite low.	2.33	2.25	.99752	.0595	.8093
8. Securities prices are not predictable in the short-run	2.83	2.62	.96366	.9050	
9. In the coming five years, inflation rate will decrease, accordingly interest rates will be reduced.	2.56	3.13	.88118	3.236	.0846
10. I hesitate when making important decisions.	1.94	2.00	.99899	.0242	.8776

Agreement Rating (1) Strongly Disagree

(2) Strongly Agree

Table 2.2.13 presents the discriminant coefficients of the 10 independent variables for the discriminant function. The higher the coefficient, the better the variable as a discriminator between the two groups. Accordingly, variables 6, 7, 8, and 1 (ordered by their relative discriminating power) were the most important variables discriminating the investor groups.

Group centroids, as indicated in Table 2.2.13 were as follows:

Bond Holders - .99275

Com.StockHolders 2.23368

For the present set of findings, it appeared that three variables related to "portfolio dynamism","satisfaction with realized return" and "willingness to share loss" were positively associated with the probability of being Common Stock Holder, whereas the two variables related to "risk taking behavior" and "security price forecasting" were found to be associated with the bond holder group.

Table 2.2.14 is known as a "confusion matrix" and helps visualize exactly how accurate the discriminant function was in predicting group membership.

The results in 96 percent of cases significantly distinguish between the bond holder and commonstock holder groups.

The proportional chance criterion is 57.4%*. Since the overall classification accuracy is 96 percent there is approximately a 39 percent improvement is prediction accuracy through the use of discriminant function.

Table 2.2.14

Confusion Matrix

Actual Group Membership	Number of Cases	Predicted Group Membership	
		Bond Holders	Com.Stock Holders
Bond Holders	18	17	1
CommonStock Holders	8	0	8

Percent of "Grouped" cases correctly classifed 96.15%

*$Cpro = p^2 + (1-p^2)$

$Cpro = (\frac{18}{26})^2 + (\frac{8}{26})^2 = 0.574$

2.2.4 Testing Fourth Hypothesis

The fourth hypothesis states that perceived importance of the attributes for security selection criteria are different for the two main individual investor groups, namely BondHolders and CommonStock Holders.

For testing the fourth hypothesis Multiple Discriminant Analysis was utilized to discriminate between the two investor groups in terms of various security selection criteria which may have influence on investment decisions.

As shown in the Table 2.2.15, the Canonical discriminant function is not statistically significant. This implies that the investigation of the discriminant function would not be worthwhile.

Table 2.2.15

Canonical Discriminant Function of Bond Holder and Common Stock Holder Groups in Relation to Security Selection Criteria

Canonical Correlations	Wilks' Lambda	Chi-Square	d.f.	Significance
.797	.364	17.656	13	.1710

Table 2.2.16 presents the findings, on a univariate basis, obtained in the Multivariate Discriminant Analysis of group differences. As already stated, univariate comparisons of groups means do not produce information about the net contribution of the variables in discriminating between the groups, but provide profile information.

Test of differences between group means of each variable included analysis indicated that variables 1, 7 and 8 produced significant F ratios below the .02 probability level. "Reputation of the firm", "safety" and "past performance of the firm invested in" were the variables which significantly differed between the two investor groups. Opportunity of purchasing security below nominal value also yield differences significant at the 0.08 level.

A more detailed presentation of the significant findings appears in Table 2.2.17.

It can be seen from the both tabulations that Bond-Holders were more sensitive to "safety" factor and assessed remarkable high importance to there attributes.

Table 2.2.16

Multiple Discriminant Analysis of Security Selection Criteria

Variables	Mean importance ratings for BOND HOLDERS	COM.STOCK HOLDERS	WILKS' LAMBDA	Univariate F	Significance
. Safety	3.94	3.25	.7597	7.591	0.011
. Liquidity of Security	3.22	3.50	.9781	.537	
. Expected Return	3.55	3.12	.9495	1.275	
. Payment Terms of return	2.72	2.12	.9351	1.664	
. Maturity period	2.50	1.88	.9081	2.429	
. Opportunity to buy below nominal value	2.05	1.38	.8800	3.271	0.083
. Reputation of the firm where invested in	3.89	2.75	.7063	9.979	0.004
. Past performance of the firm where invested in	3.94	3.25	.7963	6.137	0.021
. Anonimity of investor	2.66	3.13	.9637	.904	
. Guarantee of the principal	3.67	3.13	.9121	2.311	
. Inflation rate	3.55	3.00	.9152	2.224	
. Tax exemption	2.72	3.38	.9152	2.222	
. Denomination value of securities	2.61	1.88	.9067	2.471	

Scale Values 1) Not important at all
4) Very important

Twenty five present of the commonstock holders, on the other hand, expressed that reputation and past performance of a firm are not important when investing in securities.

Although the differences were not significant in statistical sense, Commonstock holders attached comparatively more importance to the factors, such as anonimity of investor and tax exemption, while BondHolders were more concerned with inflation rate and denomination value of securities. As seen from the Table 2.17 nearly 50 percent of the common stockholders rated "anonimity of investor" as very important and over 87 percent of them ascribed high importance on tax considerations. 67 percent of the BondHolders stated that inflation rate is "very important" when making investment decisions. For 62 percent of the BondHolders "denomination value" was found important, while approximately the same percent of CommonStockHolders, perceived this factor unimportant.

The two groups, on the other hand, appeared quite similar with respect to the perceived importance of liquidity and expected return of securities.

It is particularly noteworthy that BondHolders and CommonStock Holders are not highly distinguishable on the basis of various selective criteria.

In order to identify the dimensions of security selection criteria seperate factor analysis were also performed for the two subject groups. Since the number of observations were too limited and did not permit to fulfill the rule suggested by Hair, Andersen, Tathau and Giablowsky (1985) for validation of factor analysis which states that the number of the observations have to be at least 4 times greater than the number of

variables involved, no conclusions could be drawn concerning the similarity of factor structures for the two investor groups (See Appendix E).

2.2.5 testing Fifth Hypothesis

The fifth hypothesis states that the two investor groups, bond holders and commonstock holders, have

. different level of satisfaction with the realized return of their securities portfolio, and

. different future intentions related to investment decisions.

The hypotheses were not supported by the data. Since 96 percent of the respondents expressed that they were pleased with the return of their portfolios, subhypothesis 1 was not tested. Accordingly, in the testing of second subhypothesis, both groups appeared to be consistent with their future intention related to investment decisions. As shown in cross-classification matrix (Table 2.2.18), 33 percent of the bond holders expressed desire and planned to change their investment type. On the other hand, common stock holders were satisfied with their selection and only one of them wanted to invest in other area. Majority of those who wanted to change their investment type claimed that they would invest in "real estate".

Table 2.2.18

Investor Groups	Intention to change investment type		
	Yes	No	
Bond Holders	33.3%	66.6%	100%(18)
Com.Stock Holders	12.5%	87.5%	100%(8)

Table 2.2.17

FREQUENCIES

Variable	TS	BH	CSH
* Safety	%	%	%
Not imp.at all	3.8	5.5	.0
Not important	.0	.0	.0
Important	15.4	5.5	25.0
Very important	80.8	88.0	75.0
Liquidity			
Not imp.at all	3.8	5.5	.0
Not important	15.4	16.7	12.5
Important	26.9	27.8	25.0
Very Important	53.8	50.0	50.0
Exp.Return			
Not imp.at all	7.7	5.5	12.5
Not important	3.8	.0	12.5
Important	26.9	27.8	25.0
Very important	61.6	66.7	50.0
Payment terms			
Not imp.at all	23.1	16.7	37.5
Not important	23.1	27.8	12.5
Important	30.8	22.2	50.0
Very important	23.1	33.3	.0
Maturity period			
Not imp.at all	26.9	16.7	50.0
Not important	23.1	22.2	25.0
Important	42.3	55.6	12.5
Very important	7.7	5.5	12.5
** Acq.below nominal value			
Not imp.at all	50.0	44.4	62.5
Not important	15.4	5.5	37.5
Important	34.6	50.1	.0
Very important	.0	.0	.0
* Reputation of firm			
Not imp.at all	11.5	.0	25.0
Not important	.0	.0	.0
Important	11.5	11.0	25.0
Very important	76.9	89.9	50.0
* Past performance of firm			
Not imp.at all	3.8	.0	12.5
Not important	3.8	.0	12.5
Important	7.7	5.5	12.5
Very important	84.6	94.5	62.5

Variable	TS	BH	CSH
Anonimity of inv.	%	%	%
Not imp.at all	19.2	27.8	12.5
Not important	15.4	11.1	12.5
Important	30.8	33.3	25.0
Very Important	34.6	27.8	50.0
Quarantee of principal			
Not imp.at all	7.7	5.5	12.5
Not important	.0	.0	.0
Important	26.9	16.7	50.0
Very Important	65.4	77.8	37.5
Inflation rate			
Not imp.at all	3.8	.0	12.5
Not important	15.5	16.7	12.5
Important	19.2	16.7	37.5
Very important	61.5	66.6	37.5
Tax exemption			
Not imp.at all	15.4	16.7	12.5
Not important	11.5	16.7	.0
Important	38.5	44.4	25.0
Very important	34.6	22.2	62.5
Denomination value			
Not imp.at all	34.6	27.8	50.0
Not important	7.7	5.5	12.5
Important	42.3	44.5	37.5
Very important	15.4	22.2	.0

** $p < 0.02$ Significant

* $p < 0.1$

CHAPTER III

SUMMARY, CONCLUSIONS AND IMPLICATIONS

This research aims to explore and describe the characteristics of individual investors in Turkey and study the differences between bond-holders and commonstock-holders in their demographic and socioeconomic characteristics, investment objectives, decision mechanics, market attitudes and return perceptions.

The study included 18 bond-holders and 8 commonstock-holders, which added up to a total of 26 respondents.

The study conducted is a descriptive research. The necessary data for this study was collected from the clientele of brokerage firms and a bank by structured and undisquised questionnaire.

In testing the designed five hypotheses the data was analyzed by using various analysis methods.

The conclusions and implications of this study will be discussed in the following two sections:

3.1. CONCLUSIONS OF THE SURVEY FINDINGS

3.1.1 Personal Characteristics

One of the significant insights revealed by the study is that frequently used demographic and socioeconomic variables are of little value in discriminating between two investor groups who mostly invest in bonds and those who choose commonstocks.

The findings show that the majority of investors are male, relatively old, retired and married. They enjoy a monthly income exceeding 250.000 TL. and have their own homes.

The dominant discriminating variables are "educational background" and "percentage of income invested in securities"; that overriding occupation and age as personal characteristics which make a relatively modest contribution to the explanation of difference between the two investor groups.

The bondholders, more than half having at least a bachelor's degree are more educated than the commonstock holders. They invest relatively greater percentage of their annual income in securities when compared with their counterparts.

While the bond holder group mostly consisted of salary earners (including retired people) and elderly people, the commonstock holders are younger and more likely to have their own business which reflect their sprit of enterprice.

3.1.2 Investment Objectives

As an investment objective, the prime concern of the both investor groups is "to prevent money from inflation". Commonstock holders who also seek capital appreciation in the long run place relatively more emphasis on this goal.

Additional income for family budget appears to be the second important investment goal for the bondholders and discriminates the two investor groups in statistically significant manner.

Besides to preventing deterioration of their money, bondholders also want to support their family budget with the return of investments.

In appraising their success in achieving these ends, the bondholders use interest rate on time deposits as a criterion, but commonstock holders

have developed their own standard or predetermined rate as an internal benchmark instead.

Although, their primary concern was inflation when investing in securities, only one-fourth of them in both groups claim that they use inflation rate as benchmark in evaluating this portfolios' performance. Bondholders , on the other hand, are still consistent with their primary investment objective to the extent that the interest rate to time deposits has been over the inflation rate. But, it should be noted that, in the presence of inflation, capitalizing earnings at a rate that parallel the nominal interest rate, rather than the economically correct rate may cause investors to commit an error in evaluating their portfolios.

It is also important to point out that fluctuation in the inflation rate,rather than the level of inflation influence the investors unfavourably.

3.1.3 Investment Approaches

All investors use the advice or opinion of others to a certain extent. Some use the opinions of others merely to confirm or challenge their own ideas. Others depend almost entirely on others' advice or counsel.

As the results of the study reveal, the investors utilize personal approaches and others' advice almost equally.

The "fundamental approach" which requires studying such basic matters as the financial statements, earnings, dividends, sales and management of the companies and concerns with the general economic and political circumstances is the most commonly used investment technique among the investors.

Both groups of investors trend to rely heavily on their brokerage firms advice for portfolio decisions.

Technical approach which concentrates upon market trends and requires more sophistication is found relatively less common among the investors.

In general, commonstock holders do more of their own security analysis and allage more time on collecting information for and making decisions about their portfolios

3.1.4 Information Sources

In Turkey, there are very limited sources of information in investment business.

The results show that, as far as the perceived usefulness of different information sources are concerned the two investor groups are in agreement in their opinions.

Brokerage firms and annual operation reports of companies followed by financial papers and periodicals are thought of as the most valuable sources of investment information.

In general, while commonstock holders largely depend on annual operation reports of companies, bondholders ask advice and information from brokerage houses, with almost equal creditibility and usefulness.

It is important that banks are thought of as relatively less helpful in providing information and rendering advice.

Another important fact is the lack of trust among investors (especially commonstock holders) in TV and newspaper advertisements, which could not be established since 1980's.

3.1.5 Market Attitudes

Findings clearly show that the two investor groups differ noticeably in their assessments of the willingness to share loss as well as profit, and in taking pleasure in managing their portfolios. They have quite different views on the benefits of dynamic portfolios; and have different expectations about inflation and interest rates.

More specifically the commonstock holders believe that "loss" is the another aspect of the investment concept and it should be shared by the investors.

When compared with bondholders, commonstock holders take more pleasure making their own decisions and managing their portfolios. This result suggests that the investors' willingness for direct market participation has its origins in consideration of pleasure as well as profit. Commonstok holders also believe in the benefits of dynamically managed portfolios.

Consistent with their primary selection, commonstock holders expect gradual reductions in the inflation rate and accordingly in interest rates in the coming years.

3.1.6 Investment Attributes

Findings on the discriminating power of the investment attributes show that attributes related to "safety" aspect of investments are the main discriminators between the bondholder and commonstock holder groups.

As expected, bondholders are found to be more conservative when taking risk. Accordingly, they appear more sensitive to "safety" factor and assess comperatively high importance to such attributes "safety",

"reputation and past performance of the firm", and "guarantee of principal".

Most likely due do their total worth of portfolios, commonstock holders are remarkably more concerned with factors such as tax exemption, liquidity of security and anonimity of investors in descending order of importance.

3.1.7 Risk and Return Perceptions

As suggested by the finance literature, the stock-bond ratio that an investor chooses is the essential feature of his preferences regarding risk-reward tradeoff. Depending on their willingness to bear risk, investors will choose to hold different mixes of stocks and bonds.

It is important to note that, though the bondholders and commonstock holders differ significantly in terms of the safety feature of investments interestingly, they both appear almost identical in their willingness to bear risk and express a moderate risk-taking desire.

It is also noteworthy that, a vast majority of the investors constituting both groups are quite pleased with the return of their portfolios and do not want to change their investment type.

3.2. IMPLICATIONS OF THE STUDY

Implications to the Marketer

One of the most challenging tasks of the bank and brokerage community should be to plan and execute a successful marketing strategy for a period which promises to be increasingly competitive.

Executives of banks and brokerage firms interested in improving the efficiency of their marketing activities need a great deal of information about their clientele and the general nature of the market.

Eventhough the results of the study shed not much light on the proof of "market segmentation", a number of them argue for that conclusion. There are some variables that do appear to have both statistical and managerial significance in distinguishing the bondholders and commonstock holders.

The findings show that most of the standard demographic attributes are not important discriminators between the two groups. Thus, there may be little competitive advantage to be gained by an institution appealing directly to these attributes.

The finding that the bondholders are more educated and can allocate greater percentage of their annual income to invest in securities colud be useful for banks and brokerage firms in targeting their sales effort and volume by investor type.

A significant variation between the main objectives of the two groups was that the bondholders require additional income. Furthermore, when the frequency of payments increased, bonds become more attractive to those who seek additional income from their investments. Thus, firms or financial intermediaries, to their best ability, should pay coupon yields at least three or four times in a year.

Since both investor groups (strongly emphasized "protection of their money from inflation", all advertisements should focus on this and closely related aspects.

The investor who is unable or unwilling to make his own investment selections has a limited sources of investment advice at his disposal. But even if he relies somewhat on the opinions of others, the intelligent investor should be able to judge the reasonableness of the opinion he seeks.

Depending on the finding that the bondholders rely relatively more on brokerage firms for investment decisions and the commonstockholders enjoy managing their securities portfolio on their own, banks and brokers are advised to use profoundly different approaches in dealing with the two investor groups and; after realizing type of investor, should assist at different levels. However, regardless of the nature of the relationship, it must be their duty to deal fairly and; when recommending a security, to take into account the customers investment goals and financial circumstances.

It seems that by publishing company generated written information, such as annual operation reports, proxy statements and quarterly reports firms can indirectly advertise their relative standings, thus help investors choose among them according to their own preferences. This is in accordance with the findings of this research where a majority of stockholders has been seeking for such data/information.

On the negative end, both investor groups, especially commonstock holders, claimed that banks are not useful in rendering advice which implies either banks are not providing adequate and sufficient information intentionally for unknown reasons or more likely, employ unqualified

personnel to do the job. Nevertheless, this point can be easily taken care of by re-education and hiring qualified staff, thus improving their advisory services.

It is a known fact that in Turkey, there is a lack of information sources and this is even more profound in financial markets. The data showed that investors seek such sources but cannot find much. This market gap could be used effectively by initiating financial/trade oriented publications for the benefit of consumers as well as banks/brokerage firms in general.

As far as the personal investment approaches are concerned the need and the value of published information about companies and overall markets seem clearly appearent and significant. The type of information that will be given to investors either be persuasive or informative. Brokerage firm/bank generated information, such as market letters, special reports and weekly or monthly periodicals would be useful to the investors and should be considered by the intermediate firms as an important and effective promotion method. Firms may also advertise at regular intervals a list of recommended securities. A more selective type of advertising may be accomplished through direct mail solicidation based on a specialized list.

Another essential finding along the lines of publishing and advertising is the fact that due to recent collapse of brokers and the link between th n and their ads on TV/newspapers, current ads on television do/ will have negative impact on investors. It may be logical to be cautious or even quit using newspaper for current and near future ads.

One of the attributes of the bondholders is their risk-averseness which is reflected in their search for "safe" investments. The definition of safe investment for bondholders is the one which is backed by a known, reputable firm with a steadily grown past, and a potential to guarantee the principal. External auditing system, when fully established, will increase the realibility of reports published by firms, improve creditibility, thus it will assist every party involved.

In conclusion, to create and establish confidence in the Turkish Securities Market, where in the past such reliance was not merited, and to inform and attract more investors, Capital Markets Board or Istanbul Securities Exchange should prepare lectures, meetings, conduct investment courses, set up direct liason with the academica, and di ct their effort to educate brokers. In turn, in addition to their field experience, brokerage firms should utilize guidelines provided by securities exchange to educate and provide quality services to the public.

As a very effective educational media, holdings for on TV could encourage public interest in the securities market and carry messages to a vast audience.

As earlier mentioned the volume of the market can be increased by increasing the variety of instruments trading in the market. New and different types of securities such as commercial papers or floating notes with adjustable interest rates and short maturity periods will attract different groups of investors into the securities market.

Implications for the Researcher

In spite of its limitations this research, being the first study on the issue, may provide a useful point of departure for studying the individual investors of the Turkish Securities Markets.

The sample in this study was so limited that it inhibits generalizing from the results already reported. It is therefore suggested to study a large and representative sample of investors which will be more helpful to the marketer in decision making.

In this study, only two general types of investment alternatives were incorporated into the analysis, but the approach it takes will accomodate additional investment alternatives either. Studies including other investment alternatives would also be very useful when investigating the different groups investor for market segmentation purposes.

Useful information may also be found if bi or three- ariate relationships of important discriminating demographic characteristics and different dimensions of individuals' investment decision processes were analyzed.

Analyzing the differences between bank customers and brokerage firms customers with respect to their demographic, socio-economic and psychographic characteristics would also be very useful to better understand the individuals in the financial markets.

This study has two main contributions, one to literature the other to the marketer.

It contributes to literature as this study differentiates two main investor groups, and as it is most likely the first research done about

individual security investor and securities market.

It contributes to the marketer, by helping then to understand and get to know their market in order to take right decisions and effectively allocate marketing effort.

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APPENDICES

APPENDIX A

ANKET

Boğaziçi Üniversitesi İşletme Bölümünde Menkul Kıymetler Piyasası konusunda hazırlamakta olduğum Lisansüstü Tezi'nin önemli bir bölümünü oluşturacak bu anketi özenle yanıtlamanızı rica eder, ayırdığınız kıymetli zaman ve işbirliğiniz için teşekkürlerimi sunarım.

Ankette yer alan "Menkul Kıymetler" terimi genel anlamda hisse senedi, tahvil, gelir ortaklığı senedi gibi kıymetli evrakları temsil etmektedir.

Ankete verdiğiniz yanıtların gizliliğini sağlamak amacı ile kesinlikle kimlik belirtmeniz gerekmeyecektir.

Aşağıdaki soruları lütfen en uygun kutuyu işaretleyerek ya da boşluklara yazarak yanıtlayınız.

I- Tasarruflarınızı yaklaşık kaç senedir aşağıda belirtilen Menkul Kıymetler Piyasası Araçlarında değerlendiriyorsunuz?

☐ Devlet Tahvili ..... yıl
☐ Hazine Bonosu ..... yıl
☐ Şirket Tahvilleri ..... yıl
☐ Hisse Senetleri ..... yıl
☐ Gelir Ortaklığı Senetleri ..... yıl
☐ Diğer: .... yıl

2- Paranızı menkul kıymetlere yatırmaktaki amaç ya da amaçlarınız nelerdir?

Lütfen aşağıdaki seçenekleri en önemli amacınıza uygun olanına 1 vermek sureti ile 1'den 5'e kadar sıralayınız.

☐ Paranızı enflasyondan korumak
☐ Aile bütçenize ek gelir sağlamak
☐ Kısa dönemde sermaye kazancı elde etmek
☐ Uzun dönemde sermaye kazancı elde etmek
☐ Diğer: .....
.....

3- Toplam yıllık gelirinizin yaklaşık yüzde kaçını menkul kıymetlere yatırıyorsunuz?

%.....

4- Halihazırda Menkul Kıymetler Piyasasıaraçlarından hangilerine sahipsiniz?

Sahip bulunduğunuz her tip menkul kıymetin piyasa değerleri üzerinden portföyünüzün yaklaşık yüzde kaçını oluşturduğunu yazınız.

☐ Devlet Tahvili %.....

☐	Hazine Bonosu	%.....
☐	Şirket Tahvilleri	%.....
☐	Hisse Senetleri	%.....
☐	Gelir Ortaklığı Senetleri	%.....
☐	Diğer:.....	%.....
		% 1000

5- Toplam yıllık gelirinizin yaklaşık yüzde kaçını tasarruf edebiliyorsunuz? : %.....

Aşağıdaki seçeneklerin herbiri tasarruflarınızın yüzde kaçını teşkil ediyor?

☐	Altın	%.....
☐	Menkul Kıymetler	%.....
☐	Emlak, arsa	%.....
☐	Banka Hesabı	%.....

6- İLK ve SON menkul kıymetinizi ne şekilde edindiniz?

İlk	EnSon	
☐	☐	Banka kanalı ile satın aldım
☐	☐	Banker kanalı ile satın aldım
☐	☐	Hediye ya da miras olarak edindim
☐	☐	Bir başka şahıstan satın aldım
☐	☐	Diğer : .....

7- Menkul Kıymet seçiminizde aşağıda sıralanan faktörler sizin için ne derece önemlidir?

Her faktörün önemini en uygun rakamı daire içine alarak işaretleyiniz.

	Hiç Önemli Değil	Oldukça Önemsiz	Oldukça Önemli	Çok Önemli
- Güvence.....	1	2	3	4
- Paraya kolay çevrilebilme.....	1	2	3	4
- Beklenen getiri	1	2	3	4
- Faiz, temettü, vs.'nin ödenme şekli ve zamanı.....	1	2	3	4

	Hiç Önemli Değil	Oldukça Önemsiz	Oldukça Önemli	Çok Önemli
- Vade	1	2	3	4
- Nominal (itibari) değer altında satın alabilme imkanı.....	1	2	3	4
- Yatırım yapılan şirketin ünü..	1	2	3	4
- Yatırım yapılan şirketin geçmişteki başarısı	1	2	3	4
- Menkul Kıymetin hamiline yazılı oluşu	1	2	3	4
- Anapara garantisi	1	2	3	4
- Enflasyon oranı	1	2	3	4
- Vergiden muaflık	1	2	3	4
- Diğer kişilere transfer edilebilirlik	1	2	3	4
- Nominal satış değerleri	1	2	3	4
- Diğer :	1	2	3	4

8- Aşağıdaki görüşlere katılıp katılmadığınızı, her bir ifade için yargınızı gösteren en uygun rakamı işaretleyerek belirtiniz.

-KK : Kesinlikle Katılmıyorum

-K : Katılmıyorum

+KK : Kesinlikle Katılıyorum

+K : Katılıyorum

	-KK	-K	+K	+KK
- Bir yatırımcı çok kazanabilmek için önemli ristler üstlenebilmelidir	1	2	3	4
- Yatırım belli bir miktar parayı zamanla eriyip,ufalmaktan koruyan bir çabadır....	1	2	3	4
- Bir yatırımcı kara olduğu kadar zarara da ortak olmalıdır	1	2	3	4
- Menkul kıymetler porföyümü kendim idare etmekten ayrı bir zevk alırım	1	2	3	4
- Menkul kıymetler piyasası hakkında bir tasarruf sahibi olarak oldukça iyi bilgiye sahibim	1	2	3	4
- Elindeki menkul kıymetleri sürekli alıp satarak portföyünün canlılığını sağlayan bir yatırımcı,uzun dönemde kazanmayı bekleyen bir yatırımcıdan genellikle daha karlı durumdadır	1	2	3	4
- Taşıdığı riske nazaran menkul kıymetler portföyümün getirisi oldukça yetersiz	1	2	3	4
- Menkul kıymet fiyatlarının kısa dönemde tahmini mümkün olamamaktadır	1	2	3	4
- Gelecek beş yıl içinde enflasyon azalacak,				

9- Menkul Kıymetlerinizi değerlendirirken ya da yatırım kararlarınızı verirken aşağıdaki yaklaşımları ne sıklıkta kullanıyorsunuz?

	Hiç	Nadiren	Sıksık	Daima
- Piyasa ve endüstrinin genel durumu, temettüler,şirket yönetiminin başarısı gibi temel faktörlerin incelenmesi.....	1	2	3	4
- Hisse senedi fiatlarının değişimi,grafikler,indeksler, arz ve talep dengesi gibi piyasa faktörlerinin incelenmesi....	1	2	3	4
- Bankaların ya da Bankerlik Kuruluşlarının tavsiyelerine dayanmak	1	2	3	4
- Yatırım uzmanlarına danışmak	1	2	3	4
- Diğer :	1	2	3	4

10- Yatırımcı ve tasarruf sahiplerinin menkul kıymet seçiminde başvurdukları bazı genel bilgi kaynakları aşağıda verilmiştir.

Lütfen herbirini, size kararlarınızda sağladığı yarar açısından değerlendirerek uygun bulduğunuz rakamı daire içine almak suretiyle işaretleyiniz.

	Hiç Faydalı Değil	Oldukça Faydasız	Oldukça Faydalı	Çok Faydalı
- Bankalar.....	1	2	3	4
- Bankerlik Kuruluşları	1	2	3	4
- Yatırım Danışmanları	1	2	3	4
- Ekonomi Dergi/Gazeteleri.....	1	2	3	4
- Şirket faaliyet raporları	1	2	3	4
- TV/Gazete reklamları	1	2	3	4
- Arkadaş/Akraba tavsiyeleri	1	2	3	4
- Diğer :	1	2	3	4

11- Önemli kararlar alırken tereddüt eder misiniz?

- ☐ Hiç tereddüt etmem
- ☐ Nadiren tereddüt ederim
- ☐ Sıksık tereddüt ederim
- ☐ Daima tereddüt ederim

12- Menkul Kıymetler Portföyünüzü oluştururken karar vermek için ayda yaklaşık kaç saatinizi ayırıyorsunuz?

.....Saat

13- Menkul Kıymetler Portföyünüzün veriminden ne derecede memnunsunuz?

☐ Çok memnunum
☐ Oldukça memnunum
☐ Pek memnun değilim
☐ Hiç memnun değilim

14- Menkul Kıymetler Portföyünüzün verimliliğini değerlendirmek için çeşitli karşılaştırmalar yaparken aşağıdakilerden hangisini kendinize temel kıstas olarak alırsınız?

☐ Tasarruf mevduatlarına uygulanan faiz oranları
☐ Enflasyon oranı
☐ Tanıdıklarınızın portföy verimlilikleri
☐ Altın fiyatları
☐ Kendi belirlediğiniz oran ya da standartlar
☐ Diğer : .....

15- Elinize geçen önemli bir miktar parayı menkul kıymetlere yatırarak değerlendirmek istiyorsunuz. Hangi tip menkul kıymeti seçerdiniz? Lütfen, 1'den 5'e kadar numara vererek aşağıdaki seçenekleri tercihinize göre sıralayınız.

☐ Devlet Tahvili
☐ Şirket Tahvili
☐ Hisse Senedi
☐ Gelir Ortaklığı Senedi
☐ Hazine Bonosu
☐ Diğer:.....

Niçin?.....

16- Gelecekte yatırım şeklinizi değiştirmeyi düşünüyor musunuz?

☐ Evet

☐ Hayır

17- Yanıtınız "evet" ise, hangi tip yatırım şeklini seçmeyi düşünüyorsunuz?

: .....

Yanıtlarınızı daha iyi anlayıp, değerlendirebilmek için şahsınızla ilgili son birkaç soru sormak istiyoruz. Yine belirtelim ki anketten edinilen bilgiler hiç bir şekilde şahsınızla bağdaştırılmayacaktır.

18- Cinsiyetiniz?

☐ Erkek

☐ Kadın

19- Yaşınız?

☐ 34 ve altı

☐ 35-44

☐ 45-54

☐ 55-64

☐ 65 ve üzeri

20- Medeni durumunuz?

☐ Evli

☐ Bekar

☐ Dul/Boşanmış

21- Ailenizin net aylık geliri yaklaşık ne kadardır?

☐ 50.000 TL.nın altında

☐ 50.000-100.000 TL

☐ 100.000-250.000 TL

☐ 250.000 TLnin üzerinde

22- Mesleğiniz?

: .....

23- Eğitim durumunuz?

☐ Okur/yazar

☐ İlkokul

☐ Ortaokul

☐ Lise

☐ Üniversite

☐ Master veya Doktora

24- Aşağıdaki araç ve eşyalardan sahip olduklarınızın markasını belirtiniz.

Çamaşır makinası : .....
Buzdolabı : .....
Otomobil : .....
Televizyon : .....
Video : .....
Bulaşık makinası : .....
Müzik Seti : .....

25- Oturduğunuz ev kendinizin mi, kira mı?

☐ Kendimizin

☐ Kira

APPENDIX B

Testing the difference between two population means when population variances are unknown:

the sample standard deviations are used to estimate the population standard deviations

$$\hat{S}_1^2 = \frac{\sum_{i}^{n_1} (X_{i1} - \bar{X}_1)^2}{n_1 - 1}$$ is used to estimate σ_1^2

and

$$\hat{S}_2^2 = \frac{\sum_{i}^{n_2} (X_{i2} - \bar{X}_2)^2}{n_2 - 1}$$ is used to estimate σ_2^2

Although unknown, if the two parent population variations can be assumed equal, an estimate of the common population variance is generated by pooling the samples to calculate

$$\hat{S}^2 = \frac{\sum_{i=1}^{n_1} (X_{i1} - \bar{X}_1)^2 + \sum_{i=1}^{n_2} (X_{i2} - \bar{X}_2)^2}{n_1 + n_2 - 2}$$

The estimated standard error of the test statistics

$$S_{\bar{X}_1 - \bar{X}_2} = \sqrt{\hat{S}^2 \left(\frac{1}{n_1} + \frac{1}{n_2}\right)}$$

If the distribution of the variable in each population can be assumed to be normal, the appropriate test statistics is

$$t = \frac{(\bar{X}_1 - \bar{X}_2) - (\mu_1 - \mu_2)}{\bar{X}_1 - \bar{X}_2}$$

which is t distributed with

$\nu = n_1 + n_2 - 2$ degrees of freedom.

APPENDIX C

Group Means of Investment Objective Rankings

1- very important

4- not important at all

Prevent money from inflation

Bond Holders	Commonstock Holders
1 X 1= 7	1 X 5= 5
2 X 9=18	2 X 1= 2
3 X 1= 1	3 X 2= 6
4 X 1= 4	4 X 0=
18 32	8 13
$\bar{X}_1$= 1.78	$\bar{X}_2$= 1.63

Provide additional income for family budget

Bond Holders	Commonstock Holders
1 X 7= 7	1 X 1= 1
2 X 8=16	2 X 2= 4
3 X 1= 3	3 X 3= 9
4 X 2= 8	4 X 2= 8
18 34	8 22
$\bar{X}_1$= 1.89	$\bar{X}_2$= 2.75

Capital Appreciation in the Long Run

Bond Holders	Commonstock Holders
1 X 1= 1	1 X 1= 1
2 X 0= 0	2 X 1= 2
3 X 9=27	3 X 2= 6
4 X 8=32	4 X 4=16
18 60	8 25
$\bar{X}_1$= 3.33	$\bar{X}_2$= 3.13

Capital Appreciation in the Short Run

Bond Holders	Commonstock Holders
1 X 2= 2	1 X 1= 1
2 X 1= 2	2 X 3= 6
3 X 1= 3	3 X 0= 0
4 X 14=56	4 X 4=16
18 63	8 23
$\bar{X}_1$= 3.5	$\bar{X}_2$= 2.88

APPENDIX D

SPEARMAN RANK CORRELATIONS

Spearman's rank Correlation coefficient

$$r_s = 1 - \frac{6 \sum d^2}{n (n^2-1)}$$

t-calculated

$$t_c = r_s \sqrt{\frac{n-2}{1-r_s^2}}$$

HYPOTHESIS II

Subhypothesis 1 Investment objective rankings

$$r_s = 1 - \frac{6.2}{4(16-1)} = 0.8$$

$t_{cr} = 4.303$ (two-tail)

$\alpha = 0.05$

$\nu = 2$

$$t_c = 0.8 \sqrt{\frac{2}{1-0.64}} = 1.88$$

Since $t_{cr} > t_c$ Ho is rejected

Subhypothesis 3 Information Sources

$$r_s = 1 - \frac{6.20}{4(48)} = 0.5625$$

$t_{cr} = 2.57$

$\alpha = 0.05$

$$t_c = 0.64 \sqrt{\frac{5}{1-.413}} = 1.521$$

$\nu = 5$

Since $t_{cr} > t_c$ H_0 $(r_s = 0)$ is rejected

Subhypothesis 4 Investment Approach

$$r_s = 1 - \frac{6.3}{4(15)} = 0.7$$

$$t_{cr} = 4.303$$

$$t_c = 0.7\sqrt{\frac{2}{1-0.49}} = 1.386$$

$$\alpha = 0.05$$

$$\nu = 2$$

Since $t_{cr} > t_c$ Null hypothesis "no association" is rejected.

APPENDIX E

ROTATED FACTOR STRUCTURES OF SELECTION CRITERIA FOR TWO INVESTOR GROUPS

Variables	BOND-HOLDERS						COMMONSTOCK-HOLDERS					
	Factors						Factors					
	I	II	III	IV	V	h	I	II	III	IV	V	h
Safety	.972					.958	.955					.984
Liquidity of security			.808			.729					.968	.998
Expected return					.880	.795		.721				.877
Payment terms of return					.603	.708			.910			.982
Maturity period				-.722		.743						.901
Acquisition below nominal value		.825				.737		.830				.957
Reputation of the firm	.803					.740	.828					.956
Past performance of the firm	.972					.958				.839		.955
Anonimity of investor		.733				.653		.623				.970
Guarantee of principal			.883			.909	.950					.907
Inflation rate		.775				.867	.856					.976
Tax exemption		.621				.834		.796				.979
Denomination value				.834		.817			.918			.970
Eigenvalues	3.56	2.40	1.97	1.40	1.12	10.45	5.194	2.475	2.156	1.354	1.239	12.41
Contribution of Factors %	27.4	18.4	15.1	10.7	8.7	80.4	40.0	19.0	16.6	10.4	9.5	95.5%