Order Number 9108130

Early debt-redemption: An empirical investigation of motivation and impact

Kim, Tae-Yong, Ph.D.

City University of New York, 1990

U·M·I
300 N. Zeeb Rd.
Ann Arbor, MI 48106

A

EARLY DEBT-REDEMPTION:

AN EMPIRICAL INVESTIGATION OF MOTIVATION AND IMPACT

by

TAE-YONG KIM

A dissertation submitted to the Graduate Faculty in Business in partial fulfillment of the requirements for the degree of Doctor of Philosophy, The City University of New York

1990

This manuscript has been read and accepted for the Graduate Faculty in Business in satisfaction of the dissertation requirement for the degree of Doctor of Philosophy.

7/25/90

Date

Steven Lilien

Chair of Examining Committee

July 26, 1990

Date

Donald Vredenburgh

Executive Officer

Dr. Victor S. Pastena

Dr. In-Mu Haw

Dr. David Wu

Supervisory Committee

The City University of New York

Abstract

EARLY DEBT-REDEMPTION:

AN EMPIRICAL INVESTIGATION OF MOTIVATION AND IMPACT

by

TAE-YONG KIM

Advisor: Professor Steven B. Lilien

The objectives of this study are to answer three economic questions: (1) Why and when did firms undertake early debt-redemption (EDR)? (2) What was the impact of EDR on the equity value of those firms which undertook EDRs? (3) Are there any differences in motivations and impacts of EDR in terms of different time horizons and different means used to achieve EDRs? This paper uses a sample of all types of EDRs during the decade of the 1980s (1977-1988). This allows a comprehensive analysis of EDRs and a more robust test of prior evidence such as the income smoothing hypothesis because the current sample includes both gains and losses from EDRs. As an alternative explanation of motivations behind EDRs, the study proposes leverage adjusting and financial distress hypotheses because the main outcome of EDR is leverage reducing effects while income smoothing through EDR is a by-product of EDR.

The study finds some support for the income smoothing hypothesis in that EDRs did smooth the aggregate quarterly income of redeemers for both EDRs resulting in redemption gains and EDRs resulting in redemption losses. However, contradicting evidence indicates that not

all EDRs did smooth income. While the evidence is ambiguous whether firms used EDRs to smooth reported income, the evidence is very clear that firms undertook EDRs when their financial leverage was at a peak and their distress level was at the bottom across time. The importance of EDRs in reducing leverage and associated covenant constraints is confirmed by time-series plotting analysis with location tests and a series of cross-sectional univariate and multivariate tests. The test results confirm that the motivation to reduce leverage and improve financial distress ratios explains the decision to proceed with EDRs better than explanations based on the smoothing of income.

The results of the market study indicate that the early retirement of debt is, in general, negatively associated with the firm's equity value. This result implies that leverage-reducing capital structure change such as EDR conveys unfavorable information about the firm's prospect and thus equity holders are worse off from early retirement of debt.

ACKNOWLEDGMENTS

I owe a great debt to several individuals for guidance and assistance during the preparation of this dissertation. My special appreciation and gratitude goes to the members of my dissertation committee. I owe many thanks to Dr. Steven B. Lilien for his continued encouragement and full support as chairman of my Ph. D. Program and my dissertation committee. I wish to thanks to Dr. Victor S. Pastena for his critical comments, timely suggestions, and warm guidance. I owe my special gratitude to Dr. In-Mu Haw for his expert guidance and most fruitful comments on this project. He also provided valuable advice and warm encouragement as my mentor and advisor since the first day of my study toward the Ph. D. at Baruch College.

I wish to thanks Dr. David Wu for his knowledgeable help and research skill. I have also benefited from the friendly help of my classmate Adelaide Whelan who provided her assistance and encouragement.

My appreciation also goes to two other professors in Korea: Dr. Soo-Ho Chang and Dr. Jun-Soo Chung. Their suggestions and warm encouragement to study in the U. S. A. shall never be forgotten.

Unquestionably, my greatest debt is owed to my wife, Mal-Soon. It was her patient understanding, continued encouragement, and love that made the completion of this dissertation possible. My appreciation extends to my sons, Han-Sang and Yoon-Sang, who shared the burden with patience during the course of my study.

My final appreciation goes to my parents whose love, care, and sacrifice never ended since my childhood, so I dedicate this dissertation to my parents.

TABLE OF CONTENTS

TABLE OF CONTENTS - continued

LIST OF TABLES

LIST OF TABLES - continued

LIST OF FIGURES

LIST OF FIGURES - continued

LIST OF FIGURES - continued

LIST OF FIGURES - continued

LIST OF FIGURES - continued

Chapter 1

INTRODUCTION

In accounting, the Financial Accounting Standards Board (FASB) emphasizes that earnings numbers are important to financial statement users because earnings are the best predictor of a firm's cash generating ability. Previous accounting research indicates that investors and users of financial statements focus on earnings. Presumably, when investors react to earnings announcements, they are actually reacting to changes in expectations of cash generating ability. In some cases, however, earnings can be changed materially in the absence of major cash flow changes. For example, a high income and low cash flow effect occurs when firms prematurely retire debt by a direct exchange of new securities (stock and debt) for the outstanding debt. An accounting gain (or loss) from the exchange must be recognized for the difference between market and book value of the debt.

Recently, FASB also equally emphasizes balance sheet information. For example, FASB reduces off-balance sheet liabilities (e.g., accounting for pension and health-care benefits to employees). FASB also changed its approach to a balance-sheet-focused method (e.g., asset and liability method) from an income-statement-focused method (e.g., deferral method) for the accounting for income taxes. This movement results from increasing attention to balance sheet items. Thus, financial leverage, from the balance sheet, becomes equally important as earnings because leverage is an indicator of liquidity and solvency. The importance of both earnings and financial leverage is equivalent to saying that a business cannot hope to accomplish its goals unless it meets the two basic tests of survival: operating profitably and continued solvency.

In finance, capital structure theory posits that, given earnings streams from investment, the value of the firm may vary with a change in financial leverage. Early debt-redemption (hereafter, **EDR**), in the finance-perspective, is a revision of the firm's financing policy which affects both earnings (or cash flows) and financial leverage. By examining both earnings and financial leverage, the focus of this paper is to investigate managerial motivations behind EDR and the impacts of the revision of financing policy through EDR on security value.

1.1 Motivation of the Study

It should be noted that the rise in long-term interest rates from the six percent level in the 1960s to the 14 percent level in the early 1980s has created an opportunity for virtually all firms with older outstanding debt to experience an accounting gain if they chose EDR. As shown in Figure 1-1, however, from 1985 to the present time the interest rate has fallen to below the 10 percent level. Hence, the result of EDR has the opposite effect on income. Firms with relatively newer outstanding debt which was issued during the early 1980s, other things being equal, are more likely to report an accounting loss if they choose EDR during the late 1980s.

Prior researchers did not consider the latter case. They investigated economic behaviors of the firms which reported accounting gains from EDRs by limiting their research time horizon to the periods before 1985.[1] More importantly, most of the prior studies focus on the

1. Dietrich [1984a] examined debt-for-debt exchange for the period of 1971-1980. Hand [1989], Lys and Sivaramakrishnan [1988], and Defeo et al. [1989], among others, investigated stock-for-debt exchanges which prevailed during 1981-1984.

income effect of EDR and ignore the financial leverage effect of EDR even though the leverage effect is always greater than the income effect in terms of the absolute dollar amount because the book value of debt retired is always greater than the resultant earning effect of EDR under a reasonable market rate of interest. Thus, the main outcome of EDR is a leverage reducing effect while income management through EDRs is a by-product of the EDR. The major motivation of this study is to examine the financial leverage effect of EDR. Prior research (e.g., Hand [1989]) finds evidence of income-smoothing as a primary motivation behind EDRs for the period before 1985. The evidence should include the time horizon after 1985 in order to increase the external validity of the evidence. However, the earlier findings may or may not hold for the period after 1985 for the same EDRs because the economic environment such as market interest rates has changed in the late 1980s. An additional motivation of this study is to test whether or not the income smoothing hypothesis is still valid for the period after 1985, by expanding the time horizon from the period before 1985 (EDR with gains) to the period after 1985 (EDR with losses).

The accounting promulgation also motivates this study to expand the means of debt redemption to all types of EDRs. Accounting Principles Board Opinion (hereafter, APB) No. 26 and Statement of Financial Accounting Standards (SFAS) No. 76 conclude that, other than debt conversion and troubled debt restructuring, all extinguishments of debt are fundamentally alike, and the accounting for such transactions should be the same regardless of the means used to achieve the extinguishment. However, prior studies are limited to a specific type of EDR. In the same time period, a group of firms chose tax-free stock-for-debt swaps (e.g., for the period of 1981-1984), while others chose cash-redemptions in spite of paying taxes for the accounting gain from EDRs for the same period. In contrast with previous research which concentrated on a specific type of EDR such as debt-for-debt exchange (Dietrich [1984a]) or equity-for-debt exchange (Hand [1989]), this study will examine all types of EDRs to test whether or not all extinguishments of debt are fundamentally alike.

From these behavioral differences in both the time horizon (e.g., reporting EDR gain vs. reporting EDR loss) and the cross-section (e.g., debt-equity swaps vs. cash-redemptions), specific research questions arise as to: (1) Why some firms chose EDR while others did not? (2) Why some firms chose EDR in the early 1980s with gains while others chose EDR in the late 1980s with losses? (3) Why some firms chose different methods of EDR compared to others, even in the same year?

1.2 Objectives of the Study

The main objectives of this study are to answer three questions: (1) Why and when did firms undertake EDRs? (2) What were the impacts of EDR on the equity value of those firms which undertook EDRs? (3) Are there any differences in motivations and impacts of EDR in terms of different time horizons and different means used to achieve EDRs?

By integrating a relatively long research time horizon as well as all different types of EDRs, this study will examine EDRs to find out whether there exist any common factors or differentials in debt-redemptions across time (1977-1988) and across firms. A relatively comprehensive analysis of EDRs compared to prior research is one contribution to the current accounting literature. A major contribution to the literature is to propose a leverage adjusting hypothesis as an alternative explanation of motivations behind EDRs in addition to the income smoothing hypothesis. The study also enhances understanding of a positive aspect of the financing choices through EDRs. Previous accounting choice studies have dealt with managerial motivations for choices of one accounting principle versus others. It is logical to posit that if factors such as capital structure and profitability motivate the choice of accounting principles, those factors might also motivate some financing choices with accounting implications such as early retirement of debt. Since the literature on accounting choice has focused previously on only choice of methods and procedures, the extension of the choice literature to the financing choice may be an another contribution.

The paper is structured in the following way. Chapter 2 reviews accounting rules, institutional and legal background relating to EDRs. Chapter 3 reviews corporate finance theories and prior empirical research related to capital restructuring and/or debt redemptions. Chapter 4 describes the research design of both the experimental sample and control sample and the results of the sample selection and analyzes the data. Chapter 5 develops testable hypotheses and empirical models to examine managerial motivations behind EDRs. Based on empirical tests, Chapter 5 also summarizes the findings of the motivations. Chapter 6 develops testable hypotheses and empirical models to test the impacts of EDR on the equity value of those firms which undertook EDRs. Based on empirical tests, Chapter 6 also summarizes the findings of the market reactions. The final chapter summarizes the major findings of the study and concludes with the limitations and future research implications of the study.

Chapter 2

ACCOUNTING, INSTITUTIONAL, AND LEGAL BACKGROUND

2.1 Accounting Promulgation

Historically, the accounting for early extinguishment of debt became, for the first time, a single subject under APB No. 26 in October 1972. APB No. 26 essentially defines early extinguishment of debt as the reacquisition of any form of debt security or instrument before its scheduled maturity. The opinion concluded that, other than debt conversion (APB No. 14), all extinguishments of debt before scheduled maturities are fundamentally alike, and the accounting for such transactions should be the same regardless of the means used to achieve the extinguishment (APB No. 26, para. 19). The difference between the reacquisition price and the net carrying amount of the extinguished debt should be recognized currently in income of the period of extinguishment as losses or gains and identified as a separate item.[2] Gains or losses should not be amortized to future periods (APB No. 26, para. 20).

In March 1975, SFAS No. 4 required that the gains and losses from extinguishment of debt be aggregated and, if material, classified as an extraordinary item, net of related income tax effect, regardless of two necessary conditions (unusual in nature <u>and</u> infrequent in occurrence) for the extraordinary items specified in APB No. 30. SFAS No. 4

2. Reacquisition price of debt is the amount paid on extinguishment, including a call premium and miscellaneous costs of reacquisition. If extinguishment is achieved by a direct exchange of new securities, the reacquisition price is the total present value of the new securities. Net carrying amount of debt is the amount due at maturity, adjusted for unamortized premium, discount, and cost of issuance (APB No. 26, para. 3).

required that, in order for the users of financial statements to sufficiently evaluate their significance, the gains or losses classified as extraordinary items should be described in a single note or adequately cross-referenced notes, in which the note(s) include: (1) a description of the extinguishment transactions, including the sources of any funds used to extinguish debt if it is practicable to identify the sources; (2) the income tax effect in the period of extinguishment; and (3) the per share amount of the aggregated gain or loss, net of related income tax effect (SFAS No. 4, para. 9). However, there is one exception for the disclosure of extraordinary items when the retirement of debt is to satisfy mandatory sinking-fund requirements. In September 1982, SFAS No. 64 required that the gains or losses from extinguishment of debt made to satisfy sinking-fund requirements <u>within one year</u> are not required to be classified as extraordinary items.

After APB No. 26, FASB issued two more promulgations on debt-extinguishment, one as a special rule and the other as an additional means of debt-extinguishment. In June 1977, SFAS No. 15 singled out troubled debt restructurings from the general rule of debt-extinguishments. Thus, troubled debt restructuring (SFAS No. 15) became a separate issue of general debt-extinguishment as was the case for debt conversion (APB No. 14). The extraordinary treatment of gains or losses from troubled debt restructurings by redeemers, however, is in accordance with that of SFAS No. 4. In November 1983, SFAS No. 76, as an amendment of APB No. 26, treated the in-substance defeasance as an additional means of debt extinguishment for financial reporting purposes.

In summary, as long as the gains or losses from debt-redemption are material in amount, the income statement and accompanying footnotes should include some basic information as to the extent to which users of financial statements are able to reconstruct the transactions of any voluntary early debt-redemptions. The disclosure rules summarized above will be the starting point of the sample selection in this paper as well as the subject of the paper. In this paper, any mandatory debt-redemptions such as the debt redemption at maturity (including mandatory sinking-fund requirements within one year) and troubled debt restructurings are deleted from the subject because these debt-redemptions, in themselves, already possess the economic reasons for those events such as payment on an agreed date and forced payment (or renegotiation) due to the violation of the original agreements with creditors, respectively. Thus, the subject and sample is limited to the early debt-redemptions in which managements have discretionary decision-making alternatives for both the timing and the amount of debt-redemptions. The methods of such voluntary early debt-redemptions include retirements by repayment provision, calls for callable bonds, tender offers, exchange offers for some other securities or assets, open market repurchases, private offers, and in-substance defeasances. The instruments used to achieve EDRs are cash, assets, new debt, preferred stock, or common stock. The methods and instruments of EDR will be discussed in Section 2.4 and 2.5 in more detail.

2.2 SEC Regulation on EDR

Additional attention to early retirements of debt was accorded by the SEC which, in Accounting Series Release (ASR) No. 138, required disclosure of a repurchase of debt through the Form 8-K, effective for events occurring subsequent to September 15, 1972. Unfortunately, Form

8-K was amended in January 1977, such that the reporting of item 8, relating to a decrease in securities outstanding was deleted from the Form 8-K by requiring that, for events occurring after February 28, 1977, this information should be included on Form 10-Q, the quarterly report, in a more limited fashion than the requirement under ASR No. 138. The disclosure rules for debt-redemptions by the SEC are not so very much different from those specified by the FASB.

2.3 Tax Rules for EDR[3]

A prevailing means of EDR during 1981-1984 was a tax-free stock-for-debt exchange.[4] Without an understanding of the institutional and legal background behind the debt-equity swaps, it may be hard to figure out the motivation of debt-equity swaps as well as the differences in motivations between debt-equity swaps and other means of early debt-redemptions.

Prior to the Bankruptcy Tax Act (BTA) of 1980 which became effective January 1, 1981, firms were able to realize the capital gain arising from repurchasing any of their own debt which was selling at a discount to par in essentially a tax-free manner. Although under Section 108 of the Internal Revenue Code (IRC) the firm had to recognize as ordinary income, any difference between the nominal dollar value of the debt when originally sold and that when repurchased, the immediate tax liability created could be postponed almost indefinitely

3. This section was quoted partly from Dyl and Spahr [1983], Willens and Mirsky [1984], Finnerty [1985], Rogers and Owers [1985], and Hand [1989]. For more details in tax law changes, refer to these references, among others.

4. The "stock-for-debt exchange" (or "equity-for-debt swap") will be shortened to "debt-equity swap" and both terms are used interchangeably throughout the paper.

in most cases. Dyl and Spahr [1983] note that the old law allowed firms to treat the difference between the face and the market value of the debt as ordinary income or to reduce the tax basis of assets by the same amount. Therefore, most firms simply reduced their bases in the stock of their subsidiaries and deferred recognition of any gain until those assets were sold. Of course, those assets rarely were sold so the present value of the tax liability was effectively zero.

The BTA of 1980 altered IRC Section 108 by providing that the tax basis reduction available applied solely to depreciable assets or to real estate held for sale in the ordinary course of business. In fact, this meant that in order to cancel the taxation on the realized capital gain arising from the difference between the face and the market value of the debt purchased, the firm had to reduce its depreciation tax shield. The Tax Act, therefore, imposed significant costs on firms which wanted to retire debt selling at a discount, and in particular, those firms with sinking fund obligations to meet. These legal changes motivated firms to seek a way to avoid the effects of the Tax Act. At that time, Salomon Brothers developed the tax-free debt-equity swap. Prior to the Tax Act, the courts had long recognized an exception to the normal rule of income recognition, namely that if a firm undertook a recapitalization in which the debtholders accepted stock in exchange for their indebtedness, then any income caused by the discharge of indebtedness was tax-free. Although the Tax Act did not codify this stock-for-debt exception, it did recognize and confirm its presence obliquely; in Section 108(e)(8) the Act provided that the stock-for-debt exception would not apply only if nominal or token shares were issued. This exception was primarily motivated as a relief measure for firms in dire financial difficulties, but Salomon Brothers realized that it could also apply to stock-for-debt swaps done by solvent firms as long as certain conditions are met. The first condition is that the bonds had to be acquired by a party unrelated to the issuer, a role fulfilled by an investment banker. Secondly, the acquiring party could not act merely as an agent for the firm; it had to act as a principal, taking on itself the risks involved in legally owning the bonds. And third, although the amount of stock issued need not be identical to the debt exchanged in terms of market value, it had to satisfy IRC Section 108(e)(8) requiring that the amount of stock involved was not nominal or token. Thus, the stock side of the swap could not be satisfied with 100% cash.

This hybrid recapitalization approach developed by Salomon Brothers motivated other major investment bankers to advise their client firms to undertake the tax-free debt-equity swaps and investment bankers themselves made profits from the debt-equity swap engagements by acting as a quasi-principal because the bankers usually received a fee from the firm, which averaged 3.8% of the market value of the equity side of the swap plus a bond-holding fee which averaged $3.00 per $1,000 bond face value. In a study by Hand [1989], the total fee received by the investment banking community as a whole summed to approximately $250 million for 245 swaps done by 145 firms during 1981-1984.[5]

In July 1984, Congress passed the Deficit Reduction Act of 1984

5. Hand [1989] reported that the median swap size (the market value the equity involved in the swap plus any cash component) was $15.1 million and was exchanged for a median of $21.1 million face value of debt. The median swap gain was $4.8 million which represented a median of 18% of earnings (including the swap gain) for the swap quarter.

(see Willens and Mirsky [1984] for details). This Act contained an array of provisions designed to respond to what were perceived as abuses of tax codes. Among these provisions was IRC Section 108(e)(8), which provided that an obligation satisfied by an issuance of stock was considered satisfied for money in an amount equal to the value of the stock. A debtor now realizes taxable income from retiring debt which is selling at a discount, and the tax can be avoided only if the firm makes an election to reduce the basis of depreciable property or realty held as inventory. The Deficit Reduction Act, therefore, made retiring debt selling at a discount to par by means of a debt-equity swap more costly (in terms of taxes and transactions costs) than a straight open-market purchase.

From the review of the institutional and legal background for debt-equity swaps which prevailed during 1981-1984, the motivations can be characterized by (1) a tax-avoiding means of EDR; (2) the combined effort put by both investment bankers and redeemers; and (3) a method to retire public debt especially to satisfy sinking-fund requirements.[6]

2.4 Methods of EDR

There are various ways in which a corporation may effect a voluntary early debt-redemption. These include retirements by repayment provision, calls for callable bonds, tender offers, exchange offers for some other securities or assets, open market repurchases, private offers, and in-substance defeasances.

6. Hand [1989] reported that 85% of the bonds swapped had sinking-fund provisions. Defeo et al. [1989] reported that 107 out of 159 firm-years with the swaps were reported as ordinary income while only 52 swaps were treated as extraordinary items. Thus, most of the swaps may result from sinking-fund requirements within one year or meet immateriality criteria.

2.4.1 Retirement by Repayment Provision

Long-term loans (or notes payable) are commonly repaid in a steady, regular way, perhaps after an initial grace period. For publicly traded bonds this is done by means of a sinking-fund. Each year the firm pays a sum of cash into a sinking-fund which is then used to repurchase the bonds.

2.4.2 Calls for Callable Bonds

Most firms issuing debt to the public reserve the right to call the debt, that is, to repay and retire all the bonds in a given issue before the final maturity date. The call prices are specified when the debt is originally issued. The price that must be paid on redemption is usually stated as a percentage of face value. Usually lenders are given at least 5 years of call protection. There will normally be several call prices, each respective to a particular future date. The closer the date is to the maturity date, the lower the price becomes. A corporation issuing callable bonds must pay for this privilege of redemption on demand. One aspect of this is that the redemption or call price is usually greater than the face amount of the debt. Another aspect is the interest rate of callable debt. The yield is usually greater than that which would have been necessary without the call feature. This is the penalty that is paid by the corporation for having financial flexibility.

2.4.3 Tender Offers

A tender offer is a public offer to repurchase all or a portion of a specific debt issue made by a corporation to all holders of the issue. To protect the bondholders, both the SEC and the stock exchanges have regulations governing how a tender offer must be carried out. The tender offer price is usually above market price in order to induce the bondholders to tender their bonds. This price may or may not be above the face value of the bonds. Thus, the result could be either a gain or a loss upon early retirement of the debt. If the corporation wants to redeem part of a given issue, it will stipulate in the offer the maximum dollar amount that will be accepted. Since the cost of carrying out a tender offer can be significant, firms occasionally make the offer contingent upon a minimum dollar amount being tendered.

2.4.4 Exchange Offers for Other Securities or Assets

In an exchange offer, the consideration offered in exchange for the bonds may take a variety of forms such as stocks, new bonds, or assets.

Stock-for-Debt Exchanges: The corporation may offer to exchange either its common or preferred stock for bonds. This offer would typically be made by a firm that needs additional funds which are not available to it at an affordable interest rate. This can be due to a variety of reasons including the risk attached specifically to the firm. Another situation that could create a need for a firm to increase its equity and decrease its debt simultaneously might occur as a result of operating losses for several years, such that the leverage ratio was continuously increasing. The increase in financial leverage could violate a covenant in a loan agreement with a bank, whereby the loan would become due immediately if the debt to equity ratio exceeded a predetermined amount. A firm experiencing cash flow difficulties may anticipate an inability to meet a forthcoming payment on its debt and be willing to make an attractive offer to its bondholders in order to induce them to change their status from creditors to shareholders. Stock-for-debt swaps mentioned in Section 2.3 are a special type of this category where the primary motivation is induced by the tax-free feature of the recapitalization.

Debt-for-Debt Exchanges: Firms also offer to exchange new bonds for those outstanding. This approach is usually called refunding old debt by issuing new debt. The new bond may be similar to the old bond but with a different interest rate, a different maturity date, a different covenant agreement, or if convertible, a different exchange ratio. The terms of the exchange offer will determine whether a gain or loss is recognized on the transaction. As an inducement to the bondholders, the corporation may offer a convertible bond as a replacement for the old bonds.

Assets-for-Debt Exchanges: This exchange offer is usually the case for troubled debt restructuring with private debtholders such as bankers and insurance companies. When a firm has financial difficulty in repaying its loan or notes payable (i.e., secured debt), it may renegotiate with debtholders for an exchange of assets (e.g., real estate) for outstanding debt instead of risking bankruptcy. If the exchange is due to a troubled debt restructuring specified in SFAS No. 15, this paper will exclude the observation.

2.4.5 Open Market Repurchases

A corporation may repurchase its own debt by placing an order through a broker and buying the bonds at the going market price. This is a cash repurchase at market price. If the bond issue being repurchased is convertible and trading on its conversion features, the price can be above face value and the redemption would create a loss. The purpose of such a repurchase is to save transaction costs or to prevent the bonds from being converted or diluting earnings per share.

2.4.6 Private Offers

When a large block of bonds is held by one individual or institution, a private redemption can be advantageous since it eliminates the high cost of a public tender offering. The offer may be instituted by either party and the consideration may be other than cash. One possibility is that the redeeming corporation is holding for investment shares of stock in another corporation which the bondholder would like to obtain. Either a gain or loss can result in these circumstances.

2.4.7 In-Substance Defeasances

SFAS No. 76 defines additional means of debt-extinguishment, so called in-substance defeasance, if the debtor irrevocably places cash or other assets in trust to be used solely for satisfying scheduled payments of both interest and principal of a specified obligation. In addition, the possibility that the debtor will be required to make future payments must be remote (SFAS No. 76, para. 3). The "remote" condition satisfies the voluntary early debt-redemption criteria in this paper.

2.4.8 Conversion

When the market price of the stock exceeds the conversion price, it is advantageous to the bondholders to convert their bonds to stock. Frequently, a bondholder will not automatically convert because the bondholder can continue to collect the bond interest and still have the privilege of converting whenever the bondholder pleases. Normally, this will be done when the dividend on the stock is less than the interest on the bond. In the meantime, the bondholder is receiving interest and is protected against a downturn in the stock price. The conversion of a bond into stock is generally at the discretion of the bondholder rather than a management decision (APB No. 14). The firm will not recognize any gain or loss on early extinguishment of debt. Debt conversions by bondholders will be eliminated from this study. If the bond is callable, the firm will frequently put in a call for redemption to force a conversion.

2.5 Instruments of EDR

To retire outstanding debt, managers may use different resources such as cash, new debt, common stock, preferred stock, other assets, or combinations of the above. Table 2-1 summarizes the relationship between methods and instruments of EDRs (Panel 1) and the effect of EDRs on financial statements by different instruments (Panel 2). Although the method of EDR discussed in Section 2.4 determines the instruments to be utilized, this study examines whether different resources utilized have different implications for managers' discretionary decision-making. Depending upon the instruments utilized to retire debt, EDR results in different effects on both the balance sheet and statement of cash flows. For example, the funds from common stock or preferred stock have no cash flow effect except transaction costs, but a significant effect on leverage. The funds from a new debt have neither a cash flow effect nor a leverage effect, but the new debt may have a different maturity, different coupon rate, and different covenant provisions compared to the old debt retired.

Chapter 3

THEORIES AND PRIOR RESEARCH

Under the capital structure theories in finance, EDR is a revision of a firm's financing policy which results in a decrease in financial leverage. Thus, this chapter reviews capital structure theories in finance and previous empirical research to test the impact of capital structure changes on stock price. It also includes prior empirical research which directly tests EDR.

3.1 Static Capital Structure Theories

Modigliani and Miller [MM, 1958] demonstrate that when production-investment decisions are held fixed, the value of a firm is irrelevant to the composition of its capital structure given a perfect capital market (frictionless and perfectly competitive) and no taxes. Fama and Miller [1972] further demonstrate that, under the added condition of complete protective covenants or 'me-first rule,' the value of a firm's individual securities are irrelevant to capital structure changes. However, the irrelevance proposition does not hold under corporate and personal taxation, bankruptcy costs, or under incomplete protective covenants.

An exploration of the agency relationships of corporate organizations (Jensen and Meckling [1976]) suggests that incentive conflicts can motivate maximization of stockholder's wealth or management's wealth at the expense of firm value maximization. In a similar vein, Bulow and Shoven [1978] analyze situations where management is induced to maximize the wealth of debtholders. Thus, the existence of incentive conflicts provides a variety of motivations for capital structure changes.

Major theories of static capital structure hypothesize three valuation effects arising from capital structure change: (1) tax effects and the expected cost of bankruptcy effects; (2) wealth transfer effects and incomplete protective covenants; and (3) information effects.

3.1.1 Tax Effects and Expected Bankruptcy Costs

In a world with corporate taxation, tax deductible interest payments subsidize the issuance of debt (MM [1963]). An increase in debt increases a firm's tax shield; this in turn increases a firm's value by the amount of the present value of tax shield. With the introduction of differential personal taxation across investors, where debt interest income is taxed at a higher rate than capital gains income derived from stock, the earlier MM conclusion is no longer definitive. In this case, corporate tax deductions are at least partially offset by additional personal tax liabilities of the acquiring debt holders. Miller [1977] shows that for equilibrium to exist in a perfect capital market with corporate and differential personal income tax rates, debt policy can have no effect on firm's market value. In this case, a given firm should be indifferent to the level of outstanding debt since there is no optimal level of debt for the firm (though there is an optimal aggregate level of debt in the market).

With the introduction of investment tax shields or leverage related cost, DeAngelo and Masulis [1980] demonstrate that the existence of a personal tax bias against debt income diminishes but does not eliminate the net corporate tax benefit of debt. Moreover, a unique optimal capital structure will often exist in this tax environment, where at the margin, the corporate tax advantage of debt exactly offsets the personal tax disadvantage of holding debt.

Robichek and Myers [1966], Kraus and Litzenberger [1973], and Scott [1976] argue that the expected cost of involuntary bankruptcy and reorganization have significant impact on the value of a levered firm. These costs include lawyers' and accountants' fees, court costs, and the cost of managerial time consumed in bankruptcy and reorganization proceedings. Furthermore, as the probability of incurring these costs of bankruptcy rises, the value of the firm decreases. Consequently, a firm altering its leverage should experience a like change in the probability of bankruptcy, causing an opposite change in its value. This change in firm value must cause an equal change in the sum of the market values of the firm's risky securities, with the impact being shared among all these securities.

3.1.2 Wealth Transfer Effects and Protective Covenants

The wealth transfer (or wealth redistribution) hypothesis predicts offsetting changes in the values of individual classes of securities and no changes in firm value. Protective covenants or me-first rules are defined as "incomplete" if management can change the firm's asset or capital structure to redistribute wealth among classes of security holders (Fama and Miller [1972]). Jensen and Meckling [1976] show that securities with incomplete protective covenants can exist because the costs of monitoring and enforcing complete protective covenants exceed the value of the protection obtained from having them (in terms of higher security prices). In other words, given that securities with incomplete protective covenants are less costly to supply due to lower monitoring and enforcement costs, and given that investors assess these securities to be less valuable due to the probability of future losses, we might observe these securities to have lower market prices than otherwise equivalent securities. Consequently, while holders of outstanding securities with incomplete protective covenants are subject to potentially adverse redistribution of wealth, they receive implicit market determined compensation for being subject to these potential losses through the security's lower purchase price. Following Jensen and Meckling's [1976] wealth redistribution hypothesis, if a firm reduces its debt, debtholders will be better off because they will improve their adverse position which results from incomplete protective covenants which are subject to potential redistribution of wealth away from the bondholders. In contrast, equityholders will be worse off because the firm should take less risky investment projects due to the earlier retirement of debt with less protective covenants.

3.1.3 Information Effects

According to the information-effect hypothesis, changes in financial leverage convey management's expectations about the firm's prospects. This follows from various theoretical models that rely on informational asymmetries to justify an optimal capital structure (Ross [1977], Leland and Pyle [1977], and Heinkel [1982]). Assuming that managers possess superior information relative to investors about the "intrinsic" value of the firm, these models suggest that the firms capital structure changes are valid signals that allow managers to convey their inside information to investors. For example, the information signaling model of Ross [1977] suggests that a leverage-decreasing capital structure change conveys unfavorable information about the firm's prospects while a leverage-increasing capital structure change conveys a favorable information. Accordingly, EDR conveys negative information about the firm's future earnings prospects and results in a decrease in the firm's stock price. Moreover, the issuance of any additional stock to retire debt decreases managerial stockholdings (assuming managers do not participate in the new issuance of stock to retire debt). As a result, the potential conflict of interest between managers and outside stockholders increases and the firm's value decreases (Jensen and Meckling [1976]). In addition, in the Leland and Pyle [1977] model, managers maintain a large stock position only if they expect the future cash flows to be higher relative to the firm's current value. Therefore, an EDR that reduces the managers' fractional stockholdings is perceived as negative information, thus leading to a stock price decrease. Similar predictions follow from the Miller and Rock [1985] and Myers and Majluf [1984] models even if these model pertain only to new financing of investment.

In Chapter 6, the above three static capital structure theories will be tested for the case of early retirement of debt.

3.2 Dynamic Capital Structure Theories

Recent finance literature focuses on the dynamic aspect of capital structure rather than classical static capital-structure theories. For example, Myers [1984] pointed to current static capital structure theories as a "puzzle." He presented a static trade-off framework in which the firm is viewed as setting a target debt-to-value ratio and gradually moving toward it, in much the same way that a firm adjusts dividends to move toward a target payout ratio. In his modified pecking order strategy, incorporating those elements of the static trade-off model which have clear empirical support, provides a better approach to understanding corporate financing behavior. Brennan, Schwartz, and Emanuel [1984] analyzed a firm's intertemporal investment and capital structure policy. In their development of an equilibrium valuation model, they pointed out that financial policy has a dynamic aspect that has been largely neglected.

Kane et al. [1984] developed an option valuation model of a firm, which incorporates personal taxes and bankruptcy costs, to determine if such a model can potentially account for the observed range of debt-equity ratios in the U.S. Their analysis indicates that differences across firms in bankruptcy costs alone cannot account for the simultaneous existence of levered and unlevered firms. By using a simulation analysis to determine a reasonable cross-sectional range for optimal debt ratios, they concluded the tax advantage/bankruptcy cost trade-off is unlikely to play a major role in explaining observed leverage patterns.

Fischer, Heinkel, and Zechner [1989] develop a model of dynamic capital structure choice in a continuous time framework. In their model, firms can recapitalize at any point in time and they determine the critical upper and lower financial leverage ratios at which transactions costs are incurred to rebalance the firm's financial structure. They derive closed form solutions for the value of the firm's debt and equity as a function of its dynamic recapitalization decisions. The resulting optimal dynamic capital structure policy depends upon the benefit of debt financing (e.g., a tax advantage), potential costs of debt financing (e.g., bankruptcy costs), underlying asset variability, the riskless interest rate and the size of the costs of recapitalizing. The model provides predictions relating firm-specific properties to the range of optimal leverage ratios: smaller, riskier, lower tax, lower bankruptcy cost firms will exhibit wider swings in their debt ratios over time.

The dynamic capital structure theories will be used as a conceptual framework for the analysis of motivations behind EDR in Chapter 5.

3.3 Prior Empirical Research on Capital Structure

Many studies have examined the stock price effects of leverage changes resulting from financial transactions using market return models. For example, Masulis [1980, 1983] has examined the stock price effect of three different exchange offers (debt vs. common, debt vs. preferred, and preferred vs. common). He finds that abnormal returns are significantly positively associated with changes in leverage. That is, in leverage-reducing exchange offers (e.g., common-for-debt or preferred-for-debt), two-day abnormal returns around announcement dates are significantly negative. Eckbo [1986] and Mikkelson and Partch [1986] also find significant negative abnormal returns around a two-day announcement period when they test the stock price effect of security sales (i.e., issuing common stocks with retirement of debt). Vu [1986] has examined the stock price effect of the calls of non-convertible bonds (using cash, bank loans, or new bonds). He finds that, in aggregate, two-day announcement abnormal returns are negative, but insignificant. However, when he disaggregates his sample of calls of bonds by changes in leverage, he finds that, for the 72 firms that decrease leverage, there are significant stock price announcement returns of -1.1 percent; for the 30 firms with no change in leverage, +0.3 percent; and for the 31 firms that increase leverage, +0.9 percent. Dietrich [1984a] has examined the stock price effect of exchange offers in which firms issue their new debt with retirement of old debt. He finds that the abnormal return around the announcement period is positive but insignificant.

In the review paper of empirical studies on the stock price effects of several security offerings, Smith [1986] summarizes the evidence from exchange offers, conversion-forcing calls of convertible securities, and security sales where the proceeds are used for debt retirement. The evidence suggests that: 1) the sign of abnormal return and the sign of leverage change are the same, and 2) the larger the change in leverage, the greater is the absolute value of the abnormal price reaction. Thus, common-for-debt offers have larger negative stock price reaction than preferred-for-debt or common-for-preferred offers, while debt-for-common offers have larger positive price reactions than debt-for-preferred or preferred-for-common offers.

Early retirement of debt, the subject of this paper, results in only a decrease-in-leverage except debt-for-debt exchanges. The focus, however, is different from the above mentioned studies. For example, Masulis [1980, 1983] has studied common-for-debt and preferred-for-debt offers, but ignored cash redemptions. Eckbo [1986], and Mikkelson and Parch [1986] examined common-for-debt offers, but excluded other types of debt retirement. Vu [1986] has examined similar types of debt redemption as examined in this paper, but he has excluded partial redemption. Thus this study gives another focus of debt redemption which is characterized by early retirement of debt with gains or losses, without any restrictions on types and amount of redemption (partial or whole).

3.4 Prior Empirical Research to Test EDRs

3.4.1 Debt-for-Debt Exchanges

Dietrich [1984a] examines bond-for-bond refundings (retirement of old bonds by issuing new bonds) and their effects on stock returns by claiming that refundings can affect the reported income, cash flows (including taxes), dividend constraints and financial ratios of firms. For a sample of 36 firms that performed refundings between 1971 and 1980, stock returns were significantly higher than predicted only around the release of the quarterly earnings announcement that included the refunding effects. He attempted to explain differential security price reactions in relations to economic factors such as tax treatment of refunding gains, potential mitigation of covenant constraints, and the income effects of redemptions. Among the factors, only the change in earnings per share was found to be associated with the prediction errors. His results in regard to tax and covenant factors were not significant.

3.4.2 Stock-for-Debt Exchanges

Stock-for-Debt exchange was widely used as a debt-redemption tool throughout the sample period especially during the early 1980's as a significant corporate finance tool. Between August 1981 and June 1984 firms used them to retire approximately $10.0 billion book value of long-term debt and issue in its place $7.0 billion market value of equity (Hand [1987], p. 1). Because of the significance of the amount as well as the hybrid characteristics of the recapitalization tool developed by Salomon Brothers, the swap transaction brought on substantial attention from both the financial press and academic researchers. For the quotations from the financial press, refer to Hand [1987] (Appendix C, pp. 93-96). There is also a lot of empirical research done by both financial practitioners and academicians. For example, the market studies to test stock price reaction around the swap announcement have been done by Finnerty [1985], Peavy and Scott [1985b], Rogers and Owers [1985], Lys and Sivaramakrishnan [1987], Hand [1987], and Cornett and Travlos [1989], among others. Abdel-khalik and Jung [1985] and Hand [1987] investigated the motivation of debt-equity swaps while Defeo et al. [1989] examine the executive compensation effects of the swaps. Lys and Sivaramakrishnan [1987] also examine the association between the stock market reactions to the swaps and earning expectations by financial analysts.

Across the market studies, even though each study has different test windows and different methodologies in the return model and focuses different hypotheses, some consistent stock market reaction was found, that is, the stock price reaction around the announcement of the swaps was negative and statistically significant at conventional levels.[7]

7. The results of market studies quoted above are as follows: (1) Finnerty [1985] estimates the cumulative excess return from day 0 to day +1 to be -1.19 percent; (2) Peavy and Scott [1985] estimate the cumulative excess return from day -5 to day +5 to be -1.84 percent; (3) Rogers and Owers [1985] estimate the cumulative excess return from day -1 to day 0 to be -1.29 percent for firms involved in a "refunding strategy" and -0.60 percent for the remaining firms; (4) Lys and Sivaramakrishnan [1987] estimate the cumulative excess return from day 0 to day +1 to be -1.11 percent.

Among academic research, a relatively comprehensive study was done by Hand [1987] in his dissertation because he raises nearly all possible questions and uses the population (rather than a sample) of debt-equity swaps during that period. The basic questions raised by Hand [1987] were: (1) What was the impact of the first public release of information about the swap on the common stock price of those firms which undertook them?[8] and (2) Why did firms undertake debt-equity swaps?

For the second question, he examines the testable implications of each of five alternative explanations for the motivations of the swaps. These explanations are that (1) management used the swap gain from the swap to smooth an unexpected and transitory fall in reported earnings per share; (2) a swap offered tax advantages in terms of retiring debt selling at a discount; (3) a swap was a disguised equity issue; (4) a swap was part of a debt-refunding operation; and (5) management undertook a swap in order to increase their compensation.[9] He found evidence which he considers to be the most consistent with the first two explanations.

Abdel-khalik and Jung [1985] also examined the incentives for debt-equity swaps by using a logit model. They find that there exist some differences in firm characteristics such as financial leverage, earnings forecasting errors, and forecasting revisions made by financial analysts.

---

8. Hand [1987] estimates the cumulative excess return from day 0 to day +1 to be -1.30 percent.

9. Hand [1987] quoted the study by Defeo et al. [1989] for the compensation hypothesis.

Lys and Sivaramakrishnan [1987] examined debt-equity swaps to determine whether the security price reaction around such swaps is related to contemporaneous revisions in investor's earnings expectations. They developed a framework to analyze the direction and magnitude of the association between the security price change surrounding the first public announcement of swaps and the corresponding revisions in earnings expectations. The results of their study were generally consistent with the hypothesis that investors infer a downward revision in managerial earnings forecasts from equity-for-debt swaps. The study also showed that: (1) swap firms, on average, show a decline in earnings performance in the swap year; (2) a negative security market reaction at the swap announcement date exists; and (3) the correlation between the security market reaction at the swap announcement date and earnings forecast errors is positive and statistically significant.

Defeo et al. [1989] analyzed the association between the accounting gain produced by an equity-for-debt swap and executive compensation using data on 179 swap transactions from 1981 to 1984. Executives of firms completing a swap transaction were found to experience an increase in cash compensation (salary plus bonus). The increase was greatest both in absolute magnitude and in statistical significance for firms whose compensation plans were more accounting-oriented, that is, the firm's compensation was not adjusted for the accounting gain produced by the swap. They also found that, on average, the value of the executives' personal equity holdings decreased in the period surrounding the announcement of the swap. The magnitude of the decrease was comparable in size to the compensation increase. However, they found some weak evidence that executives of companies whose compensation plans were more accounting-oriented experienced a statistically significant increase in their total wealth as a result of the swap transaction.

Peavy and Scott [1985b] further tested the market reaction of bonds by using a comparison period return approach to test for abnormal security returns around the announcement dates of 111 stock-for-debt swaps that were transacted during August 1981 - August 1982. The results showed a positive but statistically insignificant effect on bondholder wealth around the swap announcement date, but with a significant negative effect on stockholder wealth.

Scott, Hempel, and Peavy [1985] compared the effect of stock-for-debt swaps between bank holding companies (BHCs) and non-BHCs by claiming that, for BHCs, the swaps permit them to adjust their capital positions to new optimal levels as dictated by the more stringent capital standards in effect since 1981. For 99 non-BHCs, analysis reveals a significant and negative abnormal average return on the swap announcement date of -0.49%. For the 22 BHCs, however, no significant abnormal average return on the announcement date is found. They explained that swaps may be lowering the potential costs of regulatory interference for BHCs if they are overlevered, which offsets whatever other force is driving down stock prices on new issue announcement dates.

Cornett and Travlos [1989] investigate the information effect caused by a firm's change in capital structure via equity-for-debt exchange offers (115 firms) and debt-for-equity exchange offers (40 firms) for the period covering 1973-1983. Their evidence suggests that the former lead to abnormal stock price decreases, while the latter transactions lead to abnormal stock price increases. In addition, their findings based on analysis of bond returns and cross-sectional regressions do not lend support to the wealth-transfer hypothesis and tax-effect hypothesis, but they are consistent with the information-effect hypothesis.

3.4.3 Calls of Non-Convertible Bonds

Vu [1986] examines the call behavior of corporate issuers of non-convertible bonds. From a sample of 102 calls covering the period of October 1962 - April 1978, the study shows that the market value of the called bonds is usually below the call price at the time of the announcement. The stock price reactions to call announcements are positively related to the direction of the leverage change. When the call eases restrictive covenants, the firm, on average, pays a larger premium to call debt. The premium represents a minimum estimate of the potential opportunity costs of restrictive covenants. Empirical evidence on the bond refunding hypothesis demonstrates that most refundings are profitable, but few industrial firms call their debt to refund.

Chapter 4

SAMPLE SELECTION AND DATA

4.1 Experimental Sample

4.1.1 Sample Selection - Design

A sample of firms which have engaged in EDRs is obtained from the National Automated Accounting Research System (NAARS) database. NAARS is a computerized file which includes excerpts from the annual reports of most of the firms whose securities are traded in NYSE, AMEX, or OTC in the U.S. economy. The search period covers 1977 through 1988 which will guarantee the inclusion of the latest nuances in debt retirement techniques as well as a comprehensive analysis of EDRs.

The NAARS search is conducted on three levels. The first level identifies companies which have retired debt early and utilize terms such as "call," "redeem," and "refund," etc. The second level of the search identifies those redemptions which utilize terms such as "debt," "bond," and "debenture," etc. The third level utilizes terms such as "early," "gain," or "loss," etc. A detailed final design of the text search appears in Appendix A. This search design illustrates several different methods and instruments of EDR as mentioned in Sections 2.4 and 2.5.

For the study of the motivations behind EDRs in Chapter 5, sample selection criteria require:

1. Firms must be listed on NYSE or AMEX in their redemption years.
2. Annual reports or Form 10-Ks explicitly report the amount of debt redeemed and the resulting gains or losses.
3. During the period of 1977-1988, firms' financial data must be available from either Compustat Annual Industrial Tapes or Compustat Research Industrial Tapes.

4. The sample must be limited to discretionary EDRs. Thus, any mandatory EDRs such as the debt-redemption at maturity and troubled debt restructurings are beyond the scope of the study.

For the market study in Chapter 6, the sample should satisfy the following additional requirements:

1. The public release of information about EDRs should be found in the Wall Street Journal Index.
2. The firm's common stock should be listed on the CRSP daily return tapes at and around the time of the public release of information concerning EDRs. The stock should have sufficient daily return data to estimate the parameters of the market model and abnormal returns.

4.1.2 Sample Selection - Result

Table 4-1 reports the sample selection process from the NAARS search to the final sample. Originally 1,875 annual reports (firm-years) for 847 firms were found from NAARS searches, but 39 firms changed their names during the search period. Therefore, 808 entities (1,875 firm-years) became candidates for redeemers. The sample selection criteria mentioned above eliminated 308 firms (591 firm-years) from the candidates (see a through k under number 4 in Table 4-1). During the review of 10-Ks (or annual reports) to collect relevant data for EDR, an additional 325 firm-years are found to be firm-years with EDRs for the remaining 500 redeemers, resulting in 1,609 firm-years (10-Ks) to be reviewed in detail for the data collection. Among these, 52 firms (149 firm-years) are eliminated because those candidates are firms with troubled debt restructuring. Among the remaining 1,460 firm-years for 448 companies, 697 firm-years are eliminated because the NAARS search usually does not pinpoint an exact firm-year and picks redundant firm-years for the same event due to a comparative disclosure for the past three years and one subsequent year if there is a subsequent event.[10] The reasons for the elimination of the firm-years are summarized in the Table 4-1 (a through j under number 10) in more detail. The final sample consists of 448 redeemers with 763 firm-years.

4.1.3 Analysis of the Data

Table 4-2 presents distribution of EDRs across calendar years (1977-1988) by portfolios such as: all sample, by period, by income effects, by EDR methods, by primary instruments, by income statement disclosure, and by industry groups. For the all sample, the EDRs are, in general, uniformly distributed across calendar years with the range of 55 (7%) - 154 (20%) EDRs per year from 1981 to 1987. The observations for the period of 1977-1980 are relatively small because those observations are picked by the 10-Ks released in 1981 or after as the disclosure for the prior years. The EDR observations in 1988 are also small because the NAARS search had been conducted on February 1, 1989 before December fiscal year-end firms released their 1988 10-Ks. By Period, 51.4% of the total EDRs occurred before June 1985 (denoted "Early 1980's") and 48.6% of EDRs had been conducted after June 1985 (denoted "Late 1980's") when the market interest fell below the 10% level. By income effect, 59.2% of the sample reports redemption gains, 34.0% of them reports redemption losses, and the remaining 6.8% of EDRs reports immaterial gains or losses (denoted "Zero-Gain").

10. For example, for one exact firm-year to be an EDR observation, the maximum four of 10-Ks (or annual reports) for the same firm can be picked up by the NAARS search because 10-Ks may disclose the same event in four consecutive years as comparative information, including the subsequent event disclosure in year t-1, the exact firm-year t=0 (the redemption year), and the next two years t+1 and t+2 as a prior year information for comparative purposes.

By methods, although the study attempts to segregate the sample by redemption methods listed in Panel 1 of Table 2-1, most of the disclosures do not exactly mention the methods utilized except equity-for-debt swaps. Therefore, the following analyses are based on two broad categories: equity-for-debt swaps (17.2%) and all other methods (82.8%). For the equity-for-debt swaps, all except seven EDRs occurred during 1981-1984. By primary instrument used to retire debt,[11] cash redemption (66.6%) is a dominant primary instrument especially after 1986. Common stock (18.6%) is also a popular means used, especially during the period of 1981-1984 for equity-for-debt swaps. Assets (31 EDRs) represents the instrument for in-substance defeasance (32 EDRs). By industry groups, the EDRs are widespread including 56 different industry groups based on two-digit SIC codes. Based on four-digit SIC codes, the sample is spread to 215 different industries (not reported in the table) among all 281 industries available from the Compustat Annual Industry Tape (released June 1987). The sample is so widely distributed across industries that industry clustering may not be a serious problem for the sample.

Among portfolios, the segregation of the sample by two sub-periods (Early 1980's vs. Late 1980's) is important because the market interest dramatically changed during the period of 1977-1988. The cut-off time is June 1985 when the market interest rate (based on S&P triple A bond yield) fell below the 10% level (see Figure 1-1). Thus, the two periods have different effects on earnings. For example, redeemers during the early 1980's are more likely to report redemption gains

11. The study segregates total payment into five different instruments because most of the EDRs used a combination of different instruments. The primary instrument is the instrument for which the largest amount was paid among different instruments.

while redeemers during the late 1980's may report redemption losses. Table 4-3 reports the interaction between the two sub-periods and income effects (Panel 1). Among 452 EDRs (59.2% of the total EDRs) with redemption gains, 338 EDRs (44.3% of the total) occurred during the early 1980's and 224 EDRs (29.4% of the total) out of 259 EDRs with redemption losses occurred during the late 1980's. The chi-square independence test (Panel 2) shows that all three chi-square statistics are significant at the 0.01 level and thus reject the null hypothesis of independence. This result indicates that there is a strong association between the period portfolio and income effect.

Based on the two sub-periods, the study will analyze EDRs in more detail. For example, the sample will be further divided by period and by instrument. Panel 3 of Table 4-3 summarizes the frequency of each cell by period and instrument. All cells except preferred stock during the late 1980's have a reasonable sample size to analyze in detail.

Based on Tables 4-2 and 4-3, the study chooses seven portfolios: (1) all sample; (2) by period (early 1980's vs. late 1980's); (3) by effect (EDR-Gain, EDR-Loss, and Zero-Gain); (4) by method (equity-for-debt swaps vs. all other methods); (5) by instrument for all periods; (6) by instrument during the early 1980's; and (7) by instrument during the late 1980's. In the empirical tests in Chapters 5 and 6, the study analyzes these seven portfolios.

Table 4-4 presents additional statistics describing other attributes of both EDRs and the firms which undertook them. The median face value of debt was $28.9 million and was retired by paying a median of $25.4 million (see Panel 1). The median coupon of the retired debt was 9.25% for the all sample, 8.40% for the early 1980's sub-sample, and 11.25% for the late 1980's sub-sample. The median duration (years to maturity) of the retired debt was 8 years. The median EDR gain was $0.270 million which represented a median of 2 percent of net income (including the gain) for the EDR year. When the sample is segregated by EDR-Gain and EDR-Loss, the median income effect of EDR was +9% for the EDR-Gain sub-sample and -9% for the EDR-Loss sub-sample. The median change in leverage was 13% for the all sample, 10% for the EDR-Gain sub-sample, 17% for the EDR-Loss sub-sample, and 18% for the Zero-Gain sub-sample.

Panels 2 and Panel 3 report the distribution of income effect and leverage effect, respectively. For the income effect, 74.6% of EDRs were distributed within the range of -20% to +20% of net income. For the leverage effect, 58.8% of a total 763 EDRs reduced the leverage by 10% or more. Of these 763 EDRs, 54% of redeemers undertook one EDR while 46% of redeemers conducted more than two EDRs (annual base) for the period of 1977-1988 (see Panel 4). Panel 5 presents the distribution of coupon by period. For the early 1980's sub-sample, 77.7% of EDRs retired debt with 10% coupons or less while 64.8% of EDRs redeemed debt with 10% coupons or higher. Although annual reports did not fully disclose the class of debt, retirement options, and the marketability of the retired debts, Panels 6, 7, 8, and 9 report additional distributions of EDRs for each category.

Table 4-5 presents the collected variables and Compustat variables which will be used for the empirical tests in Chapters 5 and 6.

4.2 Control Sample Design

For the analysis of motivations behind EDRs in Chapter 5, the firm characteristics of the redeemers should be compared with those of control sample (i.e., non-redeemers) which did not undertake EDRs during the search period.

Zmijewski [1984] and Palepu [1986] provide several insights concerning sampling and methodological issues related to the discrete prediction model which has dichotomous alternatives (i.e., bankruptcy/non-bankruptcy or takeover/non-takeover) as a dependent variable.[12] They have examined estimation biases which can result when the models are estimated on non-random samples.

Another choice for the control sample design is whether to match experimental observations with control observations using specified factors such as industry and size, or to incorporate those factors into a model as independent variables. In Dietrich's [1984b] discussion, he concludes that discussion participants reached no consensus on this issue. Another way to avoid a matching problem is to use the industry mean or industry median in which each firm was included. This approach was utilized by Elliott and Shaw [1988] for the study of motivations behind assets write-offs.

To integrate these methodological issues of the selection of the control sample, this study applies two different control sample designs. The first control alternative design is to use an all Compustat control sample. The second alternative design is to use the

12. Zmijewski [1984] provides a methodological critique of the bankruptcy prediction literature focusing specifically on three issues: 1) the effects of using non-random state-based samples for model estimation; 2) the choice between various statistical specifications of the bankruptcy probability model; 3) the problem of incomplete data availability for some members of the population. Palepu [1986] touches upon two other issues: 1) the bias introduced by the use of state-based samples in prediction tests; 2) the problems of using an arbitrary cutoff probability in prediction tests.

industry median in which each redeemer was a member of the industry in the redemption year.

4.2.1 All Compustat Control Sample

The study uses an all Compustat control sample rather than one-to-one matching control sample in order to avoid the bias introduced by disproportionate sampling. The other reasoning is that the sample is so widely distributed that industry clustering may not be a serious problem as shown in Table 4-2. To reduce the time period effects, the study introduced a matching procedure that provides a representative distribution across calendar years. That is, 3,788 available firms from both Compustat Annual Industrial Tape and Compustat Research Industrial Tape (released July 1989) after deleting redeemers, are randomly assigned to each redemption year according to the calendar year distribution of EDRs in Table 4-2. After eliminating candidates with no data for the assigned year, the final sample size of the all Compustat control sample is 2,801 firms for the time-series analysis and 2,091 firms for the cross-sectional analysis.

A detailed selection process of the control sample follows:

Selection Criteria	Annual (%)		Research (%)		Total
All available firms from Compustat	2467		1742		4219
Delete Redeemers from each tape	-352	(83.6)	-69	(16.4)	-421
Candidates to be assigned by EDR year	2115		1673		3788
Delete no data firms for all 8 years	-134		-853		-987
Control sample for time-series study	**1981**		**820**		**2801**
Delete no data firms in the EDR year	-225		-485		-710
Control sample for cross-section study	**1756**	**(84.0)**	**335**	**(16.0)**	**2091**
Distribution by period:					
Early 1980's	810	(38.8)	277	(13.2)	1087
Late 1980's	946	(45.2)	58	(2.8)	1004

4.2.2 Industry-Controlled Sample

Even if the redemption sample is so widespread to all industries that there is no industry clustering effect, there may be industry differences across industries. In order to control such differences across industries, the study also adopts an industry-controlled sample design similar to Elliott and Shaw [1989].

The study computes the industry median for the selected variables, for each redeemer and for each redemption year, based on four-digit industry (SIC) codes in which the redeemer was a member of the industry in the redemption year. Then the industry median-adjusted value for each tested variable is calculated by subtracting the appropriate industry median from the specific value for each redeemer. This value represents the deviation of redeemers from the industry average for each selected variable. Since the industry membership is changed over time (i.e., different versions of Compustat tapes), a redeemer may have different SIC codes depending on the redemption year. For the computation of industry median-adjusted value, the study uses the latest Compustat tape with the redemption year of each redeemer to control for the industry code. Seven different Compustat Annual Industrial Tapes (released in 1981, 1982, 1984, 1986, 1987, 1988, and 1989) available from the City University of New York are utilized in the current study to match redeemers' industry codes correctly.

Chapter 5

MOTIVATIONS BEHIND EDR

This chapter seeks to answer three economic questions: (1) What motivate firms to conduct EDRs? (2) Why did firms undertake EDR in a particular year (or quarter)? (3) Are there any differences in motivations of EDR in terms of different time horizons and different methods or instruments of EDR? To answer these questions, this study examines testable implications of each of five alternative explanations. These explanations are that (1) management used the gain (loss) from EDR to smooth an unexpected and transitory fall (rise) in the firm's reported earnings per share (EPS) (**income smoothing hypothesis**); (2) management used EDR to adjust the firm's leverage when the current leverage is closer to the upper boundary of financial leverage (**leverage adjusting hypothesis**); (3) management used EDR to relax the possibility of a covenant violation attached to the redeemed debt and/or other outstanding debt (**covenant relaxation hypothesis**); (4) management undertook EDR when the firm was inclined to be in a financially-distressed condition (**financial distress hypothesis**); and (5) EDR had been undertaken after the firm's debt-rating was downgraded by credit-rating agencies (**credit-rating change hypothesis**).

To check the internal validity of the test, this chapter is divided into two parts: the first part is a time-series analysis for the redeemers and the second part is a cross-sectional analysis between redeemers and non-redeemers. The above five hypotheses will be tested in both time-series and cross-sectional analyses with selected variables listed in Panel 3 of Table 4-5. Time-series analysis will be done (1) by applying a plotting approach by comparing time-series behavior of the selected variables between redeemers and control sample and (2) by statistical tests for the behavior of redeemers. For the cross-sectional analysis, the study examines the characteristics of redeemers (1) by comparing with the control sample (non-redeemers) by means of a two-sample mean difference test and a logit analysis and (2) by testing industry median-adjusted values for the selected variables.

5.1 Time-Series Analysis - Hypotheses

5.1.1 Income Smoothing Hypothesis

The EDR gain (loss) is the difference between the carrying value of the debt redeemed and the sum of the market value of the security issued (or assets exchanged) and the cash component if any. It was effectively a realization of a previously unrealized capital gain (loss) and it therefore was treated as a "paper" gain (loss) by prior research (Hand [1989]) and the financial press.[13] For example, in Forbes [August 30, 1982], Greene called EDR gains on debt-equity swaps "instant profits" resulting from "games companies play." According to Hand [1989], the swap gain was used by management to manipulate reported EPS. That is, management saw a debt-equity swap as providing them with the potential benefit of having incremental control over the level of EPS for the swap quarter (or year). Hand [1989] provides some empirical evidence of income smoothing for the debt-equity swaps which prevailed during 1981-1984.

13. This "paper" gain is evidenced by the actual debt agreement. For example, in a study by El-Gazzar and Pastena [1989] for the negotiated accounting rules in private debt agreements, 32 percent (7 out of 22) of the insurance lending agreements eliminate EDR gains or losses from the definition of income. (p. 12)

Hand [1989] defines smoothing as "managing earnings so as to obtain an EPS number in the current quarter such that the time-series variance of the change in EPS up to and including the current quarter is lower with the smoothing action than without it." From this definition of smoothing, he derives two testable predictions: (1) The time-series of firms' EPS should exhibit a transitory decrease in the swap quarter when the swap gain is excluded from the swap quarter's EPS; (2) The time-series variance of the change in a swapping firm's EPS in event-time centered on the swap quarter, should be lower when the swap gain is included in the swap quarter's EPS than when it is excluded.

By following these testable hypotheses, the opposite should be true. That is, the income smoothing hypothesis predicts that managements use a redemption <u>loss</u> to smooth downwardly an unexpected and transitory <u>increase</u> in the time-series of EPS. The gain or loss from early retirement of debt is determined by several factors.[14] The fundamental factors for the gain or loss, in a Fisherian economy, can be indications of how much the interest rate has risen (i.e., the difference between the coupon rate of the bond and the prevailing market interest rate at the time the debt was retired) and how old the debt was (i.e., time to maturity). After 1985, as the market rate of interest went down, it is not hard to imagine that managers, other things being equal, are more likely to report an EDR loss when they try to retire their outstanding debt which was issued at a relatively higher coupon rate prevailing during 1979-1985 compared to the recent

14. The determinants of gains or losses from EDR are a separate issue from this study. This study focuses on the motivations behind EDR by assuming that the gains or losses from EDRs are given.

market rate of interest.

The reason to include the income smoothing hypothesis in this study is simply to confirm whether the hypothesis proposed by Hand [1989] is a consistently valid one, regardless of the time-horizon and market conditions (specifically the bond market). The proposed income smoothing hypotheses are as follows:

H1. The time-series of firms' EPS should exhibit a transitory decrease (increase) in the EDR quarter when the EDR gain (loss) is excluded from the EDR quarter's EPS.

H2. The time-series variance of the change in EDR firms' EPS in event-time centered on the EDR quarter should be lower when the EDR gain or loss is included in the EDR quarter's EPS than when it is excluded.

One of the weaknesses of the income smoothing hypothesis, however, is to explain the case for the EDRs with no gains (or losses). How does this income smoothing hypothesis explain when managers report no gain or loss from EDR even though they retired a large amount of debt?

As an alternative explanation to the income smoothing hypothesis, this study proposes leverage adjusting and covenant relaxation hypotheses as major motivations behind EDRs. The reason is that the leverage effect of EDR is always greater than the income effect of EDR in terms of the absolute dollar amount because the book value of debt retired never be smaller than the resultant earning effect of EDR under a reasonable market rate of interest. In other words, the primary concern of redeemers is to make a refinancing decision which reduces their outstanding debt while earnings management through the EDR is a by-product of the financing decision.

5.1.2 Leverage Adjusting Hypothesis

The leverage adjusting hypothesis is developed by following the conceptual framework from the dynamic capital structure theory discussed in Section 3.2. Fischer, Heinkel, and Zechner [1989] (hereafter, FHZ) show that firms can recapitalize at any point in time and they determine the critical upper and lower financial leverage ratios at which transactions costs are incurred to rebalance the firm's financial structure. This means that firms dynamically adjust their capital structure within the critical upper boundary and lower boundary of capital structure. The critical upper boundary will be the financial leverage of the most restrictive debt indenture, among those covenants resulting from the issuance of the firm's outstanding debt, because the firm defaults if the observed leverage is above this boundary. FHZ also showed that the debt level changes will occur irregularly and will be "lumpy" rather than very small and continuous due to their assumed cost structure of recapitalization.

When managers seek a way to reduce their leverage for whatever reasons, there may be several alternatives. Given the same amount of resources (or some other voluntary accounting changes) being used to reduce leverage, among the alternatives, EDR is not only a direct and permanent way to reduce debt level,[15] and thus leverage, but also results in a significant reduction in leverage if a firm issues stocks (including preferred stock) in exchange for the outstanding debt. When EDR results in an accounting gain, the EDR gain also contributes to the reduction of leverage because the gain results in an increase in

15. The meaning of "permanent" is not a strict but comparative one. Leverage adjusting through accounting accrual (e.g., accounting change in the method of inventory valuation) may result in leverage reduction in one period, but not the next period.

retained earnings. Even if EDR results in an accounting loss, it still reduces leverage because the face (or carrying) value of the debt retired cannot be less than the EDR loss.[16]

Let leverage adjusting be defined as managing leverage through some kind of financing action in order to obtain a leverage ratio below the critical upper boundary of the leverage. However, because the upper boundary of leverage is unobservable, an alternative way to check the upper limit is to observe whether EDR was taken when the leverage was at a peak during a given period of time including the redemption year. Then the assumption that management used the EDR to adjust financial leverage when the current leverage is very close to (or maybe above) the critical upper boundary has the following testable predictions:

H3. The time-series of firms' leverage, for a given period of time, should exhibit a peak in the EDR year when the EDR effect on the leverage is excluded from the EDR year's leverage.

5.1.3 Covenant Relaxation Hypothesis

Restrictive debt covenants are part of a firm's set of optimal contracts. The covenants are designed to reduce agency costs by controlling conflicts of interest between debtholders and other parties of the firm. Smith and Warner [1979], among others, present this view as the "costly contracting hypothesis." Leftwich [1983] provides evidence that debt covenants are designed to reduce conflicts of interest between stockholders and bondholders. Debt covenants often

16. Debt-for-debt swaps may result in no changes in leverage except the portion of gains or losses from the exchanges. However, redeemers may choose debt-for-debt swaps if the current debt covenant attached to the debt to be redeemed may be violated near the future <u>and</u> they have no available cash flows to settle the debt.

use accounting numbers to specify the point at which activities considered detrimental to debtholders (e.g., the payment of dividends or the issue of new debt) are no longer permitted. Accounting numbers therefore form an integral part of the firm's debt contract, impacting the ability of the firm to control agency costs.

Begley [1990] examines the use of accounting and non-accounting based covenants in actual public debenture agreements in order to understand the factors that determine the choice of debt covenants through a sample of 124 non-convertible public debentures issued by industrial companies during 1975-1980. Her survey results showed that: (1) the public debt covenants used tend to be standardized; (2) covenants restrictions on the public debt (especially, restrictions on a firm's dividend policy and financing policy) are generally based on accounting numbers while covenants on investment policy are usually non-accounting based; (3) combinations of covenants are common. Her empirical findings showed that: (1) firms subject to greater agency problems are more likely to include a dividend restriction, a restriction on additional debt and to issue shorter debt; (2) the ratio of depreciation to firm value is used to proxy for when the underinvestment problem is less severe; (3) shorter term debt is more likely to include a dividend restriction.

Duke and Hunt [1990] test the validity of the most commonly used proxy, the debt/equity ratio, by examining its relation to actual debt covenant restrictions for a random sample of U.S. firms. Their results indicate that several versions of the debt/equity ratio capture the existence and tightness of three common debt covenant restrictions (retained earnings, working capital, and net tangible assets).

El-Gazzar and Pastena [1990] examine negotiated accounting rules in private debt agreements, by analyzing 74 randomly chosen private debt agreements. They find evidence of tailoring of GAAP in private lending agreements by establishing the solvency and legal perspectives ignored in GAAP. They also find the borrower's ratio of new debt to net tangible assets has some explanatory ability, like Duke and Hunt [1990].

From these recent works, one consistent conclusion is that the debt to equity ratio captures the existence and tightness of actual debt covenant restrictions in both public and private debt agreements. That is, the higher the debt to equity ratio, the more the firm is constrained by covenant restrictions.

By directly decreasing debt through EDR, managers can avoid some constraints attached to the debt, and thus they may have more flexibility in their future investment, financing, and dividend decisions. Therefore, managers are more likely to retire their outstanding debt when a firm has a higher debt to equity ratio than a normal debt to equity ratio.

H4. Managements used EDR to relax the tightness of debt covenant restrictions when they have a higher than a normal debt to equity ratio.

5.1.4 Financial Distress Hypothesis

This hypothesis is interrelated with the above three hypotheses. However, it is important because the firm may be in default if managements ignore the level of distress of the firm. If managements perceive the distress either by their own inside information or receive a signal from outside (e.g., bond down-grading from bond-rating agencies), they have two alternatives to take actions: one is preparation for default; the other is to revise their financing policy such as EDR. Thus, managements are more likely to undertake EDR when a firm is financially distressed than when it is healthy. Therefore, the testable hypothesis is as follows:

H5. Management undertook EDR when the firm was inclined to be in a financially-distressed condition.

5.1.5 Credit-Rating Change Hypothesis

Prior empirical studies showed that changes in the credit-rating by bond rating agencies affect both stock and bond prices. For example, an empirical study by Zaima and McCarthy [1988] showed that the stock and bond values decrease (increase) when bonds are downgraded (upgraded). McCarthy and Melicher [1988] examine the question of whether rating changes by bond rating agencies provide new information for the bond market or the bond market already has taken account of other financial news that preceded a rating change. The results showed that the average market adjustment occurred earlier for bonds with rating decreases than for bonds with rating increases. In a survey by Backer and Gosman [1985], interviewing treasurers or senior financial executives of 10 firms whose bonds have been downgraded by Standard's and Poor's from BBB to BB, the executives cited the most important factors causing the downgrading to be: (1) a decline in earnings, or operating losses; (2) a significant reduction in cash flow relative to debt; and (3) an increasingly levered balance sheet.

Other things being equal, management may take advantage of both cash flow and earnings when they retire their outstanding debt which has a lower credit-rating (especially, below the investment grade).

Based on prior empirical evidence and the market advantage for downgrading, the following testable hypothesis is suggested.

H6. EDR had been undertaken after the bond was downgraded by credit-rating agencies.

5.2 Time-Series Analysis - Empirical Results

5.2.1 Analysis of Time-Series Pattern

Before applying a statistical test to each hypothesis, this study uses a plotting approach to visualize redeemers' performance for selected variables over years. The procedure is: (1) to plot the time-series medians of year-to-year annual measures of earnings, leverage, and distress variables in event-time over a eight year period centered on the EDR year t = {-4, -3, -2, -1, 0 +1, +2, +3}; (2) to check whether there is any tendency (either transitory or persistent) to increase or decrease in each variable across the time horizon; and (3) to investigate why firms undertake EDRs in a particular year. The study examines four different measures of earnings variables (EPSc, EPSb, ROAc, and ROAb), three different measures of leverage variables (LTDSE, TDTA, and LTDMV), and two different measures of financial distress (ZSCORE and RATING) to check sensitivity of the variables. For the definition of the variables, Table 4-5 (Panel 3) presents the computation of the variables.

The medians of the selected variables (based on actual <u>annual</u> reported numbers) are plotted in Figures 5-1 through 5-7 for eight years from t-4 to t+3 centered on redemption year t=0. At each point in event-time the variables are sorted in order to obtain the median, hence the median of the variables at each point does not necessarily belong to the same firm across event-time. In the redemption year, earnings and leverage variables are computed two ways: one with EDR effects (i.e., actual reported number <u>after</u> redemption, joined by a straight line) and the other without EDR effects (i.e., "as-if" number <u>before</u> redemption assuming that EDR was not taken, denoted "x" in the figures and joined by a dotted line). To compare time-series patterns between redeemers and the control sample, the medians of the all Compustat control sample for the equivalent variables are also plotted in each figure (denoted "c" and joined by a dotted line). The sample size in the legend of each figure (denoted "N") represents the number of observations to compute a median for the redemption year. The original median values and sample size of the plot in the figures (as well as mean values, not plotted in the figures) for both redeemers and control sample are summarized in Tables 5-1 through 5-7 in Appendix B by portfolios. In order to access both the figures and tables easily, the numbering of each figure is matched with the numbering of panels in each table by using the same code.

5.2.1.1 Analysis of the All Sample

A. Earnings Performance Pattern

The annual EPSc (EPSb) are calculated based on net income before (after) discontinued and extraordinary items and the number of primary common shares outstanding for each year adjusted by any stock splits and stock dividends so as to be comparable to the redemption year.[17]

---

17. Since most of EDR gains or losses were classified as extraordinary items (79.2% in Table 4-2), EPSb and ROAb are correct measures for earnings variables when the "as-if" amount is computed. However, EPSc and ROAc are also included as earnings variables for a comparative purpose.

EPSc and EPSb: The median EPS of the control sample is stable over time within the range of \$1.05-1.10 for EPSc (see Figure 5-1.1) and \$1.05-1.15 for EPSb (see Figure 5-1.2). However, the median EPS of redeemers, starting from \$1.20 (EPSc) and \$1.30 (EPSb), is continuously declining over time until the redemption year (t=0) when it reaches \$0.85 (EPSc) and \$0.90 (EPSb), which is the lowest among eight years.[18] From t-1 to t+3, redeemers' median EPS is always below that of the control sample by \$0.15-0.20 (EPSc) and \$0.10-0.20 (EPSb).

ROAc and ROAb: The median ROA of the control sample shows a downward trend but is stable over time within the range of 0.04-0.05 for both ROAc (see Figure 5-1.3) and ROAb (see Figure 5-1.4). On the other hand, the redeemer's median ROA, starting from 0.035 for both ROAc and ROAb at t-4 year, shows a continuous declining trend over time until the redemption year when it reaches 0.018 (ROAc) and 0.020 (ROAb), which is the lowest among eight years. For all eight years, the redeemers' median ROA is always below that of the control sample. Especially from t-1 to t+3, the median ROA of redeemers is one half as large as the control sample's median.

B. Leverage Pattern

LTDSE, TDTA, and LTDMV: The median leverage ratios of the control sample are stable over time within the range of 0.34-0.36 for LTDSE (see Figure 5-1.5), 0.56-0.58 for TDTA (see Figure 5-1.6), and 0.24-0.32 for LTDMV (see Figure 5-1.7). Redeemers' leverage measures, starting from 0.74 (LTDSE), 0.62 (TDTA), and 0.82 (LTDMV) at t-4 year, are continuously increasing over time until the redemption year when it

18. As-if earnings variables (both EPS and ROA) are meaningless for the analysis of the all sample because some redeemers have redemption gains while other redeemers have redemption losses.

reaches 0.96 (LTDSE), 0.70 (TDTA), and 1.04 (LTDMV), which is the highest among eight years if they did not redeem their debt. For all eight years, the redeemers' median leverage measures (LTDSE and LTDMV) are always at least twice as high as the control sample. For all three leverage measures, if redeemers did not take EDR at t=0, the median leverage measures would have been the peak point among eight years.

C. Financial Distress Pattern

ZSCORE: The median ZSCORE of the control sample shows a downward trend but is stable over time within the range of 3.25-3.50 (see Figure 5-1.8). However, redeemers' median ZSCORE, starting from 2.55 at t-4 year, is continuously declining over time until it reaches 2.2 at t=0, which is the lowest among eight years. For all eight years, redeemers' median ZSCORE is always below that of the control sample as well as the distress cut-off point of 2.675. From t+1, the median ZSCORE of redeemers is slightly improved but still remains under the cut-off line.

RATING: The median RATING of the control sample is one grade lower at t=0 but is stable over time within the rating of A- to A (see Figure 5-1.9). On the other hand, the redeemers' RATING, starting from A- at t-4 year, is continuously declining over time until it reaches BB+ rating at t=0, which is the lowest rating among eight years. For all eight years except t-4, the redeemers' median RATING is always one or two grades below the investment grade of BBB+ and well below the RATING of the control sample.

In summary, the time-series behavior of redeemers for all nine measures are, on average, worse than those of all Compustat control sample. More importantly, even though there is no market or economy wide phenomenon from the plot of all Compustat control sample, for the redeemers, the earnings performance of all four measures are the lowest and the leverage levels of all three measures are the highest at t-1 and t=0 among eight years. Especially at t=0, the median leverage level would have been at a peak point had the redemption not been conducted. The distress variables (both ZSCORE and RATING) for the redeemers are not only far below than those of control sample and the cut-off lines, but also are the lowest in the redemption year among all eight years.

5.2.1.2 Analysis by Period: Early 1980's versus Late 1980's

It should be noted that, for the late 1980's sub-sample, time-series data for t+2 and t+3 are not fully available, and the plots for t+2 and t+3 are not directly comparable to prior years' plots due to small sample size. For example, an EDR occurring in 1987 does not have financial data for t+2 (1989) and t+3 (1990) from Compustat tapes released June 1989. For this reason, in the time-series plot in t+2 and t+3 for the late 1980's sub-sample, the sample size is reduced by more than half for t+2 ("bracketed" the plot in the figures) and only 10% or less of the sample remain for t+3 ("parenthesized" the plot in the figures).

A. Earnings Performance Pattern

<u>EPSc</u> (Figure 5-2.1): **All Compustat Control Samples:** For both the early 1980's (denoted "e") and the late 1980's (denoted "a"), the median EPSc is stable over time within the range of $1.00-1.15 for both control samples. Thus, the segregation of all Compustat control sample by period does not lend much differences.

Early Redeemers (denoted "*"): Starting from $1.60 at t-4 year, the median is continuously declining over time until it reaches $0.70

("as-if" base) at t=0, which is the lowest among eight years. Although, from t-4 to t-2, early redeemers' median EPSc was higher than that of the control sample, from t-1 to t+3, it is always below the control sample by $0.20-0.35.

Late Redeemers (denoted "+"): The median starts from $0.85 at t-4 year, remains at the same level until t=-1 with little fluctuation. But from t=0, the median EPSc is steadily increasing and, especially from t+1, it outperforms the control sample for the same period.

EPSb (Figure 5-2.2): The plot of EPSb shows results similar to that of EPSc (in Figure 5-2.1) for both the control sample vs. redeemers as well as early 1980's vs. late 1980's.

ROAc (Figure 5-2.3): **All Compustat Control Samples:** For both the early 1980's and late 1980's, the median ROAc shows a declining trend but is stable over time within the range of 0.042-0.052 for early 1980's and 0.038-0.048 for late 1980's.

Early Redeemers: The median starts from 0.035 at t-4 year, is continuously declining over time until at t=0, which is the lowest among eight years ("as-if" base). From t+1, it increases but remains under 0.025. For all eight years, early redeemers' median ROAc is always below the control sample by 0.015-0.030.

Late Redeemers: The pattern is similar to that of early redeemers until t=0, but it shows an upward turn from t+1 but is still below that of the control sample for the same period.

ROAb (Figure 5-2.4): The plot of ROAb shows a similar time-series pattern to that of ROAc (in Figure 5-2.3) for both the control sample vs. redeemers as well as early 1980's vs. late 1980's.

B. Leverage Pattern

__LTDSE__ (Figure 5-2.5): **All Compustat Control Samples:** For the early 1980's, the median LTDSE shows a stable trend over time within the range of 0.32-0.36 while, for the late 1980's, it shows an increasing trend but remains within a stable range of 0.32-0.44.

Early Redeemers: The median LTDSE starts from 0.76 at t-4 year, is continuously increasing over time until it reaches 0.88 at t=-2, the peak among eight years. For both t=-1 and t=0, the median LTDSE is at the second highest level, but is reduced by 0.12 by taking EDR. For all eight years, the redeemers' leverage is always twice as high as the control sample for the same period.

Late Redeemers: The median starts from 0.70 but sharply increases until t=0 ($LTDSE_{if}$=1.08), which is the highest among eight years. From t=0, it is also sharply declining over time but is still twice as high as the control sample for the same period.

__TDTA__ (Figure 5-2.6): **All Compustat Control Samples:** For both early 1980's and late 1980's, the median TDTA is stable over time within a range of 0.54-0.58.

Redeemers: For both early redeemers and late redeemers, the median, starting from 0.62 at t-4 year, is continuously increasing over time until it reaches 0.68 (early 1980's) and 0.74 (late 1980's) 0.88 at t=0, which is the peak among eight years. The level of the median TDTA for redeemers is always higher than the control sample by 0.10 for both periods.

__LTDMV__ (Figure 5-2.7): **All Compustat Control Samples:** Although early 1980's shows a downward trend over time while late 1980's shows an upward trend, the median LTDMV is stable over time within the range of 0.24-0.40.

Early Redeemers: Starting from 1.08 at t-4 year, the median reaches 1.16 at t=0 ("as-if" base), the peak among eight years, but the median is reduced by 0.14 by taking EDR at the end of t=0. However, the level of median LTDMV is still twice as high as the control sample for the same period.

Late Redeemers: The median starts from 0.62 but is sharply increasing until t=0 (0.94), which is the highest among eight years. From t=0, it is also sharply declining over time but still twice as high as the control sample for the same period.

C. Financial Distress Pattern

<u>ZSCORE</u> (Figure 5-2.8): **All Compustat Control Samples:** The pattern is stable over time within the range of 3.35-3.75 for the early 1980's while, for the late 1980's, it shows a declining trend but remains above 2.90.

Early Redeemers: Starting from 2.60 at t-4 year, the median is continuously declining over time until it reaches 2.30 at t=0 and remains the same level until t+3.

Late Redeemers: The median starts from 2.40 at t-4 year, is continuously declining over time t=0, which is the lowest level among eight years. But from t=1 the median ZSCORE is improved.

For both early redeemers and late redeemers, the median ZSCORE is far below both cut-off point of 2.675 and the medians of the control samples.

<u>RATING</u> (Figure 5-2.9): **All Compustat Control Samples:** For both early 1980's and late 1980's, the median RATING is stable over time within the range of A to A-.

Early Redeemers: Starting from A at t-4 year, the median is continuously declining over time until t+3 with the grade of BB+. At t=0, the median grade is BBB.

Late Redeemers: Starting from BBB at t-4 year, the median rating is continuously declining over time until t=0 with the grade of BB, which is the lowest level among eight years. But from t=1 the median RATING is improved.

For both early redeemers and late redeemers, RATING is still below the investment grade of BBB+.

5.2.1.3 Analysis by Effect: EDR-Gain, EDR-Loss, and Zero-Gain

A. Earnings Performance Pattern

<u>EPSc</u> (Figure 5-3.1): **Redeemers with Zero-Gain** (denoted "="): The median EPSc fluctuates a little but shows a stable pattern within the range of $1.20-1.70, which is the highest level among the three groups. It is also higher than the control sample.

Redeemers with EDR-Gain (denoted "*"): Starting from $1.35 at t-4 year, the median is continuously declining over time until the redemption year when it reaches $0.40, which is the lowest among eight years. After t+1 redeemers' median EPSc for EDR-Gain shows an increasing trend but still remains below the control sample.

Redeemers with EDR-Loss (denoted "+"): Starting from $1.00 at t-4 year, EPSc remains at the same level until t=-1 with little fluctuation. But at t=0 the median EPSc reaches the highest point among eight years. From t=0, the redeemer's EPSc become similar to that of the control sample.

<u>EPSb</u> (Figure 5-3.2): The time-series plot of EPSb shows a similar pattern to that of EPSc (in Figure 5-3.1) for all three groups.

ROAc (Figure 5-3.3): **Redeemers with Zero-Gain:** The median ROAc is stable over time within the range of 0.035-0.045.

Redeemers with EDR-Gain: Starting from 0.035 at t-4 year, ROAc is continuously declining over time until it reaches 0.006 at t=0, which is the lowest among eight years. From t+1, it is improved but remains under 0.025. The median ROAc for EDR-Gain is always below that of the two other groups.

Redeemers with EDR-Loss: The pattern is similar to that of EDR-Gain until t=-1, but it shows an increase from t=0. At t=0, the median ROAc is the highest point among eight years.

Although the median ROAc for the redeemers with Zero-Gain has a level similar to the ROAc for the control sample, the medians of ROAc for all three groups are always below that of the control sample.

ROAb (Figure 5-3.4): The plot of ROAb shows a similar time-series pattern to that of ROAc (in Figure 5-3.3) for all three groups.

B. Leverage Pattern

LTDSE (Figure 5-3.5): **Redeemers with Zero-Gain:** The median LTDSE starts from 0.82 and is continuously declining from t-2.

Redeemers with EDR-Gain: Starting from 0.72 at t-4 year, the median is continuously increasing over time until it reaches 0.82 at t=0, the peak among eight years. From t=0 it shows a declining trend.

Redeemers with EDR-Loss: Starting from 0.78 but sharply increasing until t=0 (1.24), which is the highest among eight years, LTDSE, from t=0, is also sharply declining over time but still higher than that of the two other groups.

TDTA (Figure 5-3.6): **Redeemers with Zero-Gain:** The median is stable over time within the range of 0.60-0.66.

Redeemers with EDR-Gain and EDR-Loss: For both redeemers with EDR-Gain and with EDR-Loss, starting from 0.60 and 0.64, respectively, at t-4 year, the median is continuously increasing over time until it reaches 0.66 (EDR-Gain) and 0.72 (EDR-Loss) at t=0, which is the peak among eight years for both groups.

<u>LTDMV</u> (Figure 5-3.7): **All Three Groups:** The plot shows similar time-series patterns to those of LTDSE (in Figure 5-3.5). But the level of LTDMV for redeemers with an EDR loss is much lower than that of the other two groups, which is opposite to the result of the LTDSE variable.

C. Financial Distress Pattern

<u>ZSCORE</u> (Figure 5-3.8): **Redeemers with Zero-Gain:** The median ZSCORE starts from a lower level than the other two groups, but continuously improves from t-1.

Redeemers with EDR-Gain and EDR-Loss: Starting from 2.60 and 2.55, respectively, at t-4 year, the median is continuously declining over time until it reaches 2.10 (EDR Gain) and 2.15 (EDR Loss) at t=0, which is the lowest ZSCORE for both groups. After t+1, the ZSCORE is improving but still remains below the cut-off point of 2.675.

<u>RATING</u> (Figure 5-3.9): **Redeemers with Zero-Gain:** The median RATING shows better ratings than the other two groups but the rating is continuously down-graded over time until t+2.

Redeemers with EDR-Gain and EDR-Loss: RATING shows a similar trend between the two groups, indicating that the rating is continuously declining over time until t=0 with the grade of BB+, which is the lowest grade level for both group.

For all three groups, from t-1 the median grade becomes lower than the investment grade of BBB+.

5.2.1.4 Analysis by Method: Equity-for-Debt Swaps vs. All Other Methods

A. Earnings Performance Pattern

EPSc and EPSb (Figures 5-4.1 and 5-4.2): The median EPS for equity-for-debt swaps (denoted "+") declines sharply until the swap year in which annual EPS would have been the lowest among five years up to t=0 had the swap not been conducted, but for all eight years it is always far above that of the control sample while the median EPS for all other methods (denoted "*") is always below that of control sample. This result indicates that equity-for-debt swap firms are, on average, quite a different subsample compared to firms which used other methods in terms of EPS level.

ROAc and ROAb (Figures 5-4.3 and 5-4.4): The median ROA for equity-for-debt swaps declines sharply until the swap year in which annual ROA would have been the lowest among five years up to t=0 had the swap not been conducted, and for all eight years it is always below that of control sample but above that of all other EDR methods. This result indicates that equity-for-debt swap firms outperform firms which used other EDR methods in terms of ROA level.

B. Leverage Pattern

LTDSE, TDTA, and LTDMV (Figures 5-4.5 through 5-4.7): The median leverage for both portfolios increases continuously until the redemption year in which the leverage measures would have been the highest had EDRs not been conducted, and for all eight years the leverage of both portfolios is always far above that of the control sample. Between redeemers, the leverage for all-other portfolio is much higher than that for equity-for-debt swaps portfolio.

C. **Financial Distress Pattern**

ZSCORE (Figure 5-4.8): The median ZSCORE for equity-for-debt swaps declines sharply until the swap year in which the ZSCORE is the lowest among five years up to t=0. The pattern is similar for the all-other methods portfolio but the distress level of all-other methods is more serious than the equity-for-debt swap portfolio. ZSCORE for both portfolios are always far below that of the control sample for all eight years.

RATING (Figure 5-4.9): The median RATING for equity-for-debt swaps declined from A to A- until the redemption year showing a similar level and trend to the control sample while, for the all-other methods portfolio, the rating change is more dramatically downgraded than the equity-for-debt swap portfolio.

In summary, for all measures, the equity-for-debt swap firms, on average, outperform redeemers which used other EDR methods, but both portfolios show that the time-series behavior for the selected variables are, in general, worse than the control sample with the exception of the EPS variables for equity-for-debt swaps.

5.2.1.5 Analysis by Instrument

A. **Earnings Performance Pattern**

EPSc and EPSb (Figures 5-5.1 and 5-5.2): The median EPS for common stock (denoted "=") and asset (denoted "+") portfolios are always above that of the control sample while the medians for debt (denoted "*") and preferred stock (denoted "#") portfolios are far below the median of the control sample. For all portfolios except preferred stock, annual EPS would have been the lowest had the redemption not been conducted.

Among portfolios, earnings (EPS) performance for preferred stock and debt portfolios are the poorest. Especially, the median EPS for debt portfolio is negative at t=0.

<u>ROAc and ROAb</u> (Figures 5-5.3 and 5-5.4): The median ROA for all portfolios declines until the redemption year in which annual ROA would have been the lowest among five years up to t=0 had the redemption not been conducted with the exception of the asset portfolio, and for all eight years the median is always below that of the control sample regardless of portfolio. Among portfolios, the median ROA for common stock and asset portfolios outperform the others while the earnings (ROA) performance for preferred stock and debt portfolios are the lowest. Especially, the median ROA for debt portfolio is negative at t=0.

B. Leverage Pattern

<u>LTDSE, TDTA, and LTDMV</u> (Figures 5-5.5 through 5-5.7): The median leverage measures for all portfolios increase continuously until the redemption year in which the leverage measures would have been the highest had EDRs not been conducted. For all eight years the leverage of all portfolios is always far above that of the control sample. Among portfolios, the median leverage for common stock and asset portfolios is the lowest while leverage for preferred stock and debt portfolios are is the highest.

C. Financial Distress Pattern

<u>ZSCORE</u> (Figure 5-5.8): The median ZSCORE for all portfolios declines continuously until the redemption year in which the ZSCORE is, in general, the lowest among the five years up to t=0. ZSCOREs for all portfolios are always far below that of the control sample. The

distress levels for common stock and cash portfolios are less serious than the others while the distress levels for preferred stock and debt portfolios are is the most serious.

RATING (Figure 5-5.9): The median RATINGs for all portfolios except the asset portfolio decline continuously until the redemption year. RATINGs for all portfolios are always far below that of the control sample. The rating levels for common stock and asset portfolios are better than the others while ratings for preferred stock and debt portfolios are the worst.

In summary, for all measures and for all portfolios, the time-series behavior for all selected variables are, in general, worse than the control sample with the exception of EPS variables for common stock and asset portfolios. Among portfolios, common stock and asset portfolios perform better than the others while preferred stock and debt portfolios have the lowest performance. These results indicate that, the poorer the earnings, the higher the leverage, and the deeper the distress level, redeemers are more likely to use fixed-claim securities such as a new debt or preferred stock. On the other hand, the redeemers who use common stock (mostly equity-for-debt swaps) or asset (mostly in-substance defeasance) as a primary instrument to retire debt, are have better firm performance than the other portfolios, but are still worse than the control sample for all measures except EPS.

5.2.1.6 Analysis by Instrument - Early 1980's

A. Earnings Performance Pattern (Figures 5-6.1 through 5-6.4)

Time-series plots of earnings performance (EPSc, EPSb, ROAc, and ROAb) by five different instruments for the early 1980's sub-sample show patterns similar to those of the instrument portfolio for the all sample discussed in Section 5.2.1.5.

B. Leverage Pattern (Figures 5-6.5 through 5-6.7)

Time-series plots of financial leverage measures (LTDSE, TDTA, and LTDMV) by five different instruments for the early 1980's sub-sample show patterns similar to those of the instrument portfolio for the all sample discussed in Section 5.2.1.5.

C. Financial Distress Pattern (Figures 5-6.8 through 5-6.9)

Time-series plots of distress measures (ZSCORE and RATING) by five different instruments for the early 1980's sub-sample also show patterns similar to those of the instrument portfolio for the all sample discussed in Section 5.2.1.5.

Among portfolios, common stock and asset portfolios perform better than the others while preferred stock and debt portfolios have the lowest performance.

5.2.1.7 Analysis by Instrument - Late 1980's

Because the sub-sample in this section is identical to the late redeemers in Section 5.2.1.2, the time-series data for t+2 and t+3 are not fully available, and the plots for t+2 and t+3 for each instrument are not directly comparable to prior years' plots due to small sample size.

A. Earnings Performance Pattern (Figures 5-7.1 through 5-7.4)

Time-series plots of earnings performance (EPSc, EPSb, ROAc, and ROAb) by five different instruments for the early 1980's sub-sample show patterns similar to those of the instrument portfolio for the all sample discussed in Section 5.2.1.5. The only difference is found for the common stock portfolio which shows poorer earnings performance than the others.

B. Leverage Pattern (Figures 5-7.5 through 5-7.7)

Time-series plots of financial leverage measures (LTDSE, TDTA, and LTDMV) by five different instruments for the early 1980's sub-sample show patterns similar to those of the instrument portfolio for the all sample discussed in Section 5.2.1.5.

C. Financial Distress Pattern (Figures 5-7.8 through 5-7.9)

Time-series plots of distress measures (ZSCORE and RATING) by five different instruments for the early 1980's sub-sample also show patterns similar to those of the instrument portfolio for the all sample discussed in Section 5.2.1.5. The only difference is found for the common stock portfolio which shows the lowest credit rating.

Among portfolios, asset and cash portfolios perform better than the others while common stock and debt portfolios have the lowest performance.

Although the median levels for all nine variables are slightly different between the early 1980's sub-sample and the late 1980's sub-sample, the time-series patterns are similar for both sub-samples across all five instruments. The only difference is found for the common stock portfolio which shows poorer earnings performance and lower credit rating in the late 1980's than in the early 1980's.

5.2.2 Test for Income Smoothing Hypothesis

For the test of income smoothing hypothesis, quarterly EPSs are used in addition to annual EPSs. There are two stylized empirical findings from the accounting literature. First, quarterly EPSs are reasonably described as following a seasonal random walk (Foster [1977]), and second, the finance press focuses on its attention on changes in year-to-year quarterly EPS rather than quarter-to-quarter quarterly EPS.

To test H1, by following Hand's [1989] methodology, this study uses a plotting approach. The procedure is: (1) to plot the time-series median of year-to-year quarterly EPS in event-time over a eight year period centered on the EDR quarter; (2) to check whether there is any transitory decrease (increase) in EPS in the EDR quarter for the EDR-Gain sub-sample (EDR-Loss sub-sample).

Figures 5-8.1 and 5-8.2 plot the time-series median of quarterly EPSc and EPSb, respectively, in event-time over a 14-quarter period centered on the redemption quarter (denoted "0") for both EDR-Gain sub-sample and EDR-Loss sub-sample. The original median values and sample size of the plot in the figures (as well as mean, first quartile, and third quartile values, not plotted in the figure) are summarized in Table 5-8 in Appendix C by portfolios. The sample size with a quarterly base is 1,033 firm-quarters in total. The number of firm-quarters across fiscal quarters [1st, 2nd, 3rd, 4th] when EDR gains or losses were reported, were [160, 240, 217, 321] firm-quarters, respectively, and 75 EDRs with quarters unidentified. Although 31.1% of redemption gains or losses were reported in the 4th quarter, there is no significant clustering effect.

The quarterly EPSc (EPSb) are calculated based on net income before (after) discontinued operations and extraordinary items and the number of primary common shares outstanding for each quarter adjusted by any stock splits and stock dividends so as to be comparable to the redemption quarter. At each point in event-time EPSc (EPSb) is separately sorted in order to obtain the median, hence the median EPSc (EPSb) at each point does not necessarily belong to the same firm across event-time. The median EPSc (EPSb) for event-quarters {-16, -12, -8, -4, 0, +4, +8, +12} are joined by straight lines in the figures. The median quarterly EPSc (EPSb) excluding earning effect of EDR (marked by "x") is joined by dotted lines. From Figure 5-8.1, for redeemers with EDR-Gain (denoted "+"), quarterly EPSc in the redemption quarter when the gain is excluded are the lowest in the entire eight year-to-year quarterly EPSc. When the redemption gain is included, EPSc in the redemption quarter is much closer to EPSc four quarters prior (and also four quarters subsequent).

For redeemers with redemption losses (denoted "*"), the results are symmetric to firms with redemption gains, indicating that quarterly EPSc in the redemption quarter by excluding the loss is the highest in the entire eight year-to-year quarterly EPSc whereas, by including the redemption loss, EPSc in the redemption quarter is much closer to EPSc four quarters prior (and also four quarters subsequent). The same plotting analysis is applied to the variable EPSb in Figure 5-8.2. Although the size of the smoothing under EPSb is, on average, smaller than that under EPSc, the smoothing behaviors are still observed for both EDR-Gain and EDR-Loss sub-samples from the figure.

The evidence in Figures 5-8.1 and 5-8.2 is thus consistent with the proposition that: (1) firms used the redemption gain and loss to smooth the time-series of year-to-year quarterly EPSc and EPSb and (2) the time-series of year-to-year quarterly EPSc and EPSb would have transitorily decreased (increased) in the redemption quarter had EDR with gain (loss) not been conducted.

In order to confirm the large gap for the annual earnings performance between equity-for-debt swaps and all other methods (see Figures 5-4.1 and 5-4.2), the above quarterly EPS plotting is again applied to EDR methods. Figures 5-8.3 (EPSc) and 5-8.4 (EPSb) are the results of the plotting by the two EDR methods. The median EPSc (EPSb) of equity-for-debt swaps (denoted "+") is twice as high as that of all other methods (denoted "*"), showing a similar gap between the two in annual earnings performance. By comparing Hand's [1989] result for equity-for-debt swaps (denoted "#"), the same smoothing behavior is observed in equity-for-debt swaps for the current study (denoted "+"), although the result of the current study shows much lower level of median EPSc (EPSb) for all 14 quarters compared to Hand [1989]. The distance may be due to sample size difference and/or different adjusting factors used to compute EPS.

Although the plotting approach is a convenient way to visualize earnings performance for an average redeemer at each point in time, it is not a direct statistical test for income smoothing hypothesis. Hence, the plotting approach may have a lower power. The study adopts a variance change test utilized by Hand [1989] in order to confirm the prior evidence of income smoothing hypothesis of H2.

To test H2, first, for each EDR the time-series variance of the change in year-to-year quarterly EPSc (EPSb) over event time q={-16,-12

-8, -4, 0, +4, +8, +12) is calculated, both including and excluding the redemption gain (loss). The percentage of observations (Pe) is calculated for which the variance including redemption gain (or loss) is lower than the variance excluding it. Assuming that EDRs are taken randomly without considering income smoothing, the random chance (P) for the percentage wil' be 50 percent. This scenario follows a binomial distribution with P=0.50. Thus the study applies a normal approximation (Z-statistics) to the binomial distribution with mean of NP and variance of P(1-P)/N, where N is sample size (of redeemers) and P is the prior probability (0.50) of the random chance for which the variance including redemption gain (loss) is lower than the variance excluding it. When Pe is significantly greater than P, the smoothing hypothesis is supported.

One of the weaknesses of the income smoothing hypothesis is to test the case for Zero-Gain portfolio. Since the observations of Zero-Gain may distort the proportion of Pe, the study excluded all Zero-Gain observations.

Table 5-9 reports the results of the Z-test. From Panel 1 (EPSc) the significant Z-values are found only for EDR-Loss (56.2%), equity-for-debt swaps (60.9%), debt (61.5%) and common stock (59.0%) for the all sample, and debt (64.0%) and common stock (61.4%) for the early 1980's sub-sample. For the all sample and the other 14 sub-samples, no significant variance reducing behaviors are found. Thus, the test results support the income smoothing hypothesis of H2 to only certain types of EDR. For the variable of EPSb (Panel 2), significant results are found for the all sample and nine sub-samples, but the sign is opposite to the prediction. The results for the variable EPSb show a counter-smoothing behaviors.

In summary, the income smoothing hypothesis for the location (H1) seems to be supported by the plotting approach. However, due to the lack of power in the plotting approach, the results may not be conclusive. From the statistical test for the variance change, the income smoothing hypothesis for the variation (H2) is only supported to the specific cases when EPSc was used as a tested variable while the test results by using the variable EPSb shows a counter-smoothing behavior for the all sample and most of the sub-samples, which is opposite to hypothesis H2.

In conclusion, given that the variable EPSb is a correct measure because 79.2% of EDR gains and losses were classified as extraordinary items in the current study, results are not consistent with the quarterly income smoothing hypothesis. Even if an alternative variable EPSc was used, the smoothing hypothesis is supported for only certain types of EDRs.

5.2.3 Test for Leverage Adjusting and Covenant Relaxation Hypotheses

In order to test whether redeemers engaged in EDR to adjust their leverage or relax their covenant limit, the study focuses on the location of leverage across the time horizon rather than the variation of the leverage for a given period. Assuming that EDRs were taken randomly across time, the prior probability of redemption is uniformly distributed across the time horizon. For example, in a given period of time (say, five years), the random chance for EDRs to be taken when the leverage was at a peak will be one out of five (e.g., 0.20=1/5). To test whether EDRs were taken when redeemers' financial leverage was at a peak, the study computed the actual proportion of EDR observations, in which leverage at t=0 ("as-if" base) is the highest among past five years' leverages including t=0.[19] Then the actual proportion of the "as-if" leverage at t=0 being the highest among the past five years is compared to the prior probability of random chance. This scenario follows a binomial distribution with P=0.20. Thus the study applies a normal approximation (Z-statistics) to the binomial distribution with mean of NP and variance of P(1-P)/N, where N is sample size (of redeemers) and P is the prior probability of random EDRs for a given period (0.20 for five years).

The Z-test results are summarized in Table 5-10 for two different measures of leverage: LTDSE (Panel 1) and TDTA (Panel 2). In order to compute the maximum value of leverage across five years and check whether the maximum occurred at t=0, the study excludes redeemers which did not have full data from t-4 to t=0 year for each leverage variable and excludes redeemers with negative LTDSEs as well. The sample, however, includes redeemers which have more than two redemptions within the five-year period even if this inclusion may lower the actual proportion of the peak leverage at t=0 (Pe).

For the all sample of LTDSE (Panel 1), 38.6 percent of EDR observations show that the "as-if" LTDSE at t=0 was the highest point among five years' LTDSEs, which is significant at the 0.01 level. By partitioning the sample by portfolios, the results remain the same in terms of significance level for all portfolios. By portfolios, stronger results (higher Pe) are found for the following sub-samples:

19. Since not all EDRs have full eight years' data, this may distort the prior probability, and the sample size may be too small to test each portfolio. Thus, the next three years after the redemption year are not included.

late 1980's (43.7%); EDR-Loss (40.9%); all other methods (39.7%); preferred stock (60%), asset (51.9%), and debt (43.8%) as a primary instrument for the all sample; preferred stock (57.1%) and debt (46.9%) by instrument for early 1980's sub-sample; and asset (75%) and common stock (54.5%) by instrument for late 1980's sub-sample. Interestingly, the portfolios with strong results tend to have higher median LTDSE levels compared to their counterpart portfolios in Figures 5-1 through 5-7. When the Z-test was repeated for the leverage variable of TDTA (Panel 2), the results are almost identical to the results of LTDSE in terms of proportion and significance level.

The empirical test results indicate that firms tend to directly reduce their debt by taking early retirement of debt when their leverage was at a peak for a given period of time (for five years) as if they have an upper boundary of leverage. This result is consistent with leverage adjusting (H3) and covenant relaxation (H4) hypotheses proposed in Sections 5.1.2 and 5.1.3.

5.2.4 Test for Financial Distress Hypothesis

The same methodology is applied to a financial distress variable (ZSCORE). The logic is the same as for the leverage variable, but the following differences should be mentioned for the test of the distress variable: (1) the minimum ZSCORE was considered rather than the maximum; and (2) actual ZSCORE rather than "as-if" ZSCORE was used at t=0.

Table 5-11 reports the test results. For the all sample, 33.4 percent of EDR observations show that the ZSCORE at t=0 was the lowest point among five years' ZSCOREs, which is significant at the 0.01

level. By partitioning the sample by portfolios, the results remain the same in terms of significance level for all portfolios, with the exception of portfolios such as: Zero-Gain; cash and asset portfolios in the early 1980's sub-sample; and common stock during late 1980's sub-sample. By portfolios, stronger results in terms of Pe are found for sub-samples such as: late 1980's (34.7%); EDR-Gain (34.6%) and EDR-Loss (33.1%); equity-for-debt swaps (39.4%); preferred stock (50%), and debt (46.8%) as a primary instrument for the all sample; preferred stock (50.0%) and debt (48.4%) by instrument for the early 1980's sub-sample; and asset (50%) and debt (43.8%) by instrument for the late 1980's sub-sample. The portfolios with strong results for ZSCORE also tend to have lower median ZSCORE levels when compared to their counterpart portfolios in Figures 5-1 through 5-7.

This result indicates that firms tend to reduce their debt by taking early retirement of debt when the financial distress (measured by ZSCORE) is lowest for a given period of time (for five years). This result was consistent with the financial distress hypothesis (H5) proposed in Section 5.1.4.

5.2.5 Test for Credit-Rating Change Hypothesis

The same methodology is applied to a credit-rating variable (RATING). The logic is exactly the same as for the distress variable. Table 5-12 reports the test results. Because credit-ratings are not frequently changed over time, the test was done two ways: (1) including the observations with no changes in rating for five years (Panel 1); and (2) excluding the observations with no changes in rating (Panel 2). For the all sample in Panel 1, 80.6 percent of EDR observations show that the RATING at t=0 was the lowest point among five years' RATINGs, which is significant at the 0.01 level. By partitioning the sample by portfolios, the results remain the same in terms of significance level, with the exception of portfolios such as: asset portfolios in the early 1980's sub-sample; and common stock in the late 1980's sub-sample. By portfolios, stronger results in terms of Pe are found for sub-samples such as: early 1980's (88.3%); EDR-Gain (87%) and Zero-Gain (76.9%); equity-for-debt swaps (88.2%); preferred stock (100%) and debt (95%) as a primary instrument for all sample; preferred stock (100%) and debt (100%) by instrument for the early 1980's sub-sample; and asset (100%) and debt (91.7%) by instrument for the late 1980's sub-sample. The portfolios with strong results for RATING also tend to have a lower median RATING level compared to their counterpart portfolios in Figures 5-1 through 5-7.

Panel 2 shows more restricted test results than Panel 1 because the observations with no changes in credit-rating were not counted for the minimum. Even with this restriction the results remain the same in terms of significance level. In general, more than 45 percent (at least) of the redeemers took early retirement of debt when their debt-rating is lowest compared to five years' RATINGs, regardless of the partitioning of the sample. The proportion is also significant at the 0.01 level with the exception of portfolios such as: asset portfolios in the early 1980's sub-sample; and common stock in the late 1980's sub-sample.

These results indicate that firms tend to reduce their debt by taking early retirement of debt when their credit-rating was lowest for a given period of time (for five years). This result is consistent with the credit-rating change hypothesis (H6) proposed in Section 5.1.5.

5.3 Cross-Sectional Analysis

This section will focus on the cross-sectional analysis by comparing firm characteristics between EDR firms (experimental sample) and non-EDR firms (control sample), while Sections 5.1 and 5.2 focuses on the time-series characteristics of EDR firms. As mentioned in Section 4.2, the two different control samples are utilized for the cross-sectional analysis: one is the all Compustat control sample and the other is the industry-controlled sample. This section also compares the differences in motivation between portfolios.

5.3.1 Development of Testable Hypotheses

It is logical to posit the financial effects of the EDR decision as one surrogate for managerial motivations in completing those early retirements of debt. The selection of EDR results in two broad financial effects: (1) increasing (or decreasing) accounting earnings on the income statement, and (2) improving the profile of financial leverage and debt covenant attributes on the balance sheet. These two motivations have been emphasized in previous studies. For example, Abdel-khalik and Jung [1985] set a hypothesis for the former as the "sugarcoating income hypothesis" while they set a "hypothesis about window-dressing balance sheet" for the latter. Thus two propositions about the motivations for engaging in EDR can be derived: 1) to manage earnings on the income statement, and 2) to improve financial leverage on the balance sheet. Although these stipulated motivations are consistent with the observed consequences of EDR, they are not directly observable, examination of their validity as factors must be made through surrogate measures. The two main motivations derived from the aforementioned consequences can be explicitly stated as follows:

Earnings Management: Compared to the control sample, companies which had poor (better) earnings are more likely to be motivated to enhance (smooth) their earnings in terms of financial transactions such as EDRs, especially when their operating performance is hard to improve.

Capital Restructuring: Compared to the control sample, companies which had higher financial leverage are more likely to be motivated to reduce their financial leverage.

Both motivations are not mutually exclusive. Especially in EDR, both can be achieved by one decision in which capital restructuring is a main outcome of EDR while earnings management is a by-product of the financing decision of EDR. Based on these two observable motivations, the following hypotheses are derived (All hypothesis are stated as alternative to the null of no difference):

H7: (Earnings Management) Actual accounting earnings were lower (higher) for the redeemers with EDR gain (EDR loss) than for the non-redeemers.

H8: (Capital Restructuring) Financial leverages were higher for the redeemers than for the non-redeemers.

Earnings management hypothesis of H7 is similar to H1 and H2 (income smoothing hypothesis) in the time-series analysis. Capital restructuring hypothesis of H8 is similar to H3 (leverage adjusting hypothesis) and H4 (covenant relaxation hypothesis) in the time-series analysis. The same earnings and leverage variables in the time-series analysis are utilized as a surrogate for earnings performance and financial leverage, respectively.

Two other firm-related variables are also expected to be associated with EDR. These include the degree of financial distress and firm size. The study examines these variables as additional factors to explain firm characteristics engaged in EDR.

Under the assumption of existence of bankruptcy and debt capacity, the relative severity of financial distress is also an important independent variable because it proxies for the riskiness of insolvency or bankruptcy probability. The expectation is that the degree of financial distress is more severe for the redeemers than for the non-redeemers.

H9: (Financial Distress) The degree of financial distress was more severe for the redeemers than for the non-redeemers.

Hypothesis H9 is similar to H5 (financial distress hypothesis) and H6 (credit-rating change hypothesis) in the time-series analysis. Altman's Z-score and credit rating are used as a surrogate for the financial distress.

This study also tests the effect of firm size because large firms and small firms differ in many respects and size empirically explains firm differences in many previous accounting studies. Collins, Rozeff, and Dhaliwal [1981], for example, suggest that size is an all inclusive variable that can act as a surrogate for the many variables not specifically included in the study. Another reason to incorporate the size factor into the model as an independent variable is to control a possible size effect of the control samples because both control samples are not selected by matching any size variable. However, the direction of the possible association of size and the redemption/non-redemption alternative is not clear. The size of the firm is measured here as the natural logarithm of net sales.

H10: (Firm Size) There is a difference in firm size between redeemers and non-redeemers.

5.3.2 Methodology and Model Development

5.3.2.1 Methodology by Using All Compustat Control Sample

To test whether redeemers' firm characteristics in the year of redemption are different from those of the all Compustat control sample, first, a two-sample mean difference t-test is applied to selected variables as a univariate analysis. Second, as a multi-variate analysis, a logit analysis is utilized. The multi-variate logit analysis investigates the effects of each variable with other variables controlled for and the joint ability of independent variables to explain managerial motivations or firm characteristics. One advantage of the logit analysis over multiple discriminant analysis is that it provides significance tests for the individual independent variables as well as for the overall classification. Another advantage of the logit analysis is also relevant to this study where disproportionate sampling from two populations (redeemers vs. non-redeemers) occurs. Maddala [1983] shows that disproportionate sampling affects only the constant term of the logit model and all the other logit coefficients are consistent and asymtotically unbiased. However, the effect of disproportionate sampling on the discriminant function or on probit model coefficients is more complex and not easily determined.

The model of the logit analysis in this study follows:

$$Y_j = b_0 + b_1 EARNING_j + b_2 LEVERAGE_j + b_3 SIZE_j + b_4 DISTRESS_j + e_j \quad ..(1)$$

where:

j is the firm-year index,

Y_j is 1 if the result is a redeemer;
0 if the result is a non-redeemer,

$EARNING_j$ is the earning variables such as EPSc, EPSb, ROAc, and ROAb,

$LEVERAGE_j$ is the financial leverage variable such as LTDSE and TDTA,

$SIZE_j$ is the natural logarithm of net sales (LSALES),

$DISTRESS_j$ is the distress variables such as ZSCORE and RATING,

e_j is an error term.

Based on the above basic model, four earning variables (EPSc, EPSb, ROAc, and ROAb) and two leverage variables (LTDSE and TDTA) are interchangeably used as independent variables in each model to check the sensitivity of the logit model. The natural logarithm of sales (LSALES) is used simply as a proxy controlling for the firm-size differences between samples, without making any prediction on the size variable. Financial distress variables (ZSCORE and RATING) are also used as independent variables, but are included or excluded from the logit model due to small sample size. Because of the alternative variables in each attributes, this study develops 12 models with following model specifications:

Model No		Independent Variables: Earning	Leverage	Size	Distress	Error
11:	$Y_j = b_0$	$+ b_1EPSc_j$	$+ b_2LTDSE_j$	$+ b_3LSALES_j$		$+ e_j$
12:	$Y_j = b_0$	$+ b_1EPSc_j$	$+ b_2LTDSE_j$	$+ b_3LSALES_j$	$+ b_4ZSCORE_j$	$+ e_j$
13:	$Y_j = b_0$	$+ b_1EPSc_j$	$+ b_2LTDSE_j$	$+ b_3LSALES_j$	$+ b_4RATING_j$	$+ e_j$
21:	$Y_j = b_0$	$+ b_1EPSb_j$	$+ b_2LTDSE_j$	$+ b_3LSALES_j$		$+ e_j$
22:	$Y_j = b_0$	$+ b_1EPSb_j$	$+ b_2LTDSE_j$	$+ b_3LSALES_j$	$+ b_4ZSCORE_j$	$+ e_j$
23:	$Y_j = b_0$	$+ b_1EPSb_j$	$+ b_2LTDSE_j$	$+ b_3LSALES_j$	$+ b_4RATING_j$	$+ e_j$
31:	$Y_j = b_0$	$+ b_1ROAc_j$	$\div b_2TDTA_j$	$+ b_3LSALES_j$		$+ e_j$
32:	$Y_j = b_0$	$+ b_1ROAc_j$	$+ b_2TDTA_j$	$+ b_3LSALES_j$	$+ b_4ZSCORE_j$	$+ e_j$

$33: Y_j = b_0 + b_1ROAc_j + b_2TDTA_j + b_3LSALES_j + b_4RATING_j + e_j$

$41: Y_j = b_0 + b_1ROAb_j + b_2TDTA_j + b_3LSALES_j + e_j$

$42: Y_j = b_0 + b_1ROAb_j + b_2TDTA_j + b_3LSALES_j + b_4ZSCORE_j + e_j$

$43: Y_j = b_0 + b_1ROAb_j + b_2TDTA_j + b_3LSALES_j + b_4RATING_j + e_j$

5.3.2.2 Methodology for Controlling Industry Effects

In the previous section, the cross-sectional test is designed without controlling industry effects. In order to control any possible industry effect, the study computes the industry median for the same variables used in the prior section, for each redeemer and for each redemption year, based on four-digit industry (SIC) codes in which the redeemer is a member of the industry in the redemption year. The industry median of each variable is computed by excluding redeemers from the industry under the assumption that the redeemers are selected without replacement. (For the test of sensitivity of controlling industry, the industry median of each variable is also computed by including redeemers from the industry under the assumption that the redeemers are selected with replacement.) And then the industry median-adjusted value for each variable is calculated by subtracting the appropriate industry median from the specific value for each redeemer. This value represents the deviation of redeemers from the industry average for each selected variable. A negative value indicates the industry median exceeds the value for the redeemer. The industry median-adjusted values are computed one year before redemption and in the year of redemption. For the year of redemption, the values are computed in two ways: one with the redemption effects and the other without redemption effects ("as-if" value). T-tests are applied to these three industry median-adjusted values to test whether redeemers' firm characteristics in the year of (or one year before) the redemption are different from the industry average.

5.3.3 Measurement of Independent Variables

For the measurement of each independent variables, Panel 3 of Table 4-5 reports the computation of each variable. However, additional remarks should be made for controlling extreme values.

For the empirical test with all Compustat control sample, the study controls extreme values in earnings and leverage variables. Because the mean value is relatively sensitive to extreme observations compared to the median value which was used to plot in the time-series analysis, the variables with wide dispersion (i.e., EPS, ROA, LTDSE, and LTDMV) are controlled by two methods: 1) winsorization and 2) deletion from the sample. The criteria (minimum and maximum) to winsorize and to delete the extreme values are set as follows:

EPSc (and EPSb); the minimum and the maximum value are set at $-20.00 per share and $20.00 per share, respectively.

ROAc (and ROAb); the minimum and the maximum value are set at -0.50 and +0.50, respectively.

LTDSE (and LTDMV); the maximum value is set at 10.00.

For the variable LTDSE, some observations in both redeemers and the control sample have negative values due to negative total stockholder's equity because of greater deficit than book value of common stock. In order to avoid negative LTDSE, LTDSE is taken as an absolute value and then the above criteria are applied to control extreme values of LTDSE. For the empirical test by controlling industry effect, the study controls only the negative LTDSEs for the redeemers because the industry median-adjusted values for each variable are computed by subtracting appropriate industry median (not mean) of each variable from the specific value for each redeemer.

5.4 Cross-Sectional Analysis - Empirical Results

5.4.1 Empirical Test with All Compustat Control Sample

5.4.1.1 Univariate Analysis

To test whether redeemers' firm characteristics in the year of redemption are different from those of the control sample, a two-sample mean difference t-test is applied to selected variables. Four different variables are selected as financial attributes of redeemers including earnings, leverage, financial distress, and firm size. The study examines four different measures of earnings variables (EPSc, EPSb, ROAc, and ROAb), three different measures of leverage variables (LTDSE, TDTA, and LTDMV), and two different measures of financial distress (ZSCORE and RATING) to check sensitivity of the variables. The size variable, the natural logarithm of sales (LSALES), is also included to see if redeemers' firm size is different from that of the control sample. For redeemers, the variables are computed as if EDRs have not occurred because the variable excluding EDR effects (hereafter, "as-if" variable) are considered relevant in redeemers' decision-making for redemption. The as-if variables will be used throughout this section for the test of cross-sectional analysis with the all Compustat control sample.

The results of a two-sample mean difference t-test by winsorizing extreme values are summarized in Table 5-13. For the all sample (Panel 1), redeemer's earning performance (measured by EPSc, EPSb, ROAc, and

ROAb) is, on average, significantly lower than the control sample at the 0.01 level while the redeemers' leverage level (measured by LTDSE, TDTA, and LTDMV) is, on average, significantly higher than control sample at the 0.01 level. In terms of financial distress (measured by ZSCORE and RATING), the redeemers are, on average, more distressed than the control sample at the 0.01 level. The size variable (LSALES) is positive and also significant at the 0.01 level.

It is possible to partition the sample by period and to analyze further because the all Compustat control sample was matched by the redemption year to reduce a time period effect. By partitioning the all sample into two sub-samples by period (early 1980's and late 1980's), the t-test is repeated and results are summarized in Panels 2-1 and 2-2 in Table 5-13. For the early 1980's sub-sample (Panel 2-1), the test results are the same as those of the all sample (Panel 1) in terms of signs and significance levels. For the late 1980's sub-sample (Panel 2-2), the test results except for the EPS variables (EPSc and EPSb) are the same as both the all sample and early 1980's sub-sample in terms of signs and significance levels. The EPS variables are still significantly lower for redeemers than the control sample for the same period, but the significance level is reduced to 0.05 level.

The t-test is repeated by deleting all extreme values rather than including by means of winsorization. The test results by deleting extreme values are summarized in Table 5-13-1 in Appendix D and are almost identical to the results in Table 5-13 in terms of signs and significance levels with the exception of the EPS variables in late 1980's sub-sample. By deleting extreme values, EPS variables in late 1980's sub-sample become insignificant, indicating that the earnings performance of redeemers is not different from that of the control sample. Overall, test results are not sensitive to sample treatment of extreme values.

In summary, the test results are consistent with hypotheses, indicating that redeemers have poorer earnings performance, are highly leveraged as well as financially distressed compared to the control sample, all at the 0.01 level. The only insignificant or less significant variables are EPSc and EPSb for the sub-sample of late 1980's. The similarity of the EPS performance of late redeemers and the control sample is also observed in Figures 5-2.1 (EPSc) and 5-2.2 (EPSb) in the time-series plotting. The results of the mean difference t-test for all tested variables are consistent with the time-series plotting at t=0 in Figures 5-1.1 through 5-2.9 in terms of signs and the distance.

5.4.1.2 Multi-variate Logit Analysis

Multi-variate analysis investigates the effect of each variable while controlling for other variables. Results for the 12 specifications of the logit model in Section 5.3.2 are summarized in Table 5-14.

Table 5-14 (based on winsorization) shows that, for the all sample (Panel 1), all independent variables are significant at the 0.01 level with correct signs as hypothesized when distress variables are not included (Model 11). When ZSCORE is included as a distress variable (Model 12), the sample size is reduced by 25%, but the results remain the same as the Model 11. When RATING is used as a distress variable (Model 13), only 35% of sample remain but the results are, in general, the same as the two other Models 11 and 12. When EPSb is replaced on EPSc (Models 21, 22, and 23), the results are almost identical to the results with EPSc (Models 11, 12, and 13). The only difference is found in Model 23, where the earning variable (EPSb) becomes insignificant when RATING is included. When ROAc and ROAb are used as earning variables and TDTA is used as a leverage variable (Models 31-33 and 41-43), the results are similar to those of the other six models mentioned above, with the exception of the earnings variable (Model 42) and leverage variable (Models 33 and 43). Whenever distress variables (ZSCORE and RATING) are included in the model, ROAc (Model 42) and TDTA (Models 33 and 43) become insignificant. This may result from a small sample size problem caused by the distress variables or a multicollinearity problem between distress variables and other independent variables. Table 5-15 shows that the two distress variables are highly correlated with all other variables. Across all 12 models the size variable (LSALES) is always positive and significant at the 0.01 level.

By partitioning the all sample into two periods (early 1980's and late 1980's), the logit analysis is repeated. For the early 1980's sub-sample (Panel 2-1), the results are stronger than for the all sample (Panel 1), showing that the only insignificant case is LTDSE in Model 13. For late 1980's sub-sample (Panel 2-2), the results for leverage, size, and distress variables across all 12 models are significant, at least, at the 0.05 level with correct signs. But EPS variables become insignificant for all models (Models 11-13 and 21-23) and ROA variables are also insignificant or at least less significant than both the all sample (Panel 1) and early 1980's sub-sample (Panel

2-1). The insignificant results for EPS variables during the late 1980's are consistent with univariate analyses (see Panel 2-2 in Table 5-13).

The above logit analysis is also repeated by deleting extreme values in independent variables rather than including through winsorizing. The results (Table 5-14-1 in Appendix D) remain the same and thus the results of the logit analysis are not sensitive to sample treatment.

5.4.2 Empirical Test by Controlling Industry Effect

In the previous section, the cross-sectional tests are done without controlling for industry effects. In order to control any possible industry effect, the study computes the industry median-adjusted value for each variable by subtracting the appropriate industry median from the specific value for each redeemer. T-tests are applied to the industry median-adjusted values for the selected variables to test whether redeemers' firm characteristics in the year of (or one year before) the redemption are different from the industry average.

Table 5-16 reports the results of the t-test for industry median-adjusted variables by <u>excluding</u> redeemers from the computation of the industry median. For the all sample (Panel 1), the mean of all earnings variables (EPSc, EPSb, ROAc, and ROAb) adjusted by industry median are negative at the 0.01 level one year before as well as the year of redemption (both with and without EDR effects). This indicates that redeemers' earnings performance, on average, was poorer than their industry average performance both one year before and in the year of redemption regardless of earnings effects of EDR. For all leverage variables (LTDSE, TDTA, and LTDMV), the means are positively significant at the 0.01 level both one year before and in the year of redemption regardless of leverage effects of EDR, implying that redeemers' leverage is, on average, higher than their industry average leverage. The distress variable (ZSCORE) is negatively significant at the 0.01 level for both years, indicating that redeemers are, on average, distressed firms compared to their industry average firm. In terms of firm size based on sales (LSALES), redeemers are, on average, larger than industry average firm at the 0.01 level.

By segregating the all sample into two time periods, the t-test is repeated. For early 1980's sub-sample (Panel 2-1), the results are the same as the all sample in terms of signs and significance levels. For the late 1980's sub-sample (Panel 2-2), all variables except EPS are also significant at the 0.01 level with the same signs as the all sample and early 1980's sub-sample. But EPSb is insignificant in the year of redemption (both with and without EDR effects) and EPSc without EDR effects is marginally significant at the 0.10 level. These results are consistent with the cross-sectional test by using the all Compustat control sample discussed in Section 5.4.1 even though different assumptions are applied to control sample selection. More interesting results can be found when Panel 1 of Table 5-16 is compared to the time-series plotting in Figures 5-1.1 through 5-1.8. The mean of industry median-adjusted values for each variable in t-1 year and t=0 year (both with and without redemption effects) in Panel 1 is very close to the distance (the sign as well) between the median of redeemers and the median of all Compustat control sample for the same variable in Figures 5-1.1 through 5-1.8 except EPS variables, even though different assumptions were applied to select both the all Compustat control sample and the industry-controlled sample. The cross-check between the two supports the robustness of the test results. For the EPS variables, the inconsistency between the two results is due to adjustments for stock splits and stock dividends. For time-series plotting, all EPS values from t-4 to t+2 including t-1 and t=0, are adjusted based on the adjustment factor at t+3 year by using the most recent Compustat tapes available (i.e., industrial and research Compustat tapes released July, 1989) so as to be comparable for the EPS values across eight years up to t+3, while, for the computation of industry medians, only EPS values at t-1 year are adjusted based on the adjustment factor at t=0 year by using the closest Compustat tape with the redemption year of each redeemer (i.e., seven different industrial Compustat tapes released in 1981, 1982, 1984, 1986, 1987, 1988, and 1989) in order to match industry codes correctly. Therefore, the median of time-series analysis may be lower than the industry median.

By matching the industry average, it is possible to investigate redeemers' firm characteristics further by segregating the sample by gain effect, redemption method, and instrument used to redeem debt, and so on. Panels 3-1, 3-2, and 3-3 in Table 5-16 show the test results by earnings effect. The redeemers with EDR-Gain (Panel 3-1) show, on average, poorer earnings performance, are highly leveraged, and financially distressed relative to the industry average, all at the 0.01 level regardless of EDR effects. For firms with EDR-Loss (Panel 3-2), leverage and financial distress condition is the same as redeemers with EDR-Gain but earnings variables (EPSc and EPSb) are not different from the industry average regardless of EDR-Loss effect on EPS. For the redeemers with immaterial gains or losses from EDR (Zero-Gain in Panel 3-3), all earning variables are insignificant. But all leverage variables are positively significant at the 0.01 level in t-1 year and t=0 year without redemption effects. By taking EDR, the actual leverage ratios and ZSCORE become marginally significant or insignificant in the redemption year.

Panels 4-1 and 4-2 show the test results by method. Redeemers using equity-for-debt swaps (Panel 4-1) shows insignificant actual EPS performance in both t-1 and t=0. But leverage and distress variables for swapping firms shows significant differences compared to the industry average in both t-1 and t=0 year (with and without EDR effects). Panel 4-2 (all other methods except equity-for-debt swaps) shows the same results as the all sample (Panel 1).

Based on instruments used to retire debt, the test results are summarized in Panels 5-1 through 5-5. In the cases of cash (Panel 5-1) and debt (Panel 5-2), the results are, in general, similar to the all sample. For the case of common stock (Panel 5-3), the results show that all variables (except EPS variables) are significant at the 0.01 with correct signs while, for preferred stock (Panel 5-4), the results are in general similar to the case of common stock but less significant. Both instruments show insignificant earnings performance compared to their industry counterpart. Since most of these stocks (either common stock or preferred stock) exchanged for the retirement of debt belong to the prevailing equity-for-debt swaps during early 1980's, the results are very close to those in Panel 4-2 (equity-for-debt swaps) and Panel 2-1 (early 1980's). For the asset case (Panel 5-

5), where most of this sample results from in-substance defeasance, leverage variables and ROA are significant at the 0.05 level at t=0 without EDR effects, but actual values at t=0 and t-1 (especially EPS variables) are not significantly different from the industry average.

By segregating the sample by both period and instrument, the results are reported in Panels 6-1 through 6-5 (by instrument during early 1980's) and Panels 7-1 through 7-5 (by instrument during late 1980's). For the early 1980's, the results by instrument (Panels 6-1 through 6-5) are similar to those of equivalent instruments in Panels 5-1 through 5-5 for the all sample. For the late 1980's, where the sub-sample is dominated by cash redemption, the results by instrument (Panels 7-1 through 7-4) show that EPS variables in Panels 7-1 (cash) and 7-4 (asset) are insignificant while Panels 7-2 (debt) and 7-3 (common stock) show that all variables (except firm-size) are significant with correct signs in the year of redemption.

Table 5-16-1 in Appendix E reports repeated test results for all the above panels by using a different assumption for the computation of industry median, in which industry median for each variable is computed by including redeemers under the assumption of sample selection with replacement. Even with industry median including redeemers, the test results across all panels are, in general, the same as Table 5-16. This confirms that the test results are not sensitive to the method of industry-average computation.

In summary, redeemers have different firm characteristics such as poorer earnings performance (in terms of ROA), are highly leveraged, and financially distressed compared to their industry average firm. Earning variables (EPS) are sometimes not different from their industry average depending upon sub-sample such as: late 1980's (Panel 2-2) by period; EDR-Loss (Panel 3-2) and Zero-Gain (Panel 3-3) by effect; equity-for-debt swaps (Panel 4-1) by method; common stock, preferred stock, and asset as a primary instrument used (Panels 5-3, 5-4, and 5-5, respectively). Across all panels, however, one consistent result is that redeemers, after controlling size effects, are always highly leveraged and more distressed than their industry counterparts, regardless of time period, EDR effects on earnings, methods applied to retire debt, primary instruments used to retire debt, and combinations of above. Based on these results, it may be hard to conclude that earnings concern is one single motivation of early retirement of debt, although redeemers tend to report an EDR gain (loss) when annual operating performance looks poor (better). The results show that leverage and distress adjustment through EDR is also observed and is likely to be a more persistent motivation behind early debt-redemption.

5.5 Summary

This chapter investigates motivations behind EDRs. By applying both time-series and cross-sectional analyses, the chapter tested three hypotheses: (1) income smoothing or income management hypotheses; (2) leverage adjusting or covenant relaxation hypotheses; and (3) financial distress hypothesis.

The results of the time-series analysis are as follows. For the income smoothing hypothesis, the plotting approach shows that the time-series of year-to-year quarterly EPS would have transitorily decreased (increased) in the redemption quarter had EDR with gain (loss) not been conducted. When the statistical test for variance change was applied, only for certain types of EDRs, firms used the redemption gain and loss to smooth time-series variance of year-to-year quarterly EPSc. When a more correct earnings measure EPSb was used to test the hypothesis, there was no such income smoothing behaviors, but rather counter-smoothing behaviors are observed for the all sample and most of the sub-samples. For leverage adjusting or covenant relaxation hypotheses, both the plotting approach and statistical location test show that redeemers tend to directly reduce their debt by taking EDRs when the leverage is at a peak for a given period of time (five years) as if they have an upper boundary of leverage. The results are consistent for the all sample and all of the sub-samples. For the financial distress and credit-rating change hypotheses, both the plotting approach and location test show that redeemers tend to directly reduce their debt by taking EDRs when their financial distress level and credit-rating is the lowest for a given period of time (five years). The results are also consistent for the all sample and all of the sub-samples.

The results of the cross-sectional analysis indicate that, after controlling size effects, redeemers had poorer earnings performance, were highly leveraged and financially distressed compared to the control samples and industry average firm. These results are consistent for the all sample and most of the sub-samples.

In conclusion, while the evidence is ambiguous whether firms used EDRs to smooth reported income, the evidence is very clear that firms undertook EDRs when their financial leverage was at a peak and their distress level was at the bottom across time. This evidence is consistent with the cross-sectional comparison with non-redeemers.

Chapter 6

THE IMPACT OF EDR ON THE EQUITY VALUE OF THE EDR FIRM

6.1 Development of Testable Hypotheses

The objective of this chapter is to answer two research questions: (1) What was the impact of EDR on the equity value of the firm which undertook EDR? (2) Are there any differences in impacts in terms of different time horizons (before 1985 vs. after 1985) and different methods or instruments of EDR? The effects of EDR on capital structure, in general, results in only decreases in leverage. Based on capital structure theories in finance discussed in Section 3.1, this chapter examines three alternative testable hypotheses. These include: (1) a tax-effects hypothesis; (2) a wealth-transfer hypothesis; (3) an information-effects hypothesis.

6.1.1 Tax-Effects Hypothesis

According to the tax-effect hypothesis, increases in the firm's financial leverage increases its stock value by increasing its tax shield (MM [1963]). Conversely, EDR reduces the firm's financial leverage, thus decreasing the firm's tax shield and hence, its stock price. This positive relationship between change in leverage and stock price continues to be controversial. First, the introduction of bankruptcy costs in the MM model implies that there is an optimal debt ratio for each firm (the point where the marginal tax shield equals the marginal expected bankruptcy costs). The use of any level of debt other than the optimal amount decreases the firm's value (Kraus and Litzenberger [1973], Scott [1976], and Kim [1978]). Therefore, if the firm is not using an EDR to move to the optimal level, EDRs should lead to stock price reductions. Second, Miller [1977] argues that the personal tax disadvantage of debt offsets the corporate tax advantage and that this leads to capital structure irrelevancy at the firm level. Accordingly, EDRs should not affect stock prices. Third, DeAngelo and Masulis [1980] show that the presence of corporate tax shield substitutes for debt implies a market equilibrium in which each firm has a unique interior optimal capital structure. This model predicts that any leverage change that moves a firm closer to its optimal tax-induced level leads to higher stock prices.

6.1.2 Wealth-Transfer Hypothesis

The wealth-transfer hypothesis posit that an unexpected EDR (i.e., an unexpected decrease in debt) makes outstanding debt less risky. The result is a wealth transfer from stockholders to bondholders (Galai and Masulis [1976]). Furthermore, the size of the wealth transfer is positively related to the decrease in the firm's financial leverage. Consequently, a positive relationship between stock price decreases and financial leverage decreases is expected.

6.1.3 Information-Effects Hypothesis

According to the information-effect hypothesis, changes in financial leverage convey management's expectations about the firm's prospects (Ross [1977], Leland and Pyle [1977], Heinkel [1982], Miller and Rock [1985], and Myers and Majluf [1984]). Assuming that managers possess superior information relative to investors about the "intrinsic" value of the firm, these models suggest that the firms' capital structure changes are valid signals that allow managers to convey their inside information to investors. The information signaling model of Ross [1977] suggests that a leverage-decreasing capital structure change conveys unfavorable information about the firm's prospects while a leverage-increasing capital structure change conveys favorable information. Accordingly, EDR conveys negative information about the firm's future earnings prospects and results in a decrease in the firm's stock price. Moreover, the issuance of any additional stock to retire debt decreases managerial stockholdings (assuming managers do not participate in the new issuance of stock to retire debt). The expected signs of above three hypotheses are presented in Panel 1 of Table 6-1.

6.1.4 Hypothesis between Portfolios

For the first step, this study will test the impact of EDRs on the equity value of the redeemers by aggregating all EDR firms. In the second step, the redeemers will be segregated by different time horizons and by different instruments of EDRs to form a portfolio. According to the changes in market interest rate, the EDR firms will be divided into two different time horizons portfolios: one for the period before June 1985 (hereafter, 1985_b) and the other for the period after June 1985 (hereafter, 1985_a). According to the means used to achieve EDR, the sample firms will be further divided into five different groups: (1) common-for-debt EDR; (2) preferred-for-debt EDR; (3) cash-for-debt EDR; (4) assets-for-debt EDR; and (5) debt-for-debt EDR. The comparison of market impacts of EDRs between groups follows the capital structure theories. That is, the larger the change in leverage per dollar value of debt retired, the greater is the absolute value of the abnormal price reaction. For example, for a given period, common-for-debt EDRs are expected to have greater the absolute value of stock price reaction than the other four groups while debt-for-debt EDRs are expected to have no reaction because debt refunding results in no changes in leverage (assuming no gain or loss from refunding). The sequence of above grouping by instruments is a descending order in terms of the absolute value of the stock price reaction. Between the different time horizons (i.e., 1985_b vs. 1985_a), for a given instruments, the stock price reaction is expected to be greater for 1985_b relative to 1985_a. The rationale for this hypothesis is that the higher market interest period (1985_b) is more likely to result in EDR gains and thus larger leverage effects compared to the lower market interest period (1985_a) because EDR gain (1985_b) increases the book value of equity while EDR loss (1985_a) decreases the book value of equity. The comparison between portfolios is summarized in Panel 2 of Table 6-1.

6.2 Model Development

Most of previous empirical studies mentioned in Sections 3.2 and 3.3 have focused on an event-type study. By using the same event-type study, this section examines the impact of EDR on the change in the stock price around its public announcement date. The EDR announcement date is the first date when the Wall Street Journal announces an EDR. The research hypotheses will be tested by applying an event-type methodology similar to that described in Dodd and Warner [1983] and Travlos [1987]. Firms' daily residual returns around the EDR announcement date are estimated based on a one factor market model using the CRSP value-weighted market index, and 200 days of estimation period for the market model parameters estimated using the Scholes-Williams [1977] procedure to adjust for the non-synchronous trading problem. The market model is

$$R_{jt} = a_j + b_j R_{mt} + e_{jt} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (2)$$

where:

R_{jt} = the rate of return for security j in day t,

R_{mt} = the rate of return for the value weighted market portfolio for day t,

a_j = intercept parameter,

b_j = slope parameter (systematic risk), and

e_{jt} = the stochastic disturbance term.

The a_j and b_j are estimated over a period starting 220 days before and ending 20 days before the first public EDR announcement date. Then, daily residual returns, e_{jt}, will be computed for the period starting 20 days prior and ending 10 days after the first public EDR announcement date, t = 0. The abnormal returns, e_{jt}, are

$$e_{jt} = R_{jt} - \hat{a}_j - \hat{b}_j R_{mt}, \qquad t = -20,\ldots,+10. \quad \ldots\ldots\ldots\ldots (3)$$

The average abnormal return (AR_t) for each day t for a sample of N EDRs is:

$$AR_t = \frac{1}{N} \sum_{j=1}^{N} e_{jt}. \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (4)$$

The cumulative average abnormal returns ($CAR_{s,e}$) are also derived by summing the AR_t's over various intervals starting from day s to day e as follows:

$$CAR_{s,e} = \frac{\sum_{j=1}^{N} \sum_{t=s}^{e} e_{jt}}{N}. \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (5)$$

The test statistics of AR_t and $CAR_{s,e}$ are based on the average standardized abnormal return ($ASAR_t$) and the average standardized cumulative abnormal return ($ASCAR_{s,e}$), respectively,

where:

$$ASAR_t = \frac{1}{N} \sum_{j=1}^{N} \frac{e_{jt}}{S_{jt}}, \qquad \text{.................................(6)}$$

$$ASCAR_{s,e} = \sum_{t=s}^{e} ASAR_t, \qquad \text{.................................(7)}$$

where S_{jt} is the square root of firm j's estimated forecast variance computed by:

$$S_{jt} = \left\{ S_j^2 \left\{ 1 + \frac{1}{L} + \frac{(R_{mt} - \bar{R}_m)^2}{\sum_{k=1}^{L} (R_{mk} - \bar{R}_m)^2} \right\} \right\}^{1/2} \text{..........(8)}$$

where S_j^2 is the residual variance for firm j's market model regression, L is the number of observations in days during the estimation period, R_{mt} is the market return for day t, R_{mk} is the market return for the k-th day of the estimation period, and $\bar{R}_m$ is the average market return in the estimation period.

The statistics $ZASAR_t$ and $ZCAR_{s,e}$, which follow a unit-normal distribution (Dodd and Warner [1983]), are used to test the hypotheses that the average standardized abnormal returns ($ZASAR_t$) and the average standardized cumulative abnormal returns ($ZCAR_{s,e}$) equal zero, respectively,

where:

$$ZASAR_t = \sqrt{N} * ASAR_t, \text{ and } \qquad \text{..............................(9)}$$

$$ZCAR_{s,e} = \frac{\sqrt{N}}{\sqrt{T2 - T1 + 1}} \sum_{t=s}^{e} ASAR_t. \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots (10)$$

To facilitate the comparison of the abnormal returns between portfolios discussed in Section 6.1.4, the daily mean differences are derived by subtracting the associated average abnormal returns.

The appropriate Z-statistic is:

$$ZDAR = \frac{ASAR_a - ASAR_b}{\sqrt{\frac{1}{N_a} + \frac{1}{N_b}}}. \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots (11)$$

where $ASAR_a$ and $ASAR_b$ are the average standardized abnormal returns for portfolio a and portfolio b, respectively, and N_a and N_b represents the number of observations in each group.

To facilitate the comparison of the cumulative abnormal returns between portfolios, the appropriate Z-statistic is analogously computed as follows:

$$ZDCAR = \frac{ASCAR_a - ASCAR_b}{\sqrt{\frac{1}{N_a} + \frac{1}{N_b}}}. \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots (12)$$

where $ASCAR_a$ and $ASCAR_b$ are the average standardized cumulative abnormal returns for portfolio a and portfolio b, respectively. This approach is the same as the method used by Haw, Pastena, and Lilien [1990].

6.3 Analysis of EDR Announcement Data

Table 6-2 presents the distribution of EDR announcements by calendar years and by portfolios. Since the announcement of EDR is a transaction base, the total 763 firm-years analyzed in Chapter 5 were expanded to 825 EDRs in terms of transaction base. However, not all EDRs were announced in the public press, 825 EDRs were reduced to 409 EDRs which have announcement dates from the Wall Street Journal Index. Due to insufficient daily return data from the CRSP daily return tape released 1987 and confounding events around the EDR announcement date, an additional 178 EDR announcements were eliminated. The study set a test window from day -2 to day +2 around the EDR announcement date and deleted EDR events which had any other news during the five day window. The final data consists of 230 events which represent 27.8% of total available events. The ratio of valid events out of total available events is significantly reduced from 1985 (see Panel 1). In terms of instruments used, cash redemption and assets (mostly, in-substance defeasance), the ratios are only 16% and 17.6%, respectively (see Panel 2).

It should be mentioned that the empirical test results in this chapter may not fully explain the impacts of EDR on the equity value of redeemers because of these data limitations.

6.4 Empirical Test for Market Reactions

6.4.1 Empirical Test for Market Reactions on ARs

To test whether there is any abnormal market reactions around the EDR announcement date, a Z-test for average abnormal returns (AR) and a Z-test for the proportion of positive (or negative) ARs out of all EDR announcements are applied to the all sample as well as sub-samples by portfolios. Table 6-3 reports the results of the Z-tests.

For the all sample (Panel 1), average abnormal return (hereafter, AR) at t-1 day is, on average, negative and significant at the 0.05 level. Redeemers with positive (negative) ARs at t-1 day are 40.47% (59.53%) out of total 214 redeemers, in which the proportion is significant at the 0.01 level. By partitioning the all sample into two sub-samples by period (early 1980's and late 1980's), the Z-test is repeated and results are summarized in Panels 2-1 and 2-2. For early 1980's sub-sample (Panel 2-1), ARs at t-1 and t=0 are negative and significant at the 0.10 level and 0.05 level, respectively. The proportion of negative ARs at t-1 is 63.61%, which is significant at the 0.01 level. For late 1980's sub-sample (Panel 2-2), AR at t-1 are also negative and significant at the 0.10 level while the proportion of negative ARs at t-1 is 55.26% but is insignificant.

Panels 3-1, 3-2, and 3-3 show the results of Z-tests by earnings effect. Redeemers with EDR-Gain (Panel 3-1) show negative and significant ARs at t-1 and t=0 at the 0.10 and 0.05 level, respectively. The proportion at t-1 is also significant at the 0.05 level. Redeemers with EDR-Loss (Panel 3-2) show negative ARs (insignificant) at t-1 while the proportion of negative ARs (63.79%) is significant at the 0.05 level. For the sub-sample with Zero-Gain (Panel 3-3), there is no market reaction around EDR announcements. Panels 4-1 and 4-2 show the Z-test results by method. Redeemers using equity-for-debt swaps (Panel 4-1) show negative and significant ARs at t-1 and t=0 with significantly more negative ARs at day t-1 (68%) while the all other methods portfolio (Panel 4-2) shows no abnormal market reactions around EDR announcements.

Based on instruments used to retire debt, the Z-test results are summarized in Panels 5-1 through 5-5. For the cash case (Panel 5-1), AR at t-2 is negatively significant at the 0.05 level while, for common stock (Panel 5-3), both AR and proportion of negative ARs at t-1 are significant at the 0.01 level with correct signs. But there are no abnormal market reactions for the cases of debt (Panel 5-2), preferred stock (Panel 5-4), and asset (Panel 5-5).

By segregating the sample by both period and instrument, the Z-tests are repeated and the results are reported in Panels 6-1 through 6-3 (by instrument during early 1980's) and Panels 7-1 through 7-3 (by instrument during late 1980's). But the sample size was too small for both preferred stock (N=8) and asset (N=6) in the all sample to divide into two different periods. Thus, these two instruments are deleted from the analysis. For early 1980's, the results by instrument (Panels 6-1 through 6-3) are similar to those of equivalent instrument in Panels 5-1 through 5-3. For late 1980's, where the sub-sample is dominated by cash redemption, the results by instrument (Panels 7-1 through 7-3) shows that only Panel 7-3 (common stock) shows negative and significant ARs (significantly greater proportion of negative ARs) at t-1 at the 0.01 (0.05) levels while there is no abnormal market reaction for the case of cash (Panel 7-1) and debt (Panel 7-2). In order to visualize abnormal market reactions of all dates (t) for the test period [-20,+10], the cumulative average abnormal returns from day -20 up to day t ($CAR_{-20,t}$) were computed for all 31 days and plotted for all portfolios in Figures 6-1 through 6-10 in Appendix F.

6.4.2 Empirical Test of the Difference in AR and CAR between Portfolios

To test whether there are any cumulative abnormal market reactions around the EDR announcement date and any different market reactions (of AR and CAR) between portfolios, a Z-test for CAR and a Z-test for the difference in AR and CAR are applied to all portfolios. Table 6-4 reports the results of the Z-test for cumulative average abnormal returns and Z-test for the differences in AR and CAR between portfolios. For each panel of the table, the first seven lines show ARs for each portfolio analyzed in the previous section and AR difference between two portfolios and their Z-statistics, whereas the next six lines show CAR for a given interval from starting date (s) to ending date (e) for each portfolio and its CAR difference (as well as its Z-statistics) between two portfolios. The interval of CARs covers two-days, three-days, and four-days from day -2 to +1.

For the all sample (Panel 1), all CARs except [0,1] and [-1,1] are negative and significant at the 0.05 or 0.01 level. By period (Panel 2), the early 1980's sub-sample shows significant negative CARs for all intervals except [-2,-1] while the late 1980's sub-sample has significant a negative CAR for [-2,-1] and significant positive CAR for [0,1]. For the difference in AR and CAR between the two periods, the early 1980's sub-sample shows a significantly large negative AR at t=0 and CAR for [0,1] and [-1,1]. By method (Panel 3), equity-for-debt swaps ("D/E Swaps" in the Panel) shows significant negative CARs for intervals [-1,0] (CAR=-1.5%) and [-2,0] (CAR=-1.4%),[20] while all other

20. Although the equity-for-debt swaps in this study include eight EDRs occurred after 1985, the negative and significant market reaction for both intervals are consistent with prior studies (see footnote number 7 in Section 3.4.2).

methods have significant negative CARs for only [-2,-1]. For the difference in AR and CAR between the two methods, equity-for-debt swaps shows a significantly large negative AR at t=0 and CAR for [-1,0].

By earnings effect from EDR (Panels 4-1 through 4-3), redeemers with EDR-Gain show significant negative CARs for all intervals except [0,1] while redeemers with EDR-Loss and Zero-Gain have no significant CARs at all. For the difference in AR and CAR between the three portfolios, redeemers with EDR-Gain shows a significantly large negative AR at t=0 and CAR for [-1,0] compared to EDR-Loss (see Panel 4-1). Redeemers with EDR-Gain also show also a significantly large negative AR at t=0 compared to the Zero-Gain portfolio (see Panel 4-2). Between redeemers with EDR-Loss and redeemers with Zero-Gain, there is no significantly different abnormal behavior around the EDR announcement between the two portfolios.

By instrument (Panels 5-1 through 5-10), redeemers who use common stock as a primary instrument to retire their debt have significant negative CARs for all six intervals while, for other instruments (see second columns of Panels 5-1 through 5-4), there are no significant negative CARs for all intervals. For the difference in AR and CAR among five different instruments, abnormal behavior of redeemers using common stock is not different from those of preferred stock (Panel 5-1), asset (Panel 5-3), and debt (Panel 5-4) whereas there is a significant different abnormal behavior between portfolio-common stock and portfolio-cash (Panel 5-2). The common stock portfolio shows significantly larger negative AR at t=-1 and CARs for [-1,0], [-1,1], and [-2,1] compared to the cash portfolio. The preferred stock portfolio shows that there is no different abnormal behavior compared to cash (Panel 5-5), asset (Panel 5-6), and debt (Panel 5-7). The cash portfolio also shows that there is no different abnormal behavior compared to asset (Panel 5-8) and debt (Panel 5-9). Between asset and debt (Panel 5-10), there is also no different abnormal behavior.

By segregating the sample by both period and instrument, the Z-tests are repeated and the results are reported in Panels 6-1 through 6-3 (by instrument during early 1980's) and Panels 7-1 through 7-3 (by instrument during late 1980's). But the sample size was too small for both preferred stock (N=8) and asset (N=6) for the all sample to divide into two different periods. Thus, these two instruments are deleted from the analysis by both period and instrument. For early 1980's, the test results of CAR for each instrument (Panels 6-1 through 6-3) are similar to those of equivalent instruments in the all sample by instrument (Panels 5-2 and 5-4). For the difference in AR and CAR among three different instruments during early 1980's, there is no significantly different abnormal behavior between common stock and debt (Panel 6-2) and between cash and debt (Panel 6-3), whereas abnormal behavior of redeemers using common stock shows different abnormal behavior compared to the cash portfolio (Panel 6-1). The common stock portfolio has a significantly large negative AR at t-1 and CARs for [-1,0] and [-1,1]. For the late 1980's, the results for CAR for each instrument (Panels 7-1 through 7-3) are similar to those of equivalent instruments in the all sample by instrument (Panels 5-2 and 5-4) as well as early 1980's sub-sample by instrument (Panels 6-1 and 6-2), indicating that significantly negative CARs are found only for the common stock portfolio. For the difference in AR and CAR among three different instruments during late 1980's, abnormal behavior of redeemers using common stock shows different abnormal behavior compared to the cash portfolio (Panel 6-1) and debt portfolio (Panel 7-2), in which the common stock portfolio has a significantly large negative AR at t-1. There is no significantly different abnormal behavior between cash and debt (Panel 7-3).

Panels 8-1 through 8-3 reports Z-tests for the differences in ARs and CARs by period for a given instrument. For common stock (Panel 8-1), abnormal behavior for both ARs and CARs between early 1980's and late 1980's are very similar for the two different periods, but the late period shows stronger results for AR at t-1 and CAR for [-2,-1] than the early period. For cash (Panel 8-2), ARs at t-1 and t=0 shows a marginal difference between the two periods while there is no significant difference in CAR. For debt (Panel 8-3), there is no significant difference in both ARs and CARs.

The Z-tests results in both Tables 6-3 and 6-4 are summarized for only signs and significance levels in Tables 6-5 and 6-6. In summary from Table 6-5, the signs of ARs at t-2 and t-1 for all portfolios are, in general, negative. But most of the significant and negative ARs are found at t-1 day for the all sample and sub-sample for early 1980's, EDR-Gain, equity-for-debt swaps, common stock as an instrument for the all sample, and common stock for the early 1980's and late 1980's. A significant portion of negative ARs at t-1 are also found in the same portfolios mentioned above. At t=0, the negative and significant ARs are found for the early 1980's, EDR-Gain, equity-for-debt swaps, and cash instrument for the early 1980's.

From Table 6-6, the signs of CARs for all six intervals across all portfolios are all negative with few exceptions. But the negative and significant CARs are found for the all sample and sub-samples for early 1980's, equity-for-debt swaps, EDR-Gain, common stock for the all sample, and common stock for early 1980's. For the sub-sample of late-1980's, all other methods except equity-for-debt swaps, and common stock for the late 1980's, a negative and significant CAR is found only for the interval of [-2,-1]. In summary, the market reactions (both AR and CAR) to EDR announcements are negative but significant negative reactions are associated with EDRs during early-1980's, with EDR-Gain, with equity-for-debt swaps as a method, and with common stock as a primary instrument used to retire debt. Thus, the significant market reactions for all sample seems to be largely driven by equity-for-debt swaps which prevailed as a popular quasi-recapitalization tool by using mostly common stock for the period of 1981-1985 (early 1980's portfolio in this study), resulting in a large swap gains.

In summary from Table 6-6 which condenses results of Table 6-4, the Z-statistics on the difference in AR and CAR between portfolios shows that, in general, there is no significantly different abnormal behavior between portfolios with some exceptions. The portfolios with strong market reactions (e.g., early 1980's, equity-for-debt swaps, common stock for the all sample, and common stock for early 1980's) have more negative ARs at t-1 or t=0 and/or CAR for [-1,0] than their counterparts (e.g., late 1980's, all other methods, cash for all sample, cash for early 1980's, respectively).

6.5 Summary

This chapter investigated the impacts of EDR on the equity value of the redeemers. By using an event-type methodology, the chapter tested three well-known hypotheses: (1) a tax-effects hypothesis; (2) a wealth-transfer hypothesis; and (3) an information-effects hypothesis. Consistent with the wealth-transfer hypothesis and information-effects hypothesis, the empirical test results show that, in general, there is a negative market reaction around the EDR announcements. The negative market reactions were found not only for the EDRs which resulted in redemption gains but also for the EDRs which resulted in redemption losses. These results imply that the income effect of EDRs as a by-product of redemption did not affect the stock price, but rather the leverage reducing effect of EDRs did have some information content which affected the stock price. From the portfolio analysis, stronger reactions are observed for the all sample and sub-sample for early 1980's, EDR-Gain, equity-for-debt swaps, common stock as an instrument for the all sample, and common stock for the early 1980's and the late 1980's. Thus, the significant market reactions for all sample seems to be largely driven by equity-for-debt swaps which prevailed as a popular quasi-recapitalization tool by using mostly common stock for the period of 1981-1985 (early 1980's portfolio in this study). These results indicate that stockholders react more when outstanding debt is retired by issuing new stocks for the exchange than when retired by other instruments. However, the interpretation of the results should be cautious because the EDR announcement data represents only 28% of total EDR events.

Chapter 7

CONCLUSION, LIMITATIONS, AND FUTURE STUDY AREA

The objectives of this study are to answer three economic questions: (1) Why and when did firms undertake early debt-redemption (EDR)? (2) What was the impact of EDR on the equity value of those firms which undertook EDRs? (3) Are there any differences in motivations and impacts of EDR in terms of different time horizons and different means used to achieve EDRs? This paper uses a sample of all types of EDRs during the decade of the 1980s (1977-1988). This allows a comprehensive analysis of EDRs and a more robust test of prior evidence such as the income smoothing hypothesis because the current sample includes both gains and losses from EDRs. As an alternative explanation of motivations behind EDRs, the study proposes leverage adjusting and distress avoiding hypotheses because the main outcome of EDR is leverage reducing effects while income smoothing through EDR is a by-product of EDR. The paper argues that leverage reducing and/or covenant relaxation motivate the decision to proceed with EDRs.

In Chapter 5, the paper investigates motivations behind EDRs. By applying both time-series and cross-sectional analyses, this paper tested three hypotheses: (1) income smoothing or income management hypotheses; (2) leverage adjusting or covenant relaxation hypotheses; and (3) financial distress hypothesis.

The results of the time-series analysis are as follows. For the income smoothing hypothesis, the plotting approach shows that the time-series of year-to-year quarterly EPS would have transitorily decreased (increased) in the redemption quarter had EDR with gain (loss) not been conducted. When the statistical test for variance change was applied, only for certain types of EDRs, firms used the redemption gain and loss to smooth time-series variance of year-to-year quarterly EPSc. When a more correct earnings measure EPSb was used to test the hypothesis, there was no such income smoothing behaviors, but rather counter-smoothing behaviors are observed for the all sample and most of the sub-samples. For leverage adjusting or covenant relaxation hypotheses, both the plotting approach and statistical location test show that redeemers tend to directly reduce their debt by taking EDRs when the leverage was at a peak for a given period of time (five years) as if they have an upper boundary of leverage. The results are consistent for the all sample and all of the sub-samples. For the financial distress and credit-rating change hypotheses, both the plotting approach and location test show that redeemers tend to directly reduce their debt by taking EDRs when their financial distress level and credit-rating was the lowest for a given period of time (five years). The results are also consistent for the all sample and all of the sub-samples.

The results of the cross-sectional analysis indicate that, after controlling size effects, redeemers had poorer earnings performance, were highly leveraged and financially distressed compared to the control samples and industry average firm. These results are consistent for the all sample and most of the sub-samples.

In conclusion, while the evidence is ambiguous whether firms used EDRs to smooth reported income, the evidence is very clear that firms undertook EDRs when their financial leverage was at a peak and their distress level was at the bottom across time. This evidence is also consistent with the cross-sectional comparison with non-redeemers.

In Chapter 6, the paper investigated the impacts of EDR on the equity value of the redeemers. By using an event-type methodology, this paper tested three well-known hypotheses: (1) a tax-effects hypothesis; (2) a wealth-transfer hypothesis; and (3) an information-effects hypothesis. Consistent with the wealth-transfer hypothesis and information-effects hypothesis, the empirical test results show that, in general, there is a negative market reaction around the EDR announcements. The negative market reactions were found not only for the EDRs which resulted in redemption gains but also for the EDRs which resulted in redemption losses. These results imply that the income effect of EDRs as a by-product of redemption did not affect the stock price, but rather the leverage reducing effect of EDRs did have some information content which affected the stock price. From the portfolio analysis, stronger reactions are observed for the all sample and sub-sample for early 1980's, EDR-Gain, equity-for-debt swaps, common stock as an instrument for the all sample, and common stock for the early 1980's and the late 1980's. Thus, the significant market reactions for all sample seems to be largely driven by equity-for-debt swaps which prevailed as a popular quasi-recapitalization tool by using mostly common stock for the period of 1981-1985 (early 1980's portfolio in this study). These results indicate that stockholders react more when outstanding debt is retired by issuing new stocks for the exchange than when retired by other instruments. However, the interpretation of the results should be cautious because the EDR announcement data represents only 28% of total EDR events.

This paper has some limitations which include the followings: (1) a sampling problem due to a self-selection bias; (2) announcement date problem for the market study in Chapter 6 because not all EDR firms publicly announce their plan for EDR.

The subject of this study also possesses several implications for future research. The unanswered research questions are: (1) What factors do determine the accounting gain or loss? (2) Does the computation of gains or losses from EDR in accounting rules provide fruitful information to users? (3) Are there any interaction effects between a revision of financing policy such as EDR and investment activities such as disposal of assets, asset writedowns, or the big bath? (4) Do EDRs affect the systematic risks of the EDR firms' stocks and bonds? (5) What are the determinants of abnormal returns resulting from EDR announcements?

TABLE 2-1

The Relationship between Methods and Instruments of EDRs and the Effect of EDRs on Financial Statements by Different Instruments

Panel 1: The Relationship between Methods and Instruments of EDRs

Methods / Instruments	Common Stock	Preferred Stock	Cash	Assets	Debt
1. EDR by Repayment Provision			v		
2. Calls for Callable Bonds			v		
3. Tender Offers			v		
4. Exchange Offers:					
Stock-for-Debt Exchanges	v	v			
Debt-for-Debt Exchanges					v
Assets-for-Debt Exchanges			v	v	
5. Open Market Repurchases			v		
6. Private Offers	v	v	v	v	v
7. In-Substance Defeasances			v	v	
8. Conversion	v	v			

Panel 2: The Effect of EDRs on Leverage, Cash-Flows, and Covenants by Different Instruments Used

Instruments Used	Leverage	Cash-Flows	Covenants
Common Stock	Larger	No or Minor[1]	No
Preferred Stock	Larger	No or Minor[1]	No
Cash	Medium	Yes	No
Assets	Medium	No or Minor[1]	No
Debt	No or Minor	No or Minor[1]	Yes
Combined[2]	Mixed	Mixed	Mixed

1. Minor effects are due to the transaction costs of the direct exchange.
2. The effect of combined-for-debt EDR depends on the combination of the instruments used.

TABLE 4-1
Sample Selection Process for the Experimental Sample (Redeemers)

No.	Selection Criteria (Exclusion and Inclusion)			Firms	Firm-Years
1.	Candidates for redeemers from NAARS search			847	1,875
2.	Single entity but with two names due to name change			-39	-0
3.	Candidates as an entity base ....(1-2)			808	1,875
4.	**Firms excluded from the sample:**	Firms	Firm-Years		
	a. Firms not available from both COMPUSAT and CRSP	17	29		
	b. Firms not available from COMPUSTAT	10	21		
	c. 10-Ks and annual reports not available	21	41		
	d. EDRs occurred but foreign companies with different GAAP applied for EDR	16	41		
	e. EDRs under Chapter XI proceedings	15	26		
	f. EDRs occurred before initial public offering..	6	7		
	g. EDRs occurred in an unconsolidated subsidary..	7	15		
	h. Contingency interest-rate hedging or swaps ...	2	5		
	i. Prepayment penalty for Federal Home Loan Bank	13	28		
	j. Unable to reconstruct EDR transaction due to the lack of disclosure	5	15		
	k. No EDRs firms	196	363		
	Sub-Total (a through k)			-308	-591
5.	Redeemers ....(3-4)			500	1,284
6.	Additional EDR firm-years found from redeemers			+0	+325
7.	Total redeemers and firm-years available ....(5+6)			500	1,609
8.	Troubled debt restructuring firms			-52	-149
9.	EDR firms and firm-years ....(7-8)			448	1,460
10.	**Firm-years excluded from the sample:**		Firm-Years		
	a. Redemption occurred in prior year(s) but disclosed as comparative information		450		
	b. EDR occurred in the subsequent year, but disclosed as a subsequent event		17		
	c. Conversion of convertible debt		5		
	d. EDR occurred before initial public offering		1		
	e. Prepayment penalty for Federal Home Loan Bank		15		
	f. 10-K and annual report not available in the year...		4		
	g. Firm-years with Chapter XI proceeding		6		
	h. Firm-years with troubled debt restructuring		28		
	i. Unable to reconstruct EDR transaction in the year due to the lack of disclosure		49		
	j. No EDRs in the prior, next year, and in the year...		122		
	Sub-Total (a through j)			-0	-697
11.	**Final sample (annual base)** ....(9-10)			448	763

TABLE 4-2

Distribution of EDRs across Calendar Years by Portfolios

Portfolio	Redemption Year (Calendar-Year Base)												Total	%
	77	78	79	80	81	82	83	84	85	86	87	88		
All Sample	6	7	9	26	55	97	99	65	83	125	154	37	763	
%	0.8	0.9	1.2	3.4	7.2	12.7	13.0	8.5	10.9	16.4	20.2	4.9		100.00
By Period;														
Early 1980's	6	7	9	26	55	97	99	65	28	.	.	.	392	51.38
Late 1980's	.	.	.	.	.	.	.	.	55	125	154	37	371	48.62
By Effect:														
EDR-Gain	6	7	8	24	52	91	79	54	50	15	44	22	452	59.24
EDR-Loss	.	.	1	1	2	5	13	7	18	99	99	14	259	33.94
Zero-Gain	.	.	.	1	1	1	7	4	15	11	11	1	52	6.82
By Method:														
Debt-Equity Swaps	.	.	.	2	19	48	38	17	4	2	1	.	131	17.17
Open Market	.	.	.	2	4	4	3	2	2	5	20	7	49	6.42
Call Offers	.	1	.	1	1	.	.	.	2	10	3	2	20	2.62
Induced Call	.	.	1	.	1	1	3	.	.	3	2	.	11	1.44
Defeasance	.	.	.	.	2	1	4	7	8	6	4	.	32	4.19
Tender Offer	.	.	.	1	3	1	2	1	4	2	5	.	19	2.49
Private Offer	1	2	.	.	.	1	.	.	.	.	.	.	4	0.52
Others	5	4	8	20	25	41	49	38	63	97	119	28	497	65.14
By Method:														
Debt-Equity Swaps	.	.	.	2	19	48	38	17	4	2	1	.	131	17.17
All Other Methods	6	7	9	24	36	49	61	48	79	123	153	37	632	82.83
By Instrument:														
Cash	1	6	7	18	28	39	44	32	60	101	137	35	508	66.58
Debt	4	1	1	5	7	7	6	7	10	8	8	2	66	8.65
Common Stock	.	.	1	1	16	46	41	15	6	10	6	.	142	18.61
Preferred Stock	1	.	.	1	3	4	3	3	1	.	.	.	16	2.10
Asset	.	.	.	1	1	1	5	8	6	6	3	.	31	4.06
By Disclosure:														
Extraordinary	6	6	5	16	40	73	75	47	59	107	134	36	604	79.16
Other Items	.	.	.	7	6	17	12	12	6	1	5	.	66	8.65
Special Items	.	1	3	1	6	2	2	1	2	1	1	.	20	2.62
Deferred	.	.	1	.	.	1	.	.	1	2	2	.	7	0.92
Zero-Gain	.	.	.	1	1	1	7	4	15	11	11	1	52	6.82
Mixed One	.	.	.	1	1	.	.	.	.	1	1	.	4	0.52
Mixed Two	.	.	.	.	1	3	3	1	.	2	.	.	10	1.31

(TABLE 4-2 - continued)

Distribution of EDRs across Calendar Years by Portfolios

By Industry:

Two-Digit SIC Code	Redemption Year (Calendar-Year Base) 77	78	79	80	81	82	83	84	85	86	87	88	Total	%
1	.	.	.	.	1	.	.	.	.	.	.	.	1	0.13
2	.	.	.	1	.	.	.	.	.	.	.	.	1	0.13
10	.	.	.	.	1	2	.	2	.	.	.	.	5	0.66
13	.	.	1	1	.	3	6	7	8	4	6	2	38	4.98
15	.	1	.	.	.	1	.	.	.	1	1	1	5	0.66
16	.	.	.	.	.	.	.	.	1	.	.	.	1	0.13
20	.	.	.	1	.	6	5	4	4	5	6	1	32	4.19
21	.	.	.	.	.	.	1	.	.	.	.	.	1	0.13
22	.	.	.	.	1	1	1	.	2	.	1	1	7	0.92
23	.	.	.	.	.	1	1	.	.	.	.	1	3	0.39
24	.	.	.	.	.	1	.	.	3	.	.	.	4	0.52
25	.	.	.	.	.	.	.	.	.	1	.	.	1	0.13
26	.	.	.	.	2	3	2	2	.	4	4	1	18	2.36
27	.	.	.	.	.	.	.	.	.	2	4	.	6	0.79
28	.	.	.	2	1	6	4	3	2	3	13	3	37	4.85
29	.	.	.	.	1	2	4	2	2	5	1	1	18	2.36
30	.	.	.	3	1	3	4	1	1	5	1	.	19	2.49
31	.	.	.	1	.	.	1	.	1	.	.	.	3	0.39
32	.	.	.	.	1	1	6	3	2	2	3	.	18	2.36
33	.	.	.	1	2	8	8	6	4	2	7	.	38	4.98
34	.	1	.	.	4	2	5	2	4	5	5	.	28	3.67
35	.	.	2	1	2	6	5	1	4	6	6	.	33	4.33
36	1	.	1	2	5	5	8	2	5	8	8	2	47	6.16
37	.	.	.	1	1	5	2	3	2	6	3	.	23	3.01
38	.	.	.	.	.	4	.	1	2	6	4	.	17	2.23
39	.	.	.	.	3	1	2	2	2	1	1	.	12	1.57
40	.	.	.	.	1	1	1	.	1	.	2	1	7	0.92
42	.	.	.	.	.	.	1	.	.	.	.	1	2	0.26
44	.	.	.	.	.	.	.	1	1	.	.	.	2	0.26
45	1	1	1	3	1	1	2	3	3	.	2	.	18	2.36
48	.	.	.	.	1	1	.	.	2	3	4	1	12	1.57
49	.	.	.	.	3	9	3	3	7	11	13	.	49	6.42
50	.	.	.	1	1	1	3	.	1	1	1	.	9	1.18
51	.	.	1	1	.	.	1	1	.	2	1	3	10	1.31
52	.	.	.	.	.	.	.	.	1	.	2	.	3	0.39
53	.	.	.	.	1	.	.	1	1	6	.	.	9	1.18
54	.	.	.	.	1	1	1	.	.	2	.	.	5	0.66
56	1	1	.	.	.	.	.	.	.	.	.	.	2	0.26
57	.	.	.	.	.	1	.	.	.	.	1	.	2	0.26
58	.	.	.	.	.	2	2	.	1	1	3	.	9	1.18
59	.	.	.	.	1	1	.	.	.	2	2	.	6	0.79

(Industry distribution - continued)

(TABLE 4-2 - continued)

Distribution of EDRs across Calendar Years by Portfolios

By Industry - continued:

Two-Digit SIC Code	Redemption Year (Calendar-Year Base) 77	78	79	80	81	82	83	84	85	86	87	88	Total	%
60	.	.	.	3	4	3	4	3	1	2	2	5	27	3.54
61	.	.	1	1	6	8	4	4	1	5	9	1	40	5.24
62	.	.	.	.	.	.	.	.	.	3	3	.	6	0.79
63	.	.	.	.	.	2	.	.	1	3	4	.	10	1.31
64	.	.	.	.	.	.	.	1	.	.	.	.	1	0.13
65	.	.	.	.	3	1	5	.	2	2	7	2	22	2.88
67	2	2	.	1	3	3	.	2	1	3	3	2	22	2.88
70	1	1	.	.	.	.	2	.	.	.	2	.	6	0.79
73	.	.	2	1	.	.	.	2	2	3	5	1	16	2.10
75	.	.	.	.	2	.	2	.	1	.	1	.	6	0.79
78	.	.	.	.	.	.	1	.	.	1	.	1	3	0.39
79	.	.	.	.	.	.	1	2	2	2	5	.	12	1.57
80	.	.	.	1	1	.	.	1	5	6	5	1	20	2.62
82	.	.	.	.	.	.	.	.	.	.	1	1	2	0.26
87	.	.	.	.	.	.	.	.	.	.	.	1	1	0.13
N.A.	.	.	.	.	.	1	1	.	.	1	2	3	8	1.05
Total	6	7	9	26	55	97	99	65	83	125	154	37	763	
%	0.8	0.9	1.2	3.4	7.2	12.7	13.0	8.5	10.9	16.4	20.2	4.9		100.00

N.A.: Not available.

TABLE 4-3

Interaction between Two Sub-Periods and Income Effect

Panel 1: Contingecy Table

Sub-Period	Income Effect			
	EDR Gain	Zero Gain	EDR Loss	Total
Early 1980's	338 (44.3)	19 (2.5)	35 (4.6)	392 (51.4)
Late 1980's	114 (14.9)	33 (4.3)	224 (29.4)	371 (48.6)
Total	452 (59.2)	52 (6.8)	259 (34.0)	763 (100.0)

( ) represents the proportion (%) out of total EDRs.

Panel 2: Chi-Square Independence Test between Sub-Period and Income Effect

Statistic	DF	Value	Probability
Chi-Square	2	252.310	0.000
Likelihood Ratio Chi-Square	2	273.212	0.000
Mantel-Haenszel Chi-Square	1	250.864	0.000
Phi		0.575	
Contingency Coefficient		0.499	
Cramer's V		0.575	
Sample Size = 763			

Panel 3: Distribution by Period and Instrument:

Period	Instrument					Total	%
	Cash	Debt	Common Stock	Preferred Stock	Asset		
Early 1980's	193	42	125	15	17	392	51.38
Late 1980's	315	24	17	1	14	371	48.62
Total	508	66	142	16	31	763	
%	66.58	8.65	18.61	2.10	4.06		100.00

TABLE 4-4
Descriptive Statistics of EDRs and EDR Firms

Panel 1: Descriptive Statistics of EDRs

Item	Minimum	Median	Mean	Maximum	Std. Dev.	Valid EDRs
Face value of debt redeemed[1]	0.12	28.91	86.90	2997.00	205.47	763
Payment per annual EDR[2]	0.09	25.40	87.89	3538.00	229.93	763
Remaining Balance for the retired debt[3]	0.00	16.82	99.59	6068.00	372.63	763
Coupon[4] (%) - All Sample	2.00	9.25	9.76	18.50	2.94	714
- Early 1980s	2.00	8.40	8.52	18.50	2.37	373
- Late 1980s	4.20	11.25	11.10	18.25	2.91	341
Years to maturity[5]	0.00	8.00	9.24	38.00	6.88	670
Years to maturity[6]	0.00	13.00	13.98	38.00	7.67	665
EDR gain after tax[7]	-473.00	0.27	0.35	95.35	24.42	763
Taxes on EDR gain[8]	249.00	0.00	1.28	-43.00	11.73	763
Income effect[9]:						
- All sample	-11.03	0.02	0.14	20.47	1.36	742
- EDR-Gain	0.00	0.09	0.41	20.47	1.60	436
- EDR-Loss	-11.03	-0.09	-0.30	0.00	0.85	255
Leverage effect[10]:						
- All sample	-0.03	0.13	0.38	27.90	1.35	706
- EDR-Gain	0.01	0.10	0.35	27.09	1.47	415
- EDR-Loss	-0.03	0.17	0.40	17.62	1.21	243
- Zero-Gain	0.02	0.18	0.52	4.41	0.93	48

1. $ in million.
2. $ in million and Payment = (Face value) - (Gain before tax).
3. $ in million and remaining balance for the retired debt at the end of fiscal year.
4. Weighted average coupon if more than two classes of issues were retired (Excluded zero-coupon EDRs and variable-rate coupon EDRs).
5. Remaining years to the <u>earliest</u> maturity for multiple maturities with single issue or more than two classes of issues retired.
6. Remaining years to the <u>latest</u> maturity for multiple maturities with single issue or more than two classes of issues retired.
7. $ in million (negative numbers stand for EDR losses).
8. $ in million (negative for tax charge and positive for tax credit).
9. Income effect (IE):

$$\text{IE} = \frac{\text{(EDR gain)}}{|\text{(Net income after discontinued \& extraordinary items)}|}$$

10. Leverage effect (LE):

$$\text{LE} = [(\text{LTDSE}_{\text{as-if}})-(\text{LTDSE})] \ / \ (\text{LTDSE})$$

where LTDSE = (Long-term debt)/(Stockholders' equity) at the end of redemption year.

$\text{LTDSE}_{\text{as-if}}$ = LTDSE without redemption effect.

(TABLE 4-4 - continued)

Panel 2: Distribution of Income Effect (IE)

Range of Income Effect	All Sample		EDR-Gain		EDR-Loss	
IE ≤ -1.00	34	(4.5)	.		34	(13.1)
-1.00 < IE ≤ -0.50	23	(3.0)	.		23	(8.9)
-0.50 < IE ≤ -0.40	5	(0.7)	.		5	(1.9)
-0.40 < IE ≤ -0.30	12	(1.6)	.		12	(4.6)
-0.30 < IE ≤ -0.20	14	(1.8)	.		14	(5.4)
-0.20 < IE ≤ -0.10	49	(6.4)	.		49	(18.9)
-0.10 < IE ≤ -0.05	60	(7.9)	.		60	(23.2)
-0.05 < IE < 0.00	74	(9.7)	.		79	(30.5)
0.00 = IE	58	(7.6)	.		.	
0.00 < IE < 0.05	133	(17.4)	135	(29.8)	.	
0.05 ≤ IE < 0.10	105	(13.8)	105	(23.2)	.	
0.10 ≤ IE < 0.20	90	(11.8)	90	(19.9)	.	
0.20 ≤ IE < 0.30	18	(2.4)	18	(4.0)	.	
0.30 ≤ IE < 0.40	18	(2.4)	18	(4.0)	.	
0.40 ≤ IE < 0.50	13	(1.7)	13	(2.9)	.	
0.50 ≤ IE < 1.00	32	(4.2)	32	(7.1)	.	
1.00 ≤ IE	25	(3.3)	41	(9.0)	.	
Total	763	(100.0)	452	(100.0)	259	(100.0)

( ) represents percentage.

Panel 3: Distribution of Leverage Effect (LE)

Range of Leverage Effect	All Sample		EDR-Gain		EDR-Loss	
0.00 < LE < 0.025	65	(9.4)	41	(9.9)	20	(8.6)
0.025 ≤ LE < 0.05	88	(12.7)	66	(15.9)	18	(7.8)
0.05 ≤ LE < 0.075	73	(10.5)	53	(12.8)	14	(6.0)
0.075 ≤ LE < 0.10	60	(8.6)	44	(10.6)	14	(6.0)
0.10 ≤ LE < 0.20	157	(22.6)	87	(21.0)	59	(25.4)
0.20 ≤ LE < 0.30	71	(10.2)	36	(8.7)	28	(12.1)
0.30 ≤ LE < 0.40	44	(6.3)	20	(4.8)	23	(9.9)
0.40 ≤ LE < 0.50	33	(4.7)	16	(3.9)	13	(5.6)
0.50 ≤ LE	104	(15.0)	52	(12.5)	43	(18.5)
Total	763	(100.0)	415	(100.0)	232	(100.0)

( ) represents percentage.

Panel 4: Distribution of EDRs by Frequency

	Number of EDRs for the Period of 1977-1988						
	1	2	3	4	5	6	Total
Number of Firms who did this Number of EDRs	242	128	48	22	3	3	448
(Percentage)	(54)	(29)	(11)	(5)	(1)	(1)	(100)

(TABLE 4-4 - continued)

Panel 5: Distribution of Coupon by Period

Range of Coupon	All Sample		Early 1980s		Late 1980s	
2% < Coupon ≤ 4%	1	(0.1)	1	(0.3)	0	(0.0)
4% < Coupon ≤ 6%	63	(8.9)	50	(13.4)	13	(3.8)
6% < Coupon ≤ 8%	134	(18.7)	99	(26.5)	35	(10.3)
8% < Coupon ≤ 10%	212	(29.7)	140	(37.5)	72	(21.1)
10% < Coupon ≤ 12%	137	(19.2)	54	(14.5)	83	(24.3)
12% < Coupon ≤ 14%	89	(12.5)	19	(5.1)	70	(20.6)
14% < Coupon ≤ 16%	64	(8.9)	7	(1.9)	57	(16.7)
16% < Coupon ≤ 18%	12	(1.7)	2	(0.5)	10	(2.9)
18% < Coupon	2	(0.3)	1	(0.3)	1	(0.3)
Fixed coupon total	714	(100.0)	373	(100.0)	341	(100.0)
Zero coupon	33		14		19	
Variable coupon	16		5		11	

( ) represents proportion of each range out of fixed coupon total.

Panel 6: Class of Primary Debt per EDR

Class of Debt	Number of EDRs	
Subordinated Debt	238	(31.2)
Debentures	175	(23.0)
Notes	100	(13.1)
Senior Debt	58	(7.6)
Senior Subordinated Debt	36	(4.7)
Senior Unsecured Debt	13	(1.7)
First Mortgage Bond	32	(4.2)
Others	111	(14.5)
Total	763	(100.0)

( ) represents percentage.

Panel 7: Number of Different Debts Issues per EDR

Number of Debts	Number of EDRs	
1	419	(54.9)
2	192	(25.2)
3	67	(8.8)
4	41	(5.4)
5	16	(2.1)
6	8	(1.0)
7 and more	20	(2.6)
Total	763	(100.0)

( ) represents percentage.

Panel 8: Retirement Options

Options	Number of EDRs	
Sinking-Fund:		
used for	66	(8.7)
will be used for	156	(20.4)
convertibles	106	(13.9)
Installment	20	(2.6)
Others/No Information	415	(54.4)
Total	763	(100.0)

( ) represents percentage.

Panel 9: Marketability of Debt

Marketability	Number of EDRs	
NYSE and AMEX	178	(23.4)
Other Exchanges	7	(0.9)
Private - Bank	65	(8.5)
- Insurance	1	(0.1)
Foreign Debt	8	(1.0)
No Information	504	(66.1)
Total	763	(100.0)

( ) represents percentage.

TABLE 4-5

Definition of Variables

Panel	Variable	Definition	
Panel 1: Collected Variables:			
	$GAIN_{jt}$	= Gain or loss from EDR in year t	
	$EDRTAX_{jt}$	= Income tax effect on EDR gain or loss in year t	
	FDR_{jt}	= Face value of debt retired in year t	
	CDR_{jt}	= Carrying value of debt retired in year t	
	CDN_{jt}	= Present value of new debt exchanged, if any	
	SEN_{jt}	= Market value of new common stock exchanged, if any	
	$PFDN_{jt}$	= Market value of new preferred stock exchanged, if any	
	$CASH_{jt}$	= Cash payment for EDR, if any	
	$ASSET_{jt}$	= Carrying value of assets exchanged, if any	
	T_{jt}	= Marginal tax rate in year t	
Panel 2: Compustat Variables:			
Annual:			(Compustat item No.)
	LTD_{jt}	= Long-term debt at the year-end t	(#9)
	SE_{jt}	= Stockholders' equity at the year-end t	(#60)
	TD_{jt}	= Total debt at the year-end t	([#6-#60-#130])
	TA_{jt}	= Total asset at the year-end t	(#6)
	MV_{jt}	= Market value of common stock at the fiscal year-end t	([#199*#25])
	NIc_{jt}	= Net income before discontinued operations and extraordinary item in year t	(#18)
	NIb_{jt}	= Net income after discontinued operations and extraordinary items in year t	([#18+#48])
	PPS_{jt}	= Closing value of stock price at the fiscal year-end t	(#199)
	$NSHRS_{jt}$	= Common shares outstanding (primary) at the fiscal year-end t	(#25)
	$FACTOR_{jt}$	= Adjusting factor (cumulative) ex-date	(#27)
Quarterly:			(Compustat item No.)
	NIc_{jq}	= Net income before discontinued operations and extraordinary item in quarter q	(#8)
	NIb_{jq}	= Net income after discontinued operations and extraordinary items in quarter q	([#8+#26])
		at the fiscal quarter-end q	(#14)
	$NSHRS_{jq}$	= Common shares outstanding (primary) at the fiscal quarter-end q	(#15)
	$FACTOR_{jq}$	= Adjusting factor (cumulative) ex-date	(#17)

(TABLE 4-5 - continued)

Definition of Variables

Panel	Variable	Definition

Panel 3: Variables for Motivation Study in Chapter 5

Annual Variables:

$EARNINGS_{jt}$: Earnings variables including $EPSc_{jt}$, $EPSb_{jt}$, $ROAc_{jt}$, and $ROAb_{jt}$

$EPSc_{jt} = (NIc_{jt})/(NSHRS_{jt})*(FACTOR_{jt})$
$EPSb_{jt} = (NIb_{jt})/(NSHRS_{jt})*(FACTOR_{jt})$
$ROAc_{jt} = (NIc_{jt})/(TA_{jt})$
$ROAb_{jt} = (NIb_{jt})/(TA_{jt})$

$LEVERAGE_{jt}$: Financial leverage variables including $LTDSE_{jt}$, $TDTA_{jt}$, and $LTDMV_{jt}$

$LTDSE_{jt} = (LTD_{jt})/(SE_{jt})$
$TDTA_{jt} = (TD_{jt})/(TA_{jt})$
$LTDMV_{jt} = (LTD_{jt})/(MV_{jt})$

$DISTRESS_{jt}$: Financial distress variables including $ZSCORE_{jt}$ and $RATING_{jt}$

$ZSCORE_{jt}$ = Altman's Z-score
$RATING_{jt}$ = S&P bond rating (Compustat item #280 multiplied by -1 to match with the "letter" grading)

$SIZE_{jt}$: Firm size proxy defined as $LSALES_{jt}$

$LSALES_{jt}$ = Natural logarithm of net sales (Compustat item #12)

"as-if" Variables:

$EPSc_{jt}$-if = $EPSc_{jt}$ without EDR effects
$EPSb_{jt}$-if = $EPSb_{jt}$ without EDR effects
$ROAc_{jt}$-if = $ROAc_{jt}$ without EDR effects
$ROAb_{jt}$-if = $ROAb_{jt}$ without EDR effects
$LTDSE_{jt}$-if = $LTDSE_{jt}$ without EDR effects
$TDTA_{jt}$-if = $TDTA_{jt}$ without EDR effects
$LTDMV_{jt}$-if = $LTDMV_{jt}$ without EDR effects

Quarterly Earnings Variables:

$EPSc_{jq} = (NIc_{jq})/(NSHRS_{jq})*(FACTOR_{jq})$
$EPSb_{jq} = (NIb_{jq})/(NSHRS_{jq})*(FACTOR_{jq})$
$EPSc_{jq}$-if = $EPSc_{jq}$ without EDR effects
$EPSb_{jq}$-if = $EPSb_{jq}$ without EDR effects

TABLE 5-9
Test for Income Smoothing Hypothesis (Quarterly Earnings)
- Excluding Zero-Gain EDRs and Missing EPS -

Panel 1: EPSc

Portfolios	N	Ne	Pe(%)	P(%)	DP(%)	ZDP
All Sample	966	502	52.00	50.00	2.00	1.243
By Period:						
Early 1980's	493	259	52.50	50.00	2.50	1.110
Late 1980's	473	243	51.40	50.00	1.40	0.609
By Effect:						
EDR-Gain	621	308	49.60	50.00	-0.40	-0.199
EDR-Loss	345	194	56.20	50.00	6.20	2.303**
By Method:						
Equity-for-Debt Swaps	151	92	60.90	50.00	10.90	2.679***
All Other Methods	815	410	50.30	50.00	0.30	0.171
By Instrument						
Cash	671	330	49.20	50.00	-0.80	-0.414
Debt	78	48	61.50	50.00	11.50	2.031**
Common Stock	166	98	59.00	50.00	9.00	2.319**
Preferred Stock	15	10	66.70	50.00	16.70	1.294
Asset	36	16	44.40	50.00	-5.60	-0.672
By Instrument: Early 1980's:						
Cash	264	120	45.50	50.00	-4.50	-1.462
Debt	50	32	64.00	50.00	14.00	1.980**
Common Stock	145	89	61.40	50.00	11.40	2.745***
Preferred Stock	14	10	71.40	50.00	21.40	1.601
Asset	20	8	40.00	50.00	-10.00	-0.894
By Instrument: Late 1980's:						
Cash	407	210	51.60	50.00	1.60	0.646
Debt	28	16	57.10	50.00	7.10	0.751
Common Stock	21	9	42.90	50.00	-7.10	-0.651
Asset	16	8	50.00	50.00	0.00	0.000

N : EDR observations which have full eight year-to-year quarterly EPSs (q={-16, -12, -8, -4, 0, +4, +8, +12}).
Ne : EDR observations, in which the time-series variance of the change in EDR firms' EPS in event-time centered on the EDR quarter (q=0) is lower when the EDR-Gain or EDR-Loss is included in the EDR quarter's EPS than it is excluded.
Pe : Percentage of Ne out of N (Pe=Ne/N*100).
P : Prior probability (0.50) under the assumption that an EDR will be taken randomly. (P=1/2=0.50)
DP : Difference between actual proportion (Pe) and prior probability (P) (DP=Pe-P).
ZDP= (Pe-P)/[(P*(1-P)/N)**1/2], where ZDP is a normal approximation (Z-statistics) to the binomial distribution. (ZDP is meaningless if N*P < 5 or N*(1-P) < 5).
***: significant at the 0.01 level (two-tailed).
** : significant at the 0.05 level (two-tailed).
* : significant at the 0.10 level (two-tailed).

(TABLE 5-9 - continued)

Test for Income Smoothing Hypothesis (Quarterly Earnings)
- Excluding Zero-Gain EDRs and Missing EPS -

Panel 2: EPSb

Portfolios	N	Ne	Pe(%)	P(%)	DP(%)	ZDP
All Sample	966	407	42.10	50.00	-7.90	-4.911***
By Period:						
Early 1980's	493	205	41.60	50.00	-8.40	-3.730***
Late 1980's	473	202	42.70	50.00	-7.30	-3.175***
By Effect:						
EDR-Gain	621	248	39.90	50.00	-10.10	-5.034***
EDR-Loss	345	159	46.10	50.00	-3.90	-1.449
By Method:						
Equity-for-Debt Swaps	151	72	47.70	50.00	-2.30	-0.565
All Other Methods	815	335	41.10	50.00	-8.90	-5.082***
By Instrument:						
Cash	671	281	41.90	50.00	-8.10	-4.196***
Debt	78	29	37.20	50.00	-12.80	-2.261**
Common Stock	166	76	45.80	50.00	-4.20	-1.082
Preferred Stock	15	7	46.70	50.00	-3.30	-0.256
Asset	36	14	38.90	50.00	-11.10	-1.332
By Instrument during Early 1980's:						
Cash	264	105	39.80	50.00	-10.20	-3.315***
Debt	50	16	32.00	50.00	-18.00	-2.546**
Common Stock	145	69	47.60	50.00	-2.40	-0.578
Preferred Stock	14	7	50.00	50.00	0.00	0.000
Asset	20	8	40.00	50.00	-10.00	-0.894
By Instrument during Late 1980's:						
Cash	407	176	43.20	50.00	-6.80	-2.744***
Debt	28	13	46.40	50.00	-3.60	-0.381
Common Stock	21	7	33.30	50.00	-16.70	-1.531
Asset	16	6	37.50	50.00	-12.50	-1.000

For the description of the table headings, see bottom of Panel 1.

TABLE 5-10

Test for Leverage Adjusting and Covenant Relaxation Hypotheses

Panel 1: LTDSE

Portfolio	N	Ne	Pe	P	DP	ZDP
All Sample	648	250	38.60	20.00	18.60	11.837***
By Period:						
Early 1980's	348	119	34.20	20.00	14.20	6.622***
Late 1980's	300	131	43.70	20.00	23.70	10.262***
By Effect:						
EDR-Gain	382	143	37.40	20.00	17.40	8.502***
EDR-Loss	215	88	40.90	20.00	20.90	7.661***
Zero-Gain	51	19	37.30	20.00	17.30	3.089***
By Method:						
Equity-for-Debt Swaps	122	41	33.60	20.00	13.60	3.755***
All Other Methods	526	209	39.70	20.00	19.70	11.295***
By Instrument:						
Cash	431	166	38.50	20.00	18.50	9.602***
Debt	48	21	43.80	20.00	23.80	4.122***
Common Stock	127	40	31.50	20.00	11.50	3.240***
Preferred Stock	15	9	60.00	20.00	40.00	3.873***
Asset	27	14	51.90	20.00	31.90	4.144***
By Instrument: Early 1980's:						
Cash	171	57	33.30	20.00	13.30	4.348***
Debt	32	15	46.90	20.00	26.90	3.804***
Common Stock	116	34	29.30	20.00	9.30	2.504**
Preferred Stock	14	8	57.10	20.00	37.10	3.470***
Asset	15	5	33.30	20.00	13.30	1.288
By Instrument: Late 1980's:						
Cash	260	109	41.90	20.00	21.90	8.828***
Debt	16	6	37.50	20.00	17.50	1.750*
Common Stock	11	6	54.50	20.00	34.50	2.861***
Asset	12	9	75.00	20.00	55.00	4.763***

N : EDR observations which have full data from t-4 to t=0 year.
Ne : EDR observations, in which LTDSE ("as-if") at t=0 is the highest among past five years' LTDSE including t=0 year.
Pe : Percentage of Ne out of N (Pe=Ne/N*100).
P : Prior probability (0.20) such that LTDSE ("as-if") at t=0 is located at the highest point among past five years' LTDSE, under the assumption that EDR will be taken randomly. (P=1/5=0.20 or 20 percent).
DP : Difference between actual proportion (Pe) and prior probability (P) (DP=Pe-P).
ZDP= (Pe-P)/[(P*(1-P)/N)**1/2], where ZDP is a normal approximation (Z-statistics) to the binomial distribution. (ZDP is meaningless if N*P < 5 or N*(1-P) < 5).
***: significant at the 0.01 level (two-tailed).
** : significant at the 0.05 level (two-tailed).
* : significant at the 0.10 level (two-tailed).

(TABLE 5-10 - continued)

Test for Leverage Adjusting and Covenant Relaxation Hypotheses

Panel 2: TDTA

Portfolio	N	Ne	Pe	P	DP	ZDP
All Sample	687	271	39.40	20.00	19.40	12.712***
By Period:						
Early 1980's	365	133	36.40	20.00	16.40	7.833***
Late 1980's	322	138	42.90	20.00	22.90	10.273***
By Effect:						
EDR-Gain	405	146	36.00	20.00	16.00	8.050***
EDR-Loss	227	98	43.20	20.00	23.20	8.739***
Zero-Gain	55	27	49.10	20.00	29.10	5.395***
By Method:						
Equity-for-Debt Swaps	125	44	35.20	20.00	15.20	4.249***
All Other Methods	562	227	40.40	20.00	20.40	12.090***
By Instrument:						
Cash	448	171	38.20	20.00	18.20	9.631***
Debt	60	28	46.70	20.00	26.70	5.170***
Common Stock	136	47	34.60	20.00	14.60	4.257***
Preferred Stock	16	10	62.50	20.00	42.50	4.250***
Asset	27	15	55.60	20.00	35.60	4.625***
By Instrument: Early 1980's:						
Cash	176	58	33.00	20.00	13.00	4.312***
Debt	39	19	48.70	20.00	28.70	4.481***
Common Stock	120	40	33.30	20.00	13.30	3.642***
Preferred Stock	15	10	66.70	20.00	46.70	4.522***
Asset	15	6	40.00	20.00	20.00	1.936*
By Instrument: Late 1980's:						
Cash	272	113	41.50	20.00	21.50	8.865***
Debt	21	9	42.90	20.00	22.90	2.624***
Common Stock	16	7	43.80	20.00	23.80	2.380**
Asset	12	9	75.00	20.00	55.00	4.763***

N : EDR observations which have full data from t-4 to t=0 year.
Ne : EDR observations, in which TDTA ("as-if") at t=0 is the highest among past five years' TDTAs including t=0 year.
Pe : Percentage of Ne out of N (Pe=Ne/N*100).
P : Prior probability (0.20) such that TDTA ("as-if") at t=0 is located at the highest point among past five years' TDTAs, under the assumption that EDR will be taken randomly. (P=1/5=0.20 or 20 percent).
DP : Difference between actual proportion (Pe) and prior probability (P) (DP=Pe-P).
ZDP= (Pe-P)/[(P*(1-P)/N)**1/2], where ZDP is a normal approximation (Z-statistics) to the binomial distribution. (ZDP is meaningless if N*P < 5 or N*(1-P) < 5).
***: significant at the 0.01 level (two-tailed).
** : significant at the 0.05 level (two-tailed).
* : significant at the 0.10 level (two-tailed).

TABLE 5-11

Test for Financial Distress Hypothesis

Portfolio	N	Ne	Pe	P	DP	ZDP
All Sample	551	184	33.40	20.00	13.40	7.864***
By Period:						
Early 1980's	289	93	32.20	20.00	12.20	5.185***
Late 1980's	262	91	34.70	20.00	14.70	5.949***
By Effect:						
EDR-Gain	321	111	34.60	20.00	14.60	6.540***
EDR-Loss	181	60	33.10	20.00	13.10	4.406***
Zero-Gain	49	13	26.50	20.00	6.50	1.137
By Method:						
Equity-for-Debt Swaps	104	41	39.40	20.00	19.40	4.946***
All Other Methods	447	143	32.00	20.00	12.00	6.343***
By Instrument:						
Cash	354	107	30.20	20.00	10.20	4.798***
Debt	47	22	46.80	20.00	26.80	4.593***
Common Stock	117	41	35.00	20.00	15.00	4.056***
Preferred Stock	10	5	50.00	20.00	30.00	2.372**
Asset	23	9	39.10	20.00	19.10	2.290**
By Instrument: Early 1980's:						
Cash	135	33	24.40	20.00	4.40	1.278
Debt	31	15	48.40	20.00	28.40	3.953***
Common Stock	102	37	36.30	20.00	16.30	4.116***
Preferred Stock	10	5	50.00	20.00	30.00	2.372**
Asset	11	3	27.30	20.00	7.30	0.605
By Instrument: Late 1980's:						
Cash	219	74	33.80	20.00	13.80	5.106***
Debt	16	7	43.80	20.00	23.80	2.380**
Common Stock	15	4	26.70	20.00	6.70	0.649
Asset	12	6	50.00	20.00	30.00	2.598***

N : EDR observations which have full data from t-4 to t=0 year.
Ne : EDR observations, in which ZSCORE at t=0 is the lowest among past five years' ZSCOREs including t=0 year.
Pe : Percentage of Ne out of N (Pe=Ne/N*100).
P : Prior probability (0.20) such that ZSCORE at t=0 is located at the lowest point among past five years' ZSCOREs, under the assumption that EDR will be taken randomly. (P=1/5=0.20 or 20 percent).
DP : Difference between actual proportion (Pe) and prior probability (P) (DP=Pe-P).
ZDP= (Pe-P)/[(P*(1-P)/N)**1/2], where ZDP is a normal approximation (Z-statistics) to the binomial distribution. (ZDP is meaningless if N*P < 5 or N*(1-P) < 5).
***: significant at the 0.01 level (two-tailed).
** : significant at the 0.05 level (two-tailed).
* : significant at the 0.10 level (two-tailed).

TABLE 5-12

Test for Credit-Rating Change Hypothesis

Panel 1: Including No-Changes in Credit-Rating

Portfolio	N	Ne	Pe	P	DP	ZDP
All Sample	314	253	80.60	20.00	60.60	26.846***
By Period:						
Early 1980's	137	121	88.30	20.00	68.30	19.986***
Late 1980's	177	132	74.60	20.00	54.60	18.160***
By Effect:						
EDR-Gain	161	140	87.00	20.00	67.00	21.253***
EDR-Loss	127	93	73.20	20.00	53.20	14.988***
Zero-Gain	26	20	76.90	20.00	56.90	7.253***
By Method:						
Equity-for-Debt Swaps	76	67	88.20	20.00	68.20	14.864***
All Other Methods	238	186	78.20	20.00	58.20	22.447***
By Instrument:						
Cash	200	156	78.00	20.00	58.00	20.506***
Debt	20	19	95.00	20.00	75.00	8.385***
Common Stock	76	63	82.90	20.00	62.90	13.709***
Preferred Stock	5	5	100.00	20.00	80.00	4.472***
Asset	13	10	76.90	20.00	56.90	5.129***
By Instrument; Early 1980's:						
Cash	46	44	95.70	20.00	75.70	12.836***
Debt	8	8	100.00	20.00	80.00	5.657***
Common Stock	72	61	84.70	20.00	64.70	13.725***
Preferred Stock	5	5	100.00	20.00	80.00	4.472***
Asset	6	3	50.00	20.00	30.00	1.837*
By Instrument: Late 1980's:						
Cash	154	112	72.70	20.00	52.70	16.350***
Debt	12	11	91.70	20.00	71.70	6.209***
Common Stock	4	2	50.00	20.00	30.00	1.500
Asset	7	7	100.00	20.00	80.00	5.292***

N : EDR observations which have full data from t-4 to t=0 year.
Ne : EDR observations, in which RATING at t=0 is the lowest among past five years' RATINGs including t=0 year.
Pe : Percentage of Ne out of N (Pe=Ne/N*100).
P : Prior probability (0.20) such that RATING at t=0 is located at the lowest point among past five years' RATINGs, under the assumption that EDR will be taken randomly. (P=1/5=0.20 or 20 percent).
DP : Difference between actual proportion (Pe) and prior probability (P) (DP=Pe-P).
ZDP= (Pe-P)/[(P*(1-P)/N)**1/2], where ZDP is a normal approximation (Z-statistics) to the binomial distribution. (ZDP is meaningless if N*P < 5 or N*(1-P) < 5).
***: significant at the 0.01 level (two-tailed).
** : significant at the 0.05 level (two-tailed).
* : significant at the 0.10 level (two-tailed).

(TABLE 5-12 - continued)

Test for Credit-Rating Change Hypothesis

Panel 2: Excluding No-Changes in Credit-Rating

Portfolio	N	Ne	Pe	P	DP	ZDP
All Sample	314	164	52.20	20.00	32.20	14.265***
By Period:						
Early 1980's	137	80	58.40	20.00	38.40	11.237***
Late 1980's	177	84	47.50	20.00	27.50	9.147***
By Effect:						
EDR-Gain	161	92	57.10	20.00	37.10	11.769***
EDR-Loss	127	59	46.50	20.00	26.50	7.466***
Zero-Gain	26	13	50.00	20.00	30.00	3.824***
By Method:						
Equity-for-Debt Swaps	76	40	52.60	20.00	32.60	7.105***
All Other Methods	238	124	52.10	20.00	32.10	12.380***
By Instrument:						
Cash	200	100	50.00	20.00	30.00	10.607***
Debt	20	15	75.00	20.00	55.00	6.149***
Common Stock	76	36	47.40	20.00	27.40	5.972***
Preferred Stock	5	5	100.00	20.00	80.00	4.472***
Asset	13	8	61.50	20.00	41.50	3.741***
By Instrument: Early 1980's:						
Cash	46	32	69.60	20.00	49.60	8.410***
Debt	8	6	75.00	20.00	55.00	3.889***
Common Stock	72	34	47.20	20.00	27.20	5.770***
Preferred Stock	5	5	100.00	20.00	80.00	4.472***
Asset	6	3	50.00	20.00	30.00	1.837*
By Instrument: Late 1980's:						
Cash	154	68	44.20	20.00	24.20	7.508***
Debt	12	9	75.00	20.00	55.00	4.763***
Common Stock	4	2	50.00	20.00	30.00	1.500
Asset	7	5	71.40	20.00	51.40	3.400***

N : EDR observations which have full data from t-4 to t=0 year.
Ne : EDR observations, in which RATING at t=0 is the lowest among past five years' RATINGs including t=0 year.
Pe : Percentage of Ne out of N (Pe=Ne/N*100).
P : Prior probability (0.20) such that RATING at t=0 is located at the lowest point among past five years' RATINGs, under the assumption that EDR will be taken randomly. (P=1/5=0.20 or 20 percent).
DP : Difference between actual proportion (Pe) and prior probability (P) (DP=Pe-P).
ZDP= (Pe-P)/[(P*(1-P)/N)**1/2], where ZDP is a normal approximation (Z-statistics) to the binomial distribution. (ZDP is meaningless if N*P < 5 or N*(1-P) < 5).
***: significant at the 0.01 level (two-tailed).
** : significant at the 0.05 level (two-tailed).
* : significant at the 0.10 level (two-tailed).

TABLE 5-13

Two Sample Mean Difference T-Test between Redeemers and Control Sample
- By Winsorizing Extreme Values -

Panel 1: All Sample

*	EPSc	EPSb	ROAc	ROAb	LTDSE	TDTA	LTDMV	LSALES	ZSCORE	RATING
Mr	0.22	0.36	-0.01	-0.01	1.95	0.71	1.80	6.37	2.25	-13.06
Mc	1.58	1.59	0.04	0.04	0.70	0.58	0.58	5.37	4.17	-10.06
t	-6.91	-6.00	-11.54	-10.61	13.69	15.74	14.69	12.90	-13.06	-9.88
Pr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nr	763	763	763	763	742	742	741	742	609	460
Nc	2091	2091	2091	2091	2079	2077	2002	2090	1585	546

Panel 2-1: By Period: Early 1980's

*	EPSc	EPSb	ROAc	ROAb	LTDSE	TDTA	LTDMV	LSALES	ZSCORE	RATING
Mr	-0.05	0.10	-0.01	-0.01	1.83	0.70	1.80	6.33	2.30	-12.55
Mc	1.89	1.90	0.05	0.05	0.60	0.58	0.58	5.33	4.28	-9.37
t	-6.98	-6.14	-9.89	-9.12	9.90	10.49	11.31	9.20	-9.16	-7.21
Pr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nr	392	392	392	392	381	381	380	381	310	202
Nc	1087	1087	1087	1087	1084	1082	1042	1087	838	235

Panel 2-2: By Period: Late 1980's

*	EPSc	EPSb	ROAc	ROAb	LTDSE	TDTA	LTDMV	LSALES	ZSCORE	RATING
Mr	0.51	0.63	0.00	0.00	2.07	0.72	1.81	6.41	2.19	-13.45
Mc	1.24	1.26	0.04	0.04	0.81	0.58	0.58	5.42	4.03	-10.58
t	-2.65	-2.18	-6.43	-5.94	9.45	11.77	9.59	8.79	-9.43	-6.97
Pr	0.01	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nr	371	371	371	371	361	361	361	361	299	258
Nc	1004	1004	1004	1004	995	995	960	1003	747	311

* Mr: Mean of Redeemers. Nr: Sample Size of Redeemers.
Mc: Mean of Control Sample. Nc: Sample Size of Control Sample.
t : t-value of the Mean Difference. Pr: Significance Level (Two-Tailed).

TABLE 5-14

Logit Analysis of Early Debt Redemption
- By Winsorizing Extreme Values -

The 12 models in Table 5-14 have following specifications:

Model No		Earning	Leverage	Size	Distress	Error
11:	$Y_j = b_0$	$+ b_1EPSc_j$	$+ b_2LTDSE_j$	$+ b_3LSALES_j$		$+ e_j$
12:	$Y_j = b_0$	$+ b_1EPSc_j$	$+ b_2LTDSE_j$	$+ b_3LSALES_j$	$+ b_4ZSCORE_j$	$+ e_j$
13:	$Y_j = b_0$	$+ b_1EPSc_j$	$+ b_2LTDSE_j$	$+ b_3LSALES_j$	$+ b_4RATING_j$	$+ e_j$
21:	$Y_j = b_0$	$+ b_1EPSb_j$	$+ b_2LTDSE_j$	$+ b_3LSALES_j$	+	$+ e_j$
22:	$Y_j = b_0$	$+ b_1EPSb_j$	$+ b_2LTDSE_j$	$+ b_3LSALES_j$	$+ b_4ZSCORE_j$	$+ e_j$
23:	$Y_j = b_0$	$+ b_1EPSb_j$	$+ b_2LTDSE_j$	$+ b_3LSALES_j$	$+ b_4RATING_j$	$+ e_j$
31:	$Y_j = b_0$	$+ b_1ROAc_j$	$+ b_2TDTA_j$	$+ b_3LSALES_j$		$+ e_j$
32:	$Y_j = b_0$	$+ b_1ROAc_j$	$+ b_2TDTA_j$	$+ b_3LSALES_j$	$+ b_4ZSCORE_j$	$+ e_j$
33:	$Y_j = b_0$	$+ b_1ROAc_j$	$+ b_2TDTA_j$	$+ b_3LSALES_j$	$+ b_4RATING_j$	$+ e_j$
41:	$Y_j = b_0$	$+ b_1ROAb_j$	$+ b_2TDTA_j$	$+ b_3LSALES_j$		$+ e_j$
42:	$Y_j = b_0$	$+ b_1ROAb_j$	$+ b_2TDTA_j$	$+ b_3LSALES_j$	$+ b_4ZSCORE_j$	$+ e_j$
43:	$Y_j = b_0$	$+ b_1ROAb_j$	$+ b_2TDTA_j$	$+ b_3LSALES_j$	$+ b_4RATING_j$	$+ e_j$

Independent Variables: Earning, Leverage, Size, Distress.

where $Y_j = 1$ if j is a redeemer and $Y_j = 0$ if j is a control firm.

The headings of the Table 5-14 stand for as follows:

- Model : See above 12 models.
- b_0 : Intercept of the model.
- Earning : EPSc, EPSb, ROAc, or ROAb (See above 12 models).
- Leverage: LTDSE or TDTA (See above 12 models).
- Size : LSALES (See above 12 models).
- Distress: ZSCORE or RATING (See above 12 models).
- Chi-Sq. : Chi-square statistics for the logit model.
- p-val. : p-value for the Chi-square statistics.
- N : Sample size of the model (N=Nr+Nc).
- Nr : Sample size of redeemers.
- Nc : Sample size of all-Compustat control sample.

For each model in the Table 5-14,

the first line shows coefficient of each independent variable,
the second line shows standard error of the coefficient of each independent variable, and
the third line shows p-value of the coefficient of each independent variable (two-tailed).

(TABLE 5-14 - continued)

TABLE 5-14

Logit Analysis of Early Debt Redemption - By Winsorizing Extreme Values

Panel 1: All Sample

Model	b_0	Earning	Leverage	Size	Distress	Chi-Sq.	p-val.	N	Nc	Nr
11	-3.644	-0.083	0.426	0.380	-	467.81	0.000	2820	2078	742
	0.182	0.014	0.033	0.028						
	0.000	0.000	0.000	0.000						
12	-2.779	-0.105	0.400	0.401	-0.292	402.57	0.000	2193	1584	609
	0.247	0.022	0.049	0.034	0.037					
	0.000	0.000	0.000	0.000	0.000					
13	-4.360	-0.054	0.253	0.344	-0.141	146.89	0.000	1003	545	458
	0.562	0.024	0.061	0.057	0.021					
	0.000	0.021	0.000	0.000	0.000					
21	-3.606	-0.060	0.432	0.368	-	453.42	0.000	2820	2078	742
	0.181	0.013	0.033	0.028						
	0.000	0.000	0.000	0.000						
22	-2.671	-0.068	0.399	0.382	-0.306	383.15	0.000	2193	1584	609
	0.245	0.019	0.049	0.033	0.037					
	0.000	0.000	0.000	0.000	0.000					
23	-4.470	-0.030	0.253	0.341	-0.148	144.89	0.000	1003	545	458
	0.559	0.020	0.060	0.057	0.020					
	0.000	0.135	0.000	0.000	0.000					
31	-3.983	-4.599	1.991	0.300	-	323.73	0.000	2818	2076	742
	0.223	0.632	0.236	0.026						
	0.000	0.000	0.000	0.000						
32	-3.996	-1.972	3.019	0.322	-0.232	357.35	0.000	2193	1584	609
	0.374	0.833	0.387	0.031	0.045					
	0.000	0.018	0.000	0.000	0.000					
33	-4.214	-6.708	-0.060	0.342	-0.164	145.22	0.000	1003	545	458
	0.605	1.496	0.429	0.057	0.019					
	0.000	0.018	0.889	0.000	0.000					
41	-4.026	-3.264	2.146	0.287	-	304.36	0.000	2818	2076	742
	0.223	0.584	0.234	0.026						
	0.000	0.000	0.000	0.000						
42	-3.886	-0.595	3.061	0.310	-0.266	342.66	0.000	2193	1584	609
	0.371	0.731	0.389	0.031	0.044					
	0.000	0.415	0.000	0.000	0.000					
43	-4.506	-4.220	0.217	0.337	-0.172	138.09	0.000	1003	545	458
	0.597	1.237	0.418	0.057	0.019					
	0.000	0.001	0.604	0.000	0.000					

(TABLE 5-14 - continued)

Panel 2-1: By Period; Early 1980's

Model	b_0	Earning	Leverage	Size	Distress	Chi-Sq.	p-val.	N	Nc	Nr
11	-4.135	-0.130	0.587	0.462	-	299.19	0.000	1465	1084	381
	0.276	0.023	0.065	0.042						
	0.000	0.000	0.000	0.000						
12	-3.079	-0.191	0.412	0.491	-0.323	258.11	0.000	1148	838	310
	0.389	0.034	0.079	0.051	0.058					
	0.000	0.000	0.000	0.000	0.000					
13	-4.471	-0.166	0.177	0.414	-0.145	81.48	0.000	435	235	200
	0.915	0.042	0.113	0.094	0.034					
	0.000	0.000	0.116	0.000	0.000					
21	-4.094	-0.093	0.608	0.443	-	282.44	0.000	1465	1084	381
	0.273	0.020	0.066	0.041						
	0.000	0.000	0.000	0.000						
22	-2.940	-0.143	0.411	0.467	-0.341	235.87	0.000	1148	838	310
	0.386	0.031	0.081	0.050	0.059					
	0.000	0.000	0.000	0.000	0.000					
23	-4.769	0.093	-0.198	0.405	-0.163	74.49	0.000	435	235	200
	0.905	0.034	0.114	0.092	0.034					
	0.000	0.006	0.081	0.000	0.000					
31	-3.822	-7.831	1.507	0.342	-	199.54	0.000	1463	1082	381
	0.333	1.113	0.351	0.038						
	0.000	0.000	0.000	0.000						
32	-4.216	-4.069	3.020	0.386	-0.263	220.88	0.000	1148	838	310
	0.577	1.256	0.583	0.046	0.068					
	0.000	0.001	0.000	0.000	0.000					
33	-3.042	-13.437	-2.343	0.375	-0.193	85.89	0.000	435	235	200
	1.003	2.853	0.771	0.093	0.033					
	0.002	0.000	0.002	0.000	0.000					
41	-3.946	-5.730	1.782	0.326	-	180.52	0.000	1463	1082	381
	0.331	0.973	0.345	0.038						
	0.000	0.000	0.000	0.000						
42	-4.128	-2.610	3.094	0.375	-0.297	209.68	0.000	1148	838	310
	0.575	1.086	0.580	0.045	0.067					
	0.000	0.016	0.000	0.000	0.000					
43	-3.857	-7.132	-1.450	0.369	-0.205	74.81	0.000	435	235	200
	0.990	0.227	0.724	0.092	0.032					
	0.000	0.001	0.045	0.000	0.000					

(TABLE 5-14 - continued)

Panel 2-2: By Period: Late 1980's

Model	b_0	Earning	Leverage	Size	Distress	Chi-Sq.	p-val.	N	Nc	Nr
11	-3.299	-0.038	0.349	0.317	-	186.36	0.000	1355	994	361
	0.249	0.019	0.038	0.038						
	0.000	0.047	0.000	0.000						
12	-2.450	-0.024	0.390	0.315	-0.272	162.81	0.000	1045	746	299
	0.322	0.029	0.062	0.046	0.048					
	0.000	0.400	0.000	0.000	0.000					
13	-4.388	0.023	0.281	0.300	-0.145	79.64	0.000	568	310	258
	0.722	0.030	0.072	0.072	0.026					
	0.000	0.443	0.000	0.000	0.000					
21	-3.278	-0.026	0.351	0.311	-	184.74	0.000	1355	994	361
	0.248	0.018	0.038	0.038						
	0.000	0.152	0.000	0.000						
22	-2.398	-0.007	0.390	0.306	-0.278	161.03	0.000	1045	746	299
	0.319	0.025	0.062	0.045	0.048					
	0.000	0.765	0.000	0.000	0.000					
23	-4.349	0.016	0.282	0.299	-0.143	79.36	0.000	568	310	258
	0.716	0.026	0.072	0.072	0.026					
	0.000	0.532	0.000	0.000	0.000					
31	-3.948	-2.597	2.272	0.254	-	139.56	0.000	1355	994	361
	0.305	0.816	0.327	0.037						
	0.000	0.002	0.000	0.000						
32	-3.689	0.058	3.010	0.253	-0.216	146.56	0.000	1045	746	299
	0.497	1.181	0.530	0.044	0.062					
	0.000	0.961	0.000	0.000	0.001					
33	-4.787	-3.263	1.214	0.299	-0.151	74.35	0.000	568	310	258
	0.784	1.796	0.553	0.073	0.024					
	0.000	0.069	0.028	0.000	0.000					
41	-3.974	-1.534	2.390	0.242	-	135.20	0.000	1355	994	361
	0.306	0.772	0.327	0.037						
	0.000	0.047	0.000	0.000						
42	-3.614	1.278	3.076	0.241	-0.244	144.14	0.000	1045	746	299
	0.491	1.019	0.534	0.043	0.060					
	0.000	0.210	0.000	0.000	0.000					
43	-4.885	-2.505	1.280	0.298	-0.155	73.16	0.000	568	310	258
	0.775	1.531	0.547	0.073	0.024					
	0.000	0.102	0.019	0.000	0.000					

TABLE 5-15

Pearson Correlation between Independent Variables
- By Winsorizing Extreme Values -

Panel 1: All Sample

Variable	EPSb	ROAc	ROAb	LTDSE	TDTA	LTDMV	LSALES	ZSCORE	RATING
EPSc	0.940	0.514	0.475	-0.205	-0.061	-0.250	0.263	0.084	0.454
	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.000	0.000
	2854	2854	2854	2821	2819	2743	2832	2194	1006
EPSb		0.479	0.528	-0.218	-0.069	-0.221	0.253	0.066	0.413
		0.000	0.000	0.000	0.000	0.000	0.000	0.002	0.000
		2854	2854	2821	2819	2743	2832	2194	1006
ROAc			0.930	-0.265	-0.415	-0.283	0.046	0.352	0.370
			0.000	0.000	0.000	0.000	0.015	0.000	0.000
			2854	2821	2819	2743	2832	2194	1006
ROAb				-0.259	-0.404	-0.261	0.017	0.309	0.320
				0.000	0.000	0.000	0.358	0.000	0.000
				2821	2819	2743	2832	2194	1006
LTDSE					0.500	0.726	-0.012	-0.216	-0.463
					0.000	0.000	0.511	0.000	0.000
					2817	2738	2820	2194	1003
TDTA						0.463	0.201	-0.443	-0.319
						0.000	0.000	0.000	0.000
						2735	2818	2194	1003
LTDMV							0.053	-0.240	-0.444
							0.005	0.000	0.000
							2742	2194	1001
LSALES								-0.164	0.551
								0.000	0.000
								2193	1004
ZSCORE									0.368
									0.000
									820

For each variable,
the first line shows Pearson correlation coefficients,
the second line stands for p-value for the Pearson correlation, and
the last line shows the sample size.

TABLE 5-16

T-Test for Industry Median-Adjusted Variables
[Redeemer - (Industry Median Excluding Redeemers)]

Panel 1: All Sample

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	654	-0.680	-4.57	0.00	691	-0.687	-5.11	0.00
EPSb	654	-0.732	-4.35	0.00	691	-0.615	-3.77	0.00
ROAc	659	-0.033	-11.36	0.00	693	-0.036	-10.30	0.00
ROAb	659	-0.035	-9.86	0.00	693	-0.033	-9.02	0.00
LTDSE	660	0.795	14.57	0.00	693	0.763	13.33	0.00
TDTA	660	0.111	15.50	0.00	693	0.107	14.57	0.00
LTDMV	650	0.869	16.89	0.00	691	0.788	14.84	0.00
LSALES	659	0.663	11.15	0.00	693	0.645	11.12	0.00
ZSCORE	541	-0.954	-14.82	0.00	569	-0.934	-13.66	0.00
EPSc-if					691	-0.809	-5.71	0.00
EPSb-if					691	-0.739	-4.46	0.00
ROAc-if					693	-0.040	-10.38	0.00
ROAb-if					693	-0.037	-9.95	0.00
LTDSE-if					693	0.966	16.30	0.00
TDTA-if					693	0.133	17.52	0.00
LTDMV-if					691	0.965	17.29	0.00

N : Sample size.
Mean : Mean of the difference [Redeemer - (Industry Median)].
t-value : t-value for the Mean.
Pr>|t| : p-value of t-value (two-tailed significance level).

EPSc-if : EPSc without redemption effects ("as-if" EPSc).
EPSb-if : EPSb without redemption effects ("as-if" EPSb).
ROAc-if : ROAc without redemption effects ("as-if" ROAc).
ROAb-if : ROAb without redemption effects ("as-if" ROAb).
LTDSE-if : LTDSE without redemption effects ("as-if" LTDSE).
TDTA-if : TDTA without redemption effects ("as-if" TDTA).
LTDMV-if : LTDMV without redemption effects ("as-if" LTDMV).

(TABLE 5-16 - continued)
T-Test for Industry Median-Adjusted Variables

Panel 2-1: By Period: Early 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	368	-0.787	-3.40	0.00	366	-0.896	-4.17	0.00
EPSb	368	-0.878	-3.38	0.00	366	-0.908	-3.64	0.00
ROAc	368	-0.031	-9.18	0.00	366	-0.037	-7.07	0.00
ROAb	368	-0.035	-7.50	0.00	366	-0.036	-6.57	0.00
LTDSE	369	0.757	10.30	0.00	366	0.804	11.47	0.00
TDTA	369	0.101	11.21	0.00	366	0.103	10.22	0.00
LTDMV	368	0.935	12.75	0.00	365	0.894	13.84	0.00
LSALES	368	0.776	9.82	0.00	366	0.699	8.89	0.00
ZSCORE	300	-0.759	-11.50	0.00	299	-0.856	-10.46	0.00
EPSc-if					366	-1.231	-5.69	0.00
EPSb-if					366	-1.183	-4.72	0.00
ROAc-if					366	-0.043	-7.97	0.00
ROAb-if					366	-0.041	-7.37	0.00
LTDSE-if					366	0.984	13.37	0.00
TDTA-if					366	0.127	12.23	0.00
LTDMV-if					365	1.052	15.31	0.00

Panel 2-2: By Period: Late 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	286	-0.543	-3.29	0.00	325	-0.451	-2.97	0.00
EPSb	286	-0.546	-2.86	0.00	325	-0.285	-1.41	0.16
ROAc	291	-0.036	-7.14	0.00	327	-0.035	-7.65	0.00
ROAb	291	-0.035	-6.40	0.00	327	-0.029	-6.29	0.00
LTDSE	291	0.843	10.35	0.00	327	0.718	7.75	0.00
TDTA	291	0.123	10.72	0.00	327	0.112	10.39	0.00
LTDMV	282	0.783	11.20	0.00	326	0.670	7.79	0.00
LSALES	291	0.520	5.80	0.00	327	0.584	6.81	0.00
ZSCORE	241	-1.197	-10.21	0.00	270	-1.021	-9.11	0.00
EPSc-if					325	-0.334	-1.93	0.06
EPSb-if					325	-0.238	-1.15	0.25
ROAc-if					327	-0.036	-6.66	0.00
ROAb-if					327	-0.031	-6.79	0.00
LTDSE-if					327	0.946	9.97	0.00
TDTA-if					327	0.139	12.55	0.00
LTDMV-if					326	0.868	9.67	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16 - continued)
T-Test for Industry Median-Adjusted Variables

Panel 3-1: By Effect: EDR-Gain

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	404	-0.861	-4.03	0.00	416	-1.019	-5.25	0.00
EPSb	404	-0.852	-3.53	0.00	416	-0.821	-3.41	0.00
ROAc	405	-0.037	-10.24	0.00	416	-0.042	-8.39	0.00
ROAb	405	-0.040	-8.73	0.00	416	-0.034	-6.67	0.00
LTDSE	406	0.766	11.22	0.00	416	0.784	12.28	0.00
TDTA	406	0.108	11.71	0.00	416	0.102	10.94	0.00
LTDMV	405	0.948	13.81	0.00	415	0.906	14.65	0.00
LSALES	405	0.685	9.06	0.00	416	0.630	8.47	0.00
ZSCORE	328	-0.936	-12.03	0.00	335	-0.967	-11.40	0.00
EPSc-if					416	-1.446	-7.19	0.00
EPSb-if					416	-1.168	-4.80	0.00
ROAc-if					416	-0.053	-9.16	0.00
ROAb-if					416	-0.043	-8.10	0.00
LTDSE-if					416	0.957	14.11	0.00
TDTA-if					416	0.127	12.62	0.00
LTDMV-if					415	1.057	16.11	0.00

Panel 3-2: By Effect: EDR-Loss

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	198	-0.373	-1.92	0.06	220	-0.192	-1.04	0.30
EPSb	198	-0.461	-2.14	0.03	220	-0.302	-1.42	0.16
ROAc	202	-0.028	-5.52	0.00	222	-0.028	-6.39	0.00
ROAb	202	-0.026	-4.76	0.00	222	-0.033	-6.34	0.00
LTDSE	202	0.934	8.95	0.00	222	0.819	6.78	0.00
TDTA	202	0.128	10.28	0.00	222	0.130	10.13	0.00
LTDMV	194	0.782	9.22	0.00	222	0.651	5.92	0.00
LSALES	202	0.602	5.53	0.00	222	0.619	5.99	0.00
ZSCORE	164	-1.142	-8.75	0.00	183	-1.042	-8.25	0.00
EPSc-if					220	0.232	1.21	0.23
EPSb-if					220	-0.034	-0.16	0.87
ROAc-if					222	-0.021	-5.21	0.00
ROAb-if					222	-0.028	-6.01	0.00
LTDSE-if					222	1.085	8.88	0.00
TDTA-if					222	0.157	12.75	0.00
LTDMV-if					222	0.878	7.64	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16 - continued)

T-Test for Industry Median-Adjusted Variables

Panel 3-3: By Effect: Zero-Gain

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	52	-0.451	-1.01	0.32	55	-0.154	-0.42	0.67
EPSb	52	-0.840	-1.55	0.13	55	-0.310	-0.77	0.44
ROAc	52	-0.018	-1.46	0.15	55	-0.021	-1.64	0.11
ROAb	52	-0.029	-1.73	0.09	55	-0.022	-1.68	0.10
LTDSE	52	0.480	2.84	0.01	55	0.379	1.73	0.09
TDTA	52	0.068	2.56	0.01	55	0.050	1.77	0.08
LTDMV	51	0.575	3.50	0.00	54	0.449	2.69	0.01
LSALES	52	0.731	3.50	0.00	55	0.858	4.12	0.00
ZSCORE	49	-0.446	-2.31	0.03	51	-0.334	-1.35	0.18
EPSc-if					55	-0.154	-0.42	0.67
EPSb-if					55	-0.310	-0.77	0.44
ROAc-if					55	-0.021	-1.70	0.10
ROAb-if					55	-0.022	-1.77	0.08
LTDSE-if					55	0.550	2.51	0.02
TDTA-if					55	0.077	2.78	0.01
LTDMV-if					54	0.612	3.55	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16 - continued)
T-Test for Industry Median-Adjusted Variables

Panel 4-1: By Method: Equity-for-Debt Swaps

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	124	-0.073	-0.15	0.88	126	-0.363	-0.98	0.33
EPSb	124	-0.148	-0.31	0.76	126	-0.450	-1.08	0.28
ROAc	124	-0.022	-3.82	0.00	126	-0.021	-3.59	0.00
ROAb	124	-0.025	-4.25	0.00	126	-0.024	-3.10	0.00
LTDSE	125	0.328	4.65	0.00	126	0.308	3.98	0.00
TDTA	125	0.056	5.12	0.00	126	0.046	3.52	0.00
LTDMV	125	0.447	6.26	0.00	126	0.360	5.24	0.00
LSALES	124	1.368	11.37	0.00	126	1.243	9.96	0.00
ZSCORE	107	-0.588	-5.17	0.00	110	-0.647	-5.14	0.00
EPSc-if					126	-0.696	-1.87	0.06
EPSb-if					126	-0.782	-1.85	0.07
ROAc-if					126	-0.026	-4.26	0.00
ROAb-if					126	-0.029	-3.63	0.00
LTDSE-if					126	0.421	5.16	0.00
TDTA-if					126	0.071	5.03	0.00
LTDMV-if					126	0.454	5.67	0.00

Panel 4-2: By Method: All Others Except Equity-for-Debt Swaps

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	530	-0.822	-5.69	0.00	565	-0.759	-5.33	0.00
EPSb	530	-0.869	-4.98	0.00	565	-0.652	-3.69	0.00
ROAc	535	-0.036	-10.73	0.00	567	-0.039	-9.69	0.00
ROAb	535	-0.037	-8.99	0.00	567	-0.035	-8.49	0.00
LTDSE	535	0.904	14.05	0.00	567	0.865	12.88	0.00
TDTA	535	0.124	14.80	0.00	567	0.120	14.37	0.00
LTDMV	525	0.970	16.00	0.00	565	0.884	14.15	0.00
LSALES	535	0.500	7.60	0.00	567	0.512	8.01	0.00
ZSCORE	434	-1.044	-13.99	0.00	459	-1.003	-12.70	0.00
EPSc-if					565	-0.835	-5.48	0.00
EPSb-if					565	-0.729	-4.06	0.00
ROAc-if					567	-0.043	-9.58	0.00
ROAb-if					567	-0.038	-9.27	0.00
LTDSE-if					567	1.087	15.73	0.00
TDTA-if					567	0.146	17.00	0.00
LTDMV-if					565	1.079	16.61	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16 - continued)
T-Test for Industry Median-Adjusted Variables

Panel 5-1: By Instrument: Cash

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	422	-0.615	-4.66	0.00	454	-0.583	-4.37	0.00
EPSb	422	-0.575	-3.85	0.00	454	-0.491	-2.91	0.00
ROAc	426	-0.030	-9.00	0.00	456	-0.030	-9.61	0.00
ROAb	426	-0.028	-8.17	0.00	456	-0.028	-8.11	0.00
LTDSE	426	0.808	12.63	0.00	456	0.732	10.11	0.00
TDTA	426	0.103	12.86	0.00	456	0.101	12.08	0.00
LTDMV	417	0.834	14.69	0.00	456	0.773	11.42	0.00
LSALES	426	0.495	6.49	0.00	456	0.551	7.58	0.00
ZSCORE	341	-0.972	-11.39	0.00	367	-0.879	-10.66	0.00
EPSc-if					454	-0.564	-3.99	0.00
EPSb-if					454	-0.491	-2.86	0.00
ROAc-if					456	-0.031	-9.94	0.00
ROAb-if					456	-0.029	-9.03	0.00
LTDSE-if					456	0.940	12.58	0.00
TDTA-if					456	0.122	14.90	0.00
LTDMV-if					456	0.970	13.66	0.00

Panel 5-2: By Instrument: Debt

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	59	-2.144	-2.85	0.01	62	-1.894	-4.02	0.00
EPSb	59	-2.470	-2.49	0.02	62	-1.546	-3.08	0.00
ROAc	59	-0.074	-6.01	0.00	62	-0.096	-3.92	0.00
ROAb	59	-0.092	-4.94	0.00	62	-0.079	-3.39	0.00
LTDSE	59	1.430	4.63	0.00	62	1.786	7.90	0.00
TDTA	59	0.260	7.01	0.00	62	0.272	7.80	0.00
LTDMV	58	1.657	5.54	0.00	60	1.725	8.61	0.00
LSALES	59	0.444	2.78	0.01	62	0.286	1.72	0.09
ZSCORE	50	-1.490	-8.66	0.00	51	-1.766	-7.08	0.00
EPSc-if					62	-2.551	-4.70	0.00
EPSb-if					62	-2.121	-4.08	0.00
ROAc-if					62	-0.115	-4.42	0.00
ROAb-if					62	-0.097	-3.99	0.00
LTDSE-if					62	1.984	8.67	0.00
TDTA-if					62	0.303	8.29	0.00
LTDMV-if					60	1.924	9.22	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16 - continued)
T-Test for Industry Median-Adjusted Variables

Panel 5-3: By Instrument: Common Stock

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	133	0.145	0.34	0.74	134	-0.297	-0.85	0.40
EPSb	133	-0.122	-0.26	0.79	134	-0.156	-0.44	0.66
ROAc	133	-0.026	-3.66	0.00	134	-0.029	-3.70	0.00
ROAb	133	-0.032	-3.28	0.00	134	-0.026	-3.02	0.00
LTDSE	134	0.499	5.97	0.00	134	0.329	4.53	0.00
TDTA	134	0.082	6.01	0.00	134	0.051	3.92	0.00
LTDMV	134	0.547	7.10	0.00	134	0.303	5.04	0.00
LSALES	133	1.224	10.60	0.00	134	1.122	9.14	0.00
ZSCORE	119	-0.775	-6.01	0.00	121	-0.802	-5.18	0.00
EPSc-if					134	-0.543	-1.53	0.13
EPSb-if					134	-0.403	-1.12	0.26
ROAc-if					134	-0.035	-3.43	0.00
ROAb-if					134	-0.032	-3.48	0.00
LTDSE-if					134	0.520	6.24	0.00
TDTA-if					134	0.094	5.61	0.00
LTDMV-if					134	0.407	5.90	0.00

Panel 5-4: By Instrument: Preferred Stock

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	15	-3.394	-2.39	0.03	16	-3.139	-1.28	0.22
EPSb	15	-2.924	-2.96	0.01	16	-5.585	-1.65	0.12
ROAc	15	-0.039	-2.51	0.03	16	-0.051	-2.11	0.05
ROAb	15	-0.040	-2.16	0.05	16	-0.072	-2.29	0.04
LTDSE	15	0.891	2.66	0.02	16	1.522	3.27	0.01
TDTA	15	0.111	2.68	0.02	16	0.164	3.37	0.00
LTDMV	15	1.448	3.15	0.01	16	1.688	3.80	0.00
LSALES	15	1.249	3.47	0.00	16	0.931	2.56	0.02
ZSCORE	10	-0.892	-2.68	0.03	10	-1.121	-2.71	0.02
EPSc-if					16	-3.690	-1.51	0.15
EPSb-if					16	-6.124	-1.79	0.09
ROAc-if					16	-0.058	-2.36	0.03
ROAb-if					16	-0.079	-2.48	0.03
LTDSE-if					16	1.753	3.67	0.00
TDTA-if					16	0.188	3.73	0.00
LTDMV-if					16	1.807	4.12	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16 - continued)

T-Test for Industry Median-Adjusted Variables

Panel 5-5: By Instrument: Asset

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	25	-1.084	-1.28	0.21	25	-0.091	-0.13	0.89
EPSb	25	-1.217	-1.37	0.18	25	0.169	0.23	0.82
ROAc	26	-0.030	-1.99	0.06	25	-0.027	-2.05	0.05
ROAb	26	-0.029	-1.91	0.07	25	-0.022	-1.57	0.13
LTDSE	26	0.619	2.37	0.03	25	0.637	2.35	0.03
TDTA	26	0.056	1.57	0.13	25	0.066	1.74	0.10
LTDMV	26	1.002	3.43	0.00	25	0.838	3.12	0.00
LSALES	26	0.711	2.17	0.04	25	0.490	1.51	0.14
ZSCORE	21	-0.441	-1.74	0.10	20	-0.523	-1.74	0.10
EPSc-if					25	-0.540	-0.76	0.46
EPSb-if					25	-0.174	-0.24	0.81
ROAc-if					25	-0.033	-2.57	0.02
ROAb-if					25	-0.027	-2.18	0.04
LTDSE-if					25	0.792	2.87	0.01
TDTA-if					25	0.082	2.20	0.04
LTDMV-if					25	1.021	3.73	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16 - continued)
T-Test for Industry Median-Adjusted Variables

Panel 6-1: By Period and Instrument: Cash during Early 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	180	-0.978	-4.44	0.00	178	-1.032	-4.38	0.00
EPSb	180	-0.880	-3.83	0.00	178	-0.997	-3.95	0.00
ROAc	180	-0.027	-7.13	0.00	178	-0.031	-7.16	0.00
ROAb	180	-0.023	-5.33	0.00	178	-0.032	-6.18	0.00
LTDSE	180	0.839	9.25	0.00	178	0.871	8.93	0.00
TDTA	180	0.096	8.42	0.00	178	0.101	7.61	0.00
LTDMV	179	0.977	11.28	0.00	178	0.979	11.44	0.00
LSALES	180	0.388	3.27	0.00	178	0.388	3.38	0.00
ZSCORE	140	-0.680	-8.75	0.00	140	-0.783	-8.48	0.00
EPSc-if					178	-1.252	-5.35	0.00
EPSb-if					178	-1.155	-4.60	0.00
ROAc-if					178	-0.035	-8.51	0.00
ROAb-if					178	-0.034	-7.32	0.00
LTDSE-if					178	1.061	10.48	0.00
TDTA-if					178	0.121	9.24	0.00
LTDMV-if					178	1.183	12.71	0.00

Panel 6-2: By Period and Instrument: Debt during Early 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	40	-2.393	-2.28	0.03	40	-1.933	-3.25	0.00
EPSb	40	-2.857	-2.01	0.05	40	-1.655	-2.40	0.02
ROAc	40	-0.081	-5.00	0.00	40	-0.115	-3.23	0.00
ROAb	40	-0.107	-4.11	0.00	40	-0.100	-2.92	0.01
LTDSE	40	1.356	3.15	0.00	40	1.923	6.71	0.00
TDTA	40	0.229	5.41	0.00	40	0.277	6.46	0.00
LTDMV	40	1.715	4.18	0.00	39	2.009	7.92	0.00
LSALES	40	0.547	2.73	0.01	40	0.346	1.50	0.14
ZSCORE	33	-1.580	-6.47	0.00	32	-1.949	-5.18	0.00
EPSc-if					40	-2.819	-4.67	0.00
EPSb-if					40	-2.367	-3.46	0.00
ROAc-if					40	-0.140	-3.75	0.00
ROAb-if					40	-0.121	-3.40	0.00
LTDSE-if					40	2.139	7.28	0.00
TDTA-if					40	0.312	6.73	0.00
LTDMV-if					39	2.228	8.67	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16 - continued)
T-Test for Industry Median-Adjusted Variables

Panel 6-3: By Period and Instrument: Common Stock - Early 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	119	0.196	0.41	0.68	119	-0.127	-0.33	0.74
EPSb	119	-0.117	-0.23	0.82	119	0.022	0.06	0.95
ROAc	119	-0.021	-3.69	0.00	119	-0.019	-2.98	0.00
ROAb	119	-0.031	-3.80	0.00	119	-0.018	-2.30	0.02
LTDSE	120	0.438	5.11	0.00	119	0.263	3.84	0.00
TDTA	120	0.074	5.54	0.00	119	0.044	3.34	0.00
LTDMV	120	0.523	6.39	0.00	119	0.299	4.58	0.00
LSALES	119	1.365	11.73	0.00	119	1.255	10.32	0.00
ZSCORE	106	-0.655	-5.46	0.00	107	-0.645	-4.78	0.00
EPSc-if					119	-0.400	-1.04	0.30
EPSb-if					119	-0.244	-0.63	0.53
ROAc-if					119	-0.022	-3.48	0.00
ROAb-if					119	-0.022	-2.71	0.01
LTDSE-if					119	0.414	5.16	0.00
TDTA-if					119	0.072	5.08	0.00
LTDMV-if					119	0.374	5.25	0.00

Panel 6-4: By Period and Instrument: Preferred Stock - Early 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	14	-2.778	-2.02	0.06	15	-3.129	-1.19	0.25
EPSb	14	-2.391	-2.68	0.02	15	-5.745	-1.59	0.14
ROAc	14	-0.040	-2.41	0.03	15	-0.054	-2.11	0.05
ROAb	14	-0.041	-2.09	0.06	15	-0.077	-2.30	0.04
LTDSE	14	0.958	2.72	0.02	15	1.577	3.19	0.01
TDTA	14	0.116	2.63	0.02	15	0.173	3.41	0.00
LTDMV	14	1.529	3.14	0.01	15	1.772	3.80	0.00
LSALES	14	1.373	3.78	0.00	15	1.041	2.81	0.01
ZSCORE	10	-0.892	-2.68	0.03	10	-1.121	-2.71	0.02
EPSc-if					15	-3.714	-1.42	0.18
EPSb-if					15	-6.318	-1.73	0.11
ROAc-if					15	-0.061	-2.37	0.03
ROAb-if					15	-0.083	-2.49	0.03
LTDSE-if					15	1.808	3.56	0.00
TDTA-if					15	0.199	3.79	0.00
LTDMV-if					15	1.895	4.13	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16 - continued)

T-Test for Industry Median-Adjusted Variables

Panel 6-5: By Period and Instrument: Asset during Early 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	15	-0.146	-0.19	0.85	14	-0.348	-0.34	0.74
EPSb	15	-0.191	-0.25	0.80	14	-0.367	-0.33	0.75
ROAc	15	-0.013	-1.23	0.24	14	-0.023	-1.40	0.18
ROAb	15	-0.011	-1.06	0.31	14	-0.023	-1.39	0.19
LTDSE	15	0.546	1.65	0.12	14	0.530	1.83	0.09
TDTA	15	0.033	0.75	0.46	14	0.050	1.14	0.28
LTDMV	15	1.089	2.70	0.02	14	0.812	2.56	0.02
LSALES	15	0.822	1.90	0.08	14	0.575	1.36	0.20
ZSCORE	11	-0.187	-0.56	0.59	10	-0.360	-0.74	0.48
EPSc-if					14	-0.840	-0.84	0.42
EPSb-if					14	-0.636	-0.58	0.57
ROAc-if					14	-0.027	-1.75	0.10
ROAb-if					14	-0.026	-1.60	0.13
LTDSE-if					14	0.663	2.21	0.05
TDTA-if					14	0.061	1.40	0.19
LTDMV-if					14	0.969	3.09	0.01

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16 - continued)
T-Test for Industry Median-Adjusted Variables

Panel 7-1: By Period and Instrument: Cash during Late 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	242	-0.346	-2.17	0.03	276	-0.293	-1.88	0.06
EPSb	242	-0.349	-1.78	0.08	276	-0.165	-0.74	0.46
ROAc	246	-0.032	-6.37	0.00	278	-0.029	-6.82	0.00
ROAb	246	-0.032	-6.31	0.00	278	-0.025	-5.54	0.00
LTDSE	246	0.785	8.84	0.00	278	0.644	6.38	0.00
TDTA	246	0.107	9.75	0.00	278	0.101	9.36	0.00
LTDMV	238	0.726	9.74	0.00	278	0.641	6.69	0.00
LSALES	246	0.573	5.76	0.00	278	0.656	7.00	0.00
ZSCORE	201	-1.174	-8.86	0.00	227	-0.938	-7.79	0.00
EPSc-if					276	-0.119	-0.69	0.49
EPSb-if					276	-0.062	-0.27	0.79
ROAc-if					278	-0.028	-6.45	0.00
ROAb-if					278	-0.025	-5.91	0.00
LTDSE-if					278	0.863	8.30	0.00
TDTA-if					278	0.122	11.66	0.00
LTDMV-if					278	0.834	8.39	0.00

Panel 7-2: By Period and Instrument: Debt during Late 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	19	-1.620	-2.04	0.06	22	-1.822	-2.31	0.03
EPSb	19	-1.655	-2.18	0.04	22	-1.349	-1.99	0.06
ROAc	19	-0.058	-3.43	0.00	22	-0.060	-2.68	0.01
ROAb	19	-0.060	-3.50	0.00	22	-0.041	-2.11	0.05
LTDSE	19	1.585	4.91	0.00	22	1.537	4.17	0.00
TDTA	19	0.326	4.51	0.00	22	0.264	4.31	0.00
LTDMV	18	1.528	4.68	0.00	21	1.198	4.00	0.00
LSALES	19	0.229	0.87	0.40	22	0.177	0.83	0.42
ZSCORE	17	-1.317	-7.28	0.00	19	-1.459	-6.90	0.00
EPSc-if					22	-2.062	-1.92	0.07
EPSb-if					22	-1.674	-2.13	0.05
ROAc-if					22	-0.070	-2.70	0.01
ROAb-if					22	-0.053	-2.60	0.02
LTDSE-if					22	1.703	4.70	0.00
TDTA-if					22	0.285	4.74	0.00
LTDMV-if					21	1.359	4.10	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16 - continued)
T-Test for Industry Median-Adjusted Variables

Panel 7-3: By Period and Instrument: Common Stock - Late 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	14	-0.288	-0.65	0.53	15	-1.650	-2.13	0.05
EPSb	14	-0.163	-0.36	0.73	15	-1.573	-1.90	0.08
ROAc	14	-0.071	-1.48	0.16	15	-0.111	-2.44	0.03
ROAb	14	-0.040	-0.64	0.54	15	-0.082	-2.09	0.06
LTDSE	14	1.019	3.54	0.00	15	0.854	2.56	0.02
TDTA	14	0.159	2.48	0.03	15	0.107	2.13	0.05
LTDMV	14	0.750	3.32	0.01	15	0.334	2.26	0.04
LSALES	14	0.025	0.07	0.94	15	0.070	0.16	0.88
ZSCORE	13	-1.747	-2.83	0.02	14	-2.004	-2.48	0.03
EPSc-if					15	-1.678	-1.93	0.07
EPSb-if					15	-1.660	-1.96	0.07
ROAc-if					15	-0.138	-1.88	0.08
ROAb-if					15	-0.111	-2.33	0.04
LTDSE-if					15	1.361	4.26	0.00
TDTA-if					15	0.268	3.01	0.01
LTDMV-if					15	0.676	2.74	0.02

Panel 7-4: By Period and Instrument: Asset during Late 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	10	-2.492	-1.42	0.19	11	0.236	0.27	0.79
EPSb	10	-2.757	-1.47	0.18	11	0.851	0.88	0.40
ROAc	11	-0.053	-1.66	0.13	11	-0.032	-1.45	0.18
ROAb	11	-0.053	-1.64	0.13	11	-0.020	-0.83	0.43
LTDSE	11	0.718	1.63	0.13	11	0.774	1.52	0.16
TDTA	11	0.087	1.44	0.18	11	0.087	1.27	0.23
LTDMV	11	0.882	2.02	0.07	11	0.871	1.82	0.10
LSALES	11	0.560	1.07	0.31	11	0.383	0.73	0.48
ZSCORE	10	-0.721	-1.87	0.09	10	-0.686	-1.81	0.10
EPSc-if					11	-0.160	-0.15	0.88
EPSb-if					11	0.415	0.46	0.66
ROAc-if					11	-0.040	-1.83	0.10
ROAb-if					11	-0.030	-1.42	0.19
LTDSE-if					11	0.956	1.87	0.09
TDTA-if					11	0.110	1.66	0.13
LTDMV-if					11	1.087	2.19	0.05

For the description of the table headings, see bottom of Panel 1.

TABLE 6-1

The Hypothesized Market Reactions between Portfolios

Panel 1: Expectation of Alternative Capital Structure Theories

	Tax-Effect			Tax with Bankruptcy Costs	Wealth-Transfer	Information Effects
	MM	Miller	DeAngelo & Masulis			
Expected Sign	-	0	+ or -	+ or -	-	-

Panel 2: Formation of Portfolios and Relative Market Reactions Between Portfolios (in terms of the Absolute Value)

Instruments of EDR	Degree of Market Reaction	Two Different Time Horizons: Before 1985 (1985_b) Greater		After 1985 (1985_a) Smaller
1. Common-for-Debt	Greatest Reaction	1985_b	>	1985_a
	v			
2. Preferred-for-Debt	Greater Reaction	1985_b	>	1985_a
	v			
3. Cash-for-Debt	Medium Reaction	1985_b	>	1985_a
	v			
4. Asset-for-Debt	Medium Reaction	1985_b	>	1985_a
	v			
5. Debt-for-Debt	Minor or No Reaction	1985_b	>	1985_a

TABLE 6-2

Distribution of EDR Announcements by Calendar Years and Portfolios

Panel 1: Distribution of EDR Announcements by Calendar Years

Calendar Year	77	78	79	80	81	82	83	84	85	86	87	88	Total
Available Events[1]	6	9	10	27	56	109	120	71	87	131	159	40	825
WSJ Dates[2]	4	3	2	6	15	34	53	21	18	36	31	7	230
Ratio[3]	67	33	20	22	27	31	44	30	21	27	19	18	28

Panel 2: Distribution of EDR Announcements by Portfolios

Portfolios	Available Events[1]		WSJ Dates[2]		Announcement Ratio[3]	
All Sample	825		230		27.8	
By Period:						
Early 1980's	436		143		32.7	
Late 1980's	389		87		22.4	
By Effect:						
EDR-Gain	488		146		29.9	
EDR-Loss	65		63		23.2	
Zero-Gain	272		21		32.3	
By Method:						
Debt-Equity Swaps	143		77		53.8	
Open Market	49		3		6.1	
Call Offers	20		9		45.0	
Induced Conversion	12		6		50.0	
Defeasance	32		5		15.6	
Others	549		116		21.1	
By Instrument:						
Cash	536		86		16.0	
Debt	75		40		53.3	
Common Stock	164		89		54.3	
Preferred Stock	16		9		56.3	
Asset	34		6		17.6	
By Instrument: Early versus (Late)						
Cash	208	(328)	22	(64)	10.6	(19.5)
Debt	49	(26)	29	(11)	59.2	(42.3)
Common Stock	146	(18)	80	(9)	54.8	(50.0)
Preferred Stock	15	(1)	9	(0)	60.0	(0.0)
Asset	18	(16)	3	(3)	16.0	(18.8)

1. Available Events : EDR transactions found from 10-Ks.
2. WSJ Dates : EDR transactions announced in the Wall Street Journal.
3. Announcement Ratio = (EDRs with WSJ Dates) / (Available Events).
   ( ) represents the distribution of the late 1980's sub-sample.

TABLE 6-3

Test on Abnormal Returns (AR) around the EDR Announcement

Date	AR	ASAR	ZASAR	%(+AR)	Z[%(+AR)]	$CAR_{-20,t}$	Run-up
Panel 1: All Sample (N=214)							
-5	0.000	0.013	0.19	47.91	-0.68	-0.003	0.179
-4	-0.001	-0.061	-0.89	40.65	-2.80a	-0.004	0.224
-3	-0.002	0.001	0.02	51.63	0.41	-0.006	0.321
-2	-0.003	-0.070	-1.03	47.20	-0.89	-0.009	0.450
-1	-0.006	-0.169	-2.48b	40.47	-2.86a	-0.015	0.766
0	-0.002	0.009	0.13	50.47	0.07	-0.017	0.852
1	-0.003	-0.027	-0.40	46.05	-1.23	-0.020	1.000
2	-0.001	-0.042	-0.62	40.19	-2.94a	-0.020c	1.042
3	-0.003	-0.080	-1.17	42.79	-2.18b	-0.023c	1.186
Panel 2-1: By Period: Early 1980's (N=138)							
-5	0.000	-0.019	-0.22	45.65	-1.11	-0.002	0.084
-4	-0.001	-0.055	-0.65	42.03	-1.96c	-0.002	0.118
-3	-0.001	0.071	0.84	56.12	1.36	-0.003	0.158
-2	-0.001	-0.002	-0.02	47.10	-0.77	-0.004	0.185
-1	-0.005	-0.153	-1.81c	36.69	-3.22a	-0.009	0.416
0	-0.007	-0.179	-2.10b	43.48	-1.62	-0.016	0.769
1	-0.005	-0.079	-0.93	43.17	-1.70c	-0.021c	1.000
2	0.001	0.025	0.29	40.58	-2.30b	-0.020	0.971
3	-0.002	-0.042	-0.49	43.17	-1.70c	-0.022	1.057
Panel 2-2: By Period: Late 1980's (N=76)							
-5	0.003	0.149	1.30	52.63	0.34	-0.001	0.043
-4	0.000	-0.033	-0.29	43.42	-1.26	0.000	0.010
-3	-0.004	-0.109	-0.95	47.37	-0.57	-0.004	0.278
-2	-0.006	-0.173	-1.51	47.37	-0.57	-0.010	0.727
-1	-0.007	-0.194	-1.69c	44.74	-1.03	-0.016	1.251
0	0.002	0.169	1.47	57.89	1.26	-0.014	1.068
1	0.001	0.098	0.85	51.32	0.11	-0.013	1.000
2	0.001	-0.039	-0.34	43.42	-1.26	-0.012	0.947
3	-0.003	-0.041	-0.36	47.37	-0.57	-0.015	1.165

Date (t) : Day t from the EDR announcement date (t=0).
AR : Average abnormal returns at day t.
ASAR : Average standardized AR at day t.
ZASAR : Z-value for ASAR at day t.
%(+AR) : Percentage of positive AR at day t.
Z[%(+AR)]: Z-value for percentage of positive AR at day t.
$CAR_{-20,t}$: Cumulative abnormal returns starting from day -20 to t.
Run-up = $(CAR_{-20,t})/(CAR_{-20,1})$.

a : significant at the 0.01 (two-tailed).
b : significant at the 0.05 (two-tailed).
c : significant at the 0.10 (two-tailed).

(TABLE 6-3 - continued)

Test on Abnormal Returns (AR) around the EDR Annou... ment

Date	AR	ASAR	ZASAR	%(+AR)	Z[%(+AR)]	$CAR_{-20,t}$	Run-up
Panel 3-1; By Effect: EDR-Gain (N=138)							
-5	0.002	0.063	0.74	46.38	-0.94	0.004	-0.263
-4	-0.001	-0.018	-0.22	42.75	-1.79c	0.003	-0.228
-3	-0.002	0.000	-0.01	53.24	0.68	0.001	-0.086
-2	-0.003	-0.059	-0.70	48.55	-0.43	-0.001	0.081
-1	-0.004	-0.159	-1.87c	40.29	-2.37b	-0.005	0.346
0	-0.009	-0.206	-2.42b	44.20	-1.45	-0.014	0.936
1	-0.001	0.067	0.79	46.76	-0.85	-0.015	1.000
2	-0.001	-0.028	-0.33	39.86	-2.47b	-0.016	1.073
3	-0.003	-0.092	-1.08	43.88	-1.53	-0.019	1.241
Panel 3-2; By Effect: EDR-Loss (N=58)							
-5	0.000	0.030	0.23	53.45	0.39	-0.011	0.410
-4	-0.002	-0.186	-1.42	36.21	-2.23b	-0.013	0.480
-3	0.001	0.096	0.73	53.45	0.39	-0.012	0.452
-2	-0.004	-0.133	-1.02	41.38	-1.44	-0.016	0.604
-1	-0.008	-0.132	-1.01	36.21	-2.23b	-0.024	0.897
0	0.004	0.174	1.33	55.17	0.66	-0.020	0.739
1	-0.007	-0.174	-1.33	44.83	-0.92	-0.027	1.000
2	0.003	-0.001	-0.01	43.10	-1.18	-0.023	0.876
3	-0.001	0.088	0.67	43.10	-1.18	-0.024	0.899
Panel 3-3; By Effect: Zero-Gain (N=18)							
-5	-0.001	-0.097	-0.41	44.44	-0.71	-0.011	0.812
-4	0.007	0.177	0.75	61.11	0.71	-0.004	0.322
-3	-0.007	-0.213	-0.90	50.00	-0.24	-0.011	0.866
-2	0.003	0.139	0.59	55.56	0.24	-0.008	0.628
-1	-0.010	-0.354	-1.50	44.44	-0.71	-0.018	1.381
0	0.008	0.358	1.52	61.11	0.71	-0.010	0.757
1	-0.003	-0.147	-0.62	44.44	-0.71	-0.013	1.000
2	0.005	0.243	1.03	50.00	-0.24	-0.008	0.602
3	-0.004	-0.075	-0.32	55.56	0.24	-0.012	0.938

For the description of the table heading, see bottom of Panel 1.

(TABLE 6-3 - continued)

Test on Abnormal Returns (AR) around the EDR Announcement

Date	AR	ASAR	ZASAR	%(+AR)	Z[%(+AR)]	$CAR_{-20,t}$	Run-up
Panel 4-1: By Method: Equity-for-Debt Swaps (N=75)							
-5	0.002	0.024	0.21	50.67	0.00	-0.004	0.153
-4	-0.004	-0.157	-1.36	38.67	-2.08b	-0.008	0.323
-3	-0.002	0.074	0.64	58.67	1.39	-0.010	0.396
-2	0.001	0.059	0.51	50.67	0.00	-0.008	0.341
-1	-0.005	-0.273	-2.36b	32.00	-3.23a	-0.013	0.536
0	-0.010	-0.217	-1.88c	44.00	-1.15	-0.024	0.955
1	-0.001	-0.008	-0.07	48.00	-0.46	-0.025	1.000
2	-0.003	-0.077	-0.67	42.67	-1.39	-0.027	1.112
3	0.001	0.017	0.15	52.00	0.23	-0.027	1.084
Panel 4-2: By Method: All Other Methods (N=139)							
-5	0.000	0.050	0.59	46.76	-0.85	0.000	0.001
-4	0.002	0.012	0.14	44.60	-1.36	0.002	-0.123
-3	-0.002	-0.028	-0.33	50.00	-0.08	0.000	0.000
-2	-0.005	-0.128	-1.51	45.32	-1.19	-0.004	0.311
-1	-0.006	-0.112	-1.32	43.57	-1.61	-0.010	0.720
0	0.000	0.032	0.38	51.08	0.17	-0.011	0.745
1	-0.004	-0.021	-0.25	45.00	-1.27	-0.014	1.000
2	0.002	0.045	0.53	41.01	-2.21b	-0.012	0.829
3	-0.004	-0.073	-0.87	40.71	-2.28b	-0.016	1.085

For the description of the table heading, see bottom of Panel 1.

(TABLE 6-3 - continued)

Test on Abnormal Returns (AR) around the EDR Announcement

Date	AR	ASAR	ZASAR	%(+AR)	Z[%(+AR)]	$CAR_{-20,t}$	Run-up
Panel 5-1: By Instrument: Cash (N=76)							
-5	0.004	0.196	1.71c	50.00	-0.11	0.001	-0.398
-4	0.003	0.051	0.44	42.86	-1.37	0.004	-1.496
-3	-0.002	-0.046	-0.40	50.65	0.00	0.002	-0.800
-2	-0.005	-0.227	-1.99b	42.86	-1.37	-0.003	1.282
-1	0.001	0.067	0.59	53.25	0.46	-0.002	0.921
0	-0.003	-0.008	-0.07	49.35	-0.23	-0.006	2.123
1	0.003	0.100	0.88	48.05	-0.46	-0.003	1.000
2	-0.002	-0.066	-0.58	35.06	-2.74a	-0.005	1.823
3	-0.002	0.001	0.01	46.75	-0.68	-0.006	2.442
Panel 5-2: By Instrument: Debt (N=36)							
-5	-0.012	-0.271	-1.63	30.56	-2.50b	-0.017	0.440
-4	0.000	0.037	0.22	52.78	0.17	-0.016	0.436
-3	0.000	0.122	0.73	55.56	0.50	-0.017	0.449
-2	-0.003	-0.019	-0.12	50.00	-0.17	-0.020	0.530
-1	-0.007	-0.152	-0.91	41.67	-1.17	-0.027	0.713
0	-0.004	-0.091	-0.55	50.00	-0.17	-0.031	0.815
1	-0.007	0.014	0.09	44.44	-0.83	-0.037	1.000
2	0.005	0.076	0.45	47.22	-0.50	-0.032	0.854
3	-0.004	-0.136	-0.82	36.11	-1.83c	-0.036	0.953
Panel 5-3: By Instrument: Common Stock (N=87)							
-5	0.003	0.056	0.52	55.17	0.86	-0.001	0.038
-4	-0.004	-0.180	-1.68c	37.93	-2.36b	-0.006	0.195
-3	-0.002	0.029	0.27	55.17	0.86	-0.007	0.256
-2	0.001	0.044	0.41	49.43	-0.21	-0.007	0.237
-1	-0.011	-0.415	-3.87a	24.14	-4.93a	-0.018	0.617
0	-0.006	-0.117	-1.10	47.13	-0.64	-0.023	0.811
1	-0.005	-0.150	-1.40	45.98	-0.86	-0.028	1.000
2	0.000	-0.023	-0.21	43.68	-1.29	-0.028	1.000
3	-0.002	-0.041	-0.39	47.13	-0.64	-0.030	1.060

For the description of the table heading, see bottom of Panel 1.

(TABLE 6-3 - continued)

Test on Abnormal Returns (AR) around the EDR Announcement

Date	AR	ASAR	ZASAR	%(+AR)	Z[%(+AR)]	$CAR_{-20,t}$	Run-up
Panel 5-4: By Instrument: Preferred Stock (N=8)							
-5	0.009	-0.059	-0.18	33.33	-1.33	0.031	1.488
-4	0.018	0.231	0.65	37.50	-1.06	0.048	2.344
-3	-0.002	-0.015	-0.04	55.56	0.00	0.047	2.268
-2	-0.016	-0.202	-0.57	37.50	-1.06	0.031	1.505
-1	-0.004	0.019	0.06	55.56	0.00	0.027	1.319
0	0.001	0.105	0.30	50.00	-0.35	0.028	1.373
1	-0.008	0.229	0.69	33.33	-1.33	0.021	1.000
2	0.007	0.228	0.64	50.00	-0.35	0.028	1.339
3	-0.003	0.109	0.33	44.44	-0.67	0.025	1.195
Panel 5-5: By Instrument: Asset (N=6)							
-5	-0.001	-0.129	-0.32	50.00	-0.41	0.005	-0.748
-4	-0.007	-0.264	-0.65	50.00	-0.41	-0.002	0.332
-3	-0.010	-0.266	-0.65	33.33	-1.22	-0.012	1.818
-2	0.014	0.423	1.04	66.67	0.41	0.002	-0.226
-1	-0.006	0.035	0.09	50.00	-0.41	-0.005	0.700
0	0.004	0.241	0.59	50.00	-0.41	-0.001	0.087
1	-0.006	-0.125	-0.31	50.00	-0.41	-0.007	1.000
2	0.008	0.502	1.23	50.00	-0.41	0.002	-0.237
3	-0.005	-0.256	-0.63	33.33	-1.22	-0.004	0.548

For the description of the table heading, see bottom of Panel 1.

(TABLE 6-3 - continued)

Test on Abnormal Returns (AR) around the EDR Announcement

Date	AR	ASAR	ZASAR	%(+AR)	Z[%(+AR)]	$CAR_{-20,t}$	Run-up
Panel 6-1: By Period and Instrument: Cash during Early 1980's (N=21)							
-5	0.005	0.201	0.92	47.62	-0.44	-0.011	0.573
-4	0.001	0.077	0.36	40.91	-1.07	-0.010	0.522
-3	0.002	0.171	0.80	59.09	0.64	-0.008	0.433
-2	-0.010	-0.366	-1.72c	31.82	-1.92c	-0.019	0.962
-1	0.011	0.524	2.46b	68.18	1.49	-0.008	0.418
0	-0.013	-0.364	-1.71c	31.82	-1.92c	-0.021	1.071
1	0.001	0.043	0.20	50.00	-0.21	-0.019	1.000
2	0.001	0.058	0.27	27.27	-2.35b	-0.018	0.941
3	0.001	0.102	0.48	50.00	-0.21	-0.017	0.882
Panel 6-2: By Period and Instrument: Debt during Early 1980's (N=26)							
-5	-0.013	-0.251	-1.28	26.92	-2.55b	0.000	0.005
-4	0.002	0.070	0.35	53.85	0.20	0.002	-0.096
-3	-0.001	0.074	0.38	53.85	0.20	0.001	-0.063
-2	0.000	0.054	0.27	46.15	-0.59	0.001	-0.052
-1	-0.007	-0.186	-0.95	38.46	-1.37	-0.006	0.329
0	-0.005	-0.197	-1.00	42.31	-0.98	-0.011	0.600
1	-0.007	-0.022	-0.11	38.46	-1.37	-0.019	1.000
2	0.004	0.034	0.18	38.46	-1.37	-0.015	0.793
3	-0.008	-0.277	-1.41	26.92	-2.55b	-0.022	1.209
Panel 6-3: By Period and Instrument: Common Stock during Early 1980's (N=79)							
-5	0.002	0.020	0.18	53.16	0.45	-0.003	0.116
-4	-0.003	-0.133	-1.19	39.24	-2.03b	-0.006	0.239
-3	-0.001	0.071	0.64	56.96	1.13	-0.007	0.276
-2	0.002	0.070	0.62	50.63	0.00	-0.005	0.180
-1	-0.008	-0.354	-3.15a	25.32	-4.50a	-0.013	0.498
0	-0.008	-0.163	-1.45	46.84	-0.68	-0.020	0.805
1	-0.005	-0.156	-1.39	44.30	-1.13	-0.025	1.000
2	-0.001	-0.014	-0.12	44.30	-1.13	-0.027	1.052
3	0.000	-0.011	-0.10	48.10	-0.45	-0.027	1.062

For the description of the table heading, see bottom of Panel 1.

(TABLE 6-3 - continued)

Test on Abnormal Returns (AR) around the EDR Announcement

Date	AR	ASAR	ZASAR	%(+AR)	Z[%(+AR)]	$CAR_{-20,t}$	Run-up
Panel 7-1: By Period and Instrument: Cash during Late 1980's (N=55)							
-5	0.004	0.194	1.44	50.91	0.00	0.006	1.438
-4	0.004	0.040	0.30	43.64	-1.08	0.010	2.320
-3	-0.003	-0.132	-0.98	47.27	-0.54	0.006	1.533
-2	-0.004	-0.172	-1.27	47.27	-0.54	0.003	0.678
-1	-0.003	-0.116	-0.86	47.27	-0.54	0.000	-0.029
0	0.001	0.134	1.00	56.36	0.81	0.001	0.134
1	0.004	0.123	0.91	47.27	-0.54	0.004	1.000
2	-0.003	-0.116	-0.86	38.18	-1.89c	0.001	0.156
3	-0.003	-0.039	-0.29	45.45	-0.81	-0.002	-0.508
Panel 7-2: By Period and Instrument: Debt during Late 1980's (N=10)							
-5	-0.010	-0.326	-1.03	40.00	-0.95	-0.059	0.683
-4	-0.004	-0.048	-0.15	50.00	-0.32	-0.063	0.732
-3	0.000	0.246	0.78	60.00	0.32	-0.063	0.734
-2	-0.010	-0.209	-0.66	60.00	0.32	-0.074	0.855
-1	-0.006	-0.063	-0.20	50.00	-0.32	-0.080	0.928
0	-0.001	0.183	0.58	70.00	0.95	-0.081	0.935
1	-0.006	0.108	0.34	60.00	0.32	-0.086	1.000
2	0.010	0.183	0.58	70.00	0.95	-0.077	0.887
3	0.007	0.231	0.73	60.00	0.32	-0.070	0.810
Panel 7-3: By Period and Instrument: Common Stock during Late 1980's (N=8)							
-5	0.014	0.415	1.17	75.00	1.06	0.017	-0.287
-4	-0.018	-0.637	-1.80c	25.00	-1.77c	-0.001	0.009
-3	-0.010	-0.392	-1.11	37.50	-1.06	-0.010	0.172
-2	-0.018	-0.213	-0.60	37.50	-1.06	-0.029	0.477
-1	-0.038	-1.023	-2.89a	12.50	-2.47b	-0.067	1.111
0	0.016	0.333	0.94	50.00	-0.35	-0.050	0.838
1	-0.010	-0.085	-0.24	62.50	0.35	-0.060	1.000
2	0.013	-0.115	-0.33	37.50	-1.06	-0.047	0.786
3	-0.016	-0.340	-0.96	37.50	-1.06	-0.063	1.053

For the description of the table heading, see bottom of Panel 1.

TABLE 6-4

Test on Cumulative Abnormal Returns around the EDR Announcement and Test on the Difference in AR and CAR between Portfolios

Panel 1: All Sample (N=214)

s	e	$CAR_{s,e}$	ASCAR	ZASCAR
	-4	-0.0009	-0.0611	-0.893
	-3	-0.0019	0.0013	0.019
	-2	-0.0025	-0.0703	-1.028
	-1	-0.0062	-0.1693	-2.483b
	0	-0.0017	0.0091	0.134
	1	-0.0029	-0.0275	-0.403
	2	-0.0008	-0.0423	-0.619
-1	0	-0.0078	-0.1602	-1.657c
-2	0	-0.0103	-0.2305	-1.946c
-2	-1	-0.0087	-0.2396	-2.478b
0	1	-0.0046	-0.0183	-0.190
-1	1	-0.0107	-0.1877	-1.585
-2	1	-0.0132	-0.2579	-1.886c

N : Sample size.
s : Starting date.
e : Ending date.
$CAR_{s,e}$: Cumulative average abnormal returns from day s to day e.
ASCAR : Average standardized $CAR_{s,e}$.
ZASCAR: Z-value for $ASCAR_{s,e}$.
If there is no starting date, AR_e, ASAR, and ZASAR are equivalent statistics to $CAR_{s,e}$, ASCAR, and ZASCAR, respectively.
a : significant at the 0.01 level (two-tailed) for ZASCAR.
b : significant at the 0.05 level (two-tailed) for ZASCAR.
c : significant at the 0.10 level (two-tailed) for ZASCAR.

(TABLE 6-4 - continued)

Panel 2: By Period | Panel 3: By Method

s	e	Early (a) vs. Late (b) (N_a=138) CAR$_a$	(N_b=76) CAR$_b$	DCAR	ZDCAR	D/E Swaps (a) vs. Others (b) (N_a=75) CAR$_a$	(N_b=139) CAR$_b$	DCAR	ZDCAR
	-4	-0.001	0.000	-0.001	-0.15	-0.004	0.002	-0.006	-1.18
	-3	-0.001	-0.004	0.003	1.26	-0.002	-0.002	0.000	0.71
	-2	-0.001	-0.006	0.005	1.20	0.001	-0.005	0.006	1.30
	-1	-0.005c	-0.007c	0.002	0.29	-0.005b	-0.006	0.001	-1.12
	0	-0.007b	0.002	-0.010	-2.43**	-0.010c	0.000	-0.010	-1.74*
	1	-0.005	0.001	-0.006	-1.23	-0.001	-0.004	0.003	0.09
	2	0.001	0.001	0.000	0.45	-0.003	0.002	-0.005	-0.85
-1	0	-0.012a	-0.004	-0.008	-1.52	-0.015a	-0.006	-0.009	-2.02**
-2	0	-0.013b	-0.010	-0.002	-0.55	-0.014b	-0.011	-0.003	-0.90
-2	-1	-0.005	-0.013b	0.007	1.05	-0.003	-0.010b	0.007	0.13
0	1	-0.012b	0.003c	-0.015	-2.59***	-0.011	-0.004	-0.007	-1.16
-1	1	-0.017a	-0.004	-0.013	-1.95*	-0.016b	-0.010	-0.006	-1.60
-2	1	-0.017b	-0.009	-0.008	-1.09	-0.015c	-0.014	0.000	-0.73

$CAR_{s,e}$: Cumulative average abnormal returns from day s to day e.
s : Starting date.
e : Ending date.
ASCAR : Average standardized $CAR_{s,e}$.
ZCAR : Z-value for ASCAR.
CAR_a : $CAR_{s,e}$ for portfolio a.
CAR_b : $CAR_{s,e}$ for portfolio b.
N_a : Sample for portfolio a.
N_b : Sample for portfolio b.
DCAR = CAR_a - CAR_b.
ZDCAR : Z-value for DCAR.
If there is no starting date, AR_a, AR_b, DAR (=AR_a-AR_b), and ZDAR are equivalent statistics to CAR_a, CAR_b, DCAR, and ZDCAR, respectively.
a[***]: significant at the 0.01 level (two-tailed) for ZCAR [ZDCAR].
b[**] : significant at the 0.05 level (two-tailed) for ZCAR [ZDCAR].
c[*] : significant at the 0.10 level (two-tailed) for ZCAR [ZDCAR].

(TABLE 6-4 - continued)

By Effect:

Panel 4-1: Gain vs. Loss

		Gain (a) vs. Loss (b) (N_a=138) (N_b=58)			
s	e	CAR_a	CAR_b	DCAR	ZDCAR
	-4	-0.001	-0.002	0.001	1.07
	-3	-0.002	0.001	-0.003	-0.61
	-2	-0.003	-0.004	0.002	0.47
	-1	-0.004c	-0.008	0.004	-0.17
	0	-0.009b	0.004	-0.013	-2.43**
	1	-0.001	-0.007	0.006	1.54
	2	-0.001	0.003	-0.004	-0.17
-1	0	-0.013a	-0.004	-0.009	-1.84*
-2	0	-0.015a	-0.008	-0.008	-1.23
-2	-1	-0.006c	-0.012	0.005	0.22
0	1	-0.010	-0.003	-0.007	-0.63
-1	1	-0.014b	-0.011	-0.003	-0.61
-2	1	-0.016b	-0.015	-0.002	-0.29

Panel 4-2: Gain vs. Zero-Gain

		Gain (a) vs. Zero-Gain (b) (N_a=138) (N_b=18)			
s	e	CAR_a	CAR_b	DCAR	ZDCAR
	-4	-0.001	0.007	-0.007	-0.78
	-3	-0.002	-0.007	0.005	0.85
	-2	-0.003	0.003	-0.006	-0.79
	-1	-0.004c	-0.010	0.006	0.78
	0	-0.009b	0.008	-0.017	-2.25**
	1	-0.001	-0.003	0.002	0.85
	2	-0.001	0.005	-0.006	-1.08
-1	0	-0.013a	-0.002	-0.011	-1.04
-2	0	-0.015a	0.001	-0.017	-1.31
-2	-1	-0.006c	-0.007	0.000	-0.01
0	1	-0.010	0.005	-0.015	-0.99
-1	1	-0.014b	-0.005	-0.009	-0.36
-2	1	-0.016b	-0.002	-0.015	-0.70

Panel 4-3: Loss vs. Zero-Gain

		Loss (a) vs. Zero-Gain (b) (N_a=58) (N_b=18)			
s	e	CAR_a	CAR_b	DCAR	ZDCAR
	-4	-0.002	0.007	-0.008	-1.35
	-3	0.001	-0.007	0.008	1.14
	-2	-0.004	0.003	-0.007	-1.01
	-1	-0.008	-0.010	0.002	0.82
	0	0.004	0.008	-0.004	-0.68
	1	-0.007	-0.003	-0.004	-0.10
	2	0.003	0.005	-0.002	-0.90
-1	0	-0.004	-0.002	-0.002	0.10
-2	0	-0.008	0.001	-0.009	-0.50
-2	-1	-0.012	-0.007	-0.005	-0.13
0	1	-0.003	0.005	-0.008	-0.55
-1	1	-0.011	-0.005	-0.006	0.02
-2	1	-0.015	-0.002	-0.013	-0.48

For the description of the table headings, see bottom of Panel 2.

(TABLE 6-4 - continued)

By Instrument:
Panel 5-1: Common vs. Preferred | Panel 5-2: Common vs. Cash

		Common (a) vs. Preferred (b)				Common (a) vs. Cash (b)			
		(N_a=87)	(N_b=8)			(N_a=87)	(N_b=77)		
s	e	CAR_a	CAR_b	DCAR	ZDCAR	CAR_a	CAR_b	DCAR	ZDCAR
	-4	-0.004c	0.018	-0.022	-1.11	-0.004c	0.003	-0.007	-1.47
	-3	-0.002	-0.002	0.000	0.12	-0.002	-0.002	0.000	0.47
	-2	0.001	-0.016	0.016	0.67	0.001	-0.005b	0.006	1.73*
	-1	-0.011a	-0.004	-0.007	-1.18	-0.011a	0.001	-0.012	-3.07***
	0	-0.006	0.001	-0.007	-0.60	-0.006	-0.003	-0.002	-0.70
	1	-0.005	-0.008	0.002	-1.03	-0.005	0.003	-0.008	-1.59
	2	0.000	0.007	-0.007	-0.68	0.000	-0.002	0.002	0.28
-1	0	-0.016a	-0.003	-0.014	-1.26	-0.016a	-0.002	-0.014	-2.67***
-2	0	-0.016a	-0.018	0.003	-0.64	-0.016a	-0.008	-0.008	-1.18
-2	-1	-0.010b	-0.020	0.009	-0.36	-0.010b	-0.004	-0.006	-0.95
0	1	-0.011c	-0.007	-0.004	-1.15	-0.011c	0.000	-0.011	-1.63
-1	1	-0.022a	-0.010	-0.011	-1.62	-0.022a	0.001	-0.022	-3.11***
-2	1	-0.021a	-0.026	0.005	-1.07	-0.021a	-0.005	-0.016	-1.82*

By Instrument:
Panel 5-3: Common vs. Asset | Panel 5-4: Common vs. Debt

		Common (a) vs. Asset (b)				Common (a) vs. Debt (b)			
		(N_a=87)	(N_b=6)			(N_a=87)	(N_b=36)		
s	e	CAR_a	CAR_b	DCAR	ZDCAR	CAR_a	CAR_b	DCAR	ZDCAR
	-4	-0.004c	-0.007	0.003	0.20	-0.004c	0.000	-0.005	-1.08
	-3	-0.002	-0.010	0.008	0.70	-0.002	0.000	-0.001	-0.47
	-2	0.001	0.014	-0.013	-0.90	0.001	-0.003	0.004	0.32
	-1	-0.011a	-0.006	-0.005	-1.07	-0.011a	-0.007	-0.004	-1.31
	0	-0.006	0.004	-0.010	-0.85	-0.006	-0.004	-0.002	-0.13
	1	-0.005	-0.006	0.001	-0.06	-0.005	-0.007	0.002	-0.82
	2	0.000	0.008	-0.008	-1.24	0.000	0.005	-0.006	-0.49
-1	0	-0.016a	-0.002	-0.014	-1.35	-0.016a	-0.011	-0.006	-1.03
-2	0	-0.016a	0.012	-0.027	-1.63	-0.016a	-0.014	-0.002	-0.66
-2	-1	-0.010b	0.007	-0.018	-1.39	-0.010b	-0.010	0.000	-0.71
0	1	-0.011c	-0.002	-0.009	-0.64	-0.011c	-0.011	0.000	-0.68
-1	1	-0.022a	-0.008	-0.014	-1.14	-0.022a	-0.018	-0.004	-1.32
-2	1	-0.021a	0.005	-0.027	-1.44	-0.021a	-0.021	-0.001	-0.98

For the description of the table headings, see bottom of Panel 2.

(TABLE 6-4 - continued)

By Instrument:
Panel 5-5: Preferred vs. Cash

Panel 5-6: Preferred vs. Asset

		Preferred (a) vs. Cash (b) (N_a=8)	(N_b=77)			Preferred (a) vs. Asset (b) (N_a=8)	(N_b=6)		
s	e	CAR_a	CAR_b	DCAR	ZDCAR	CAR_a	CAR_b	DCAR	ZDCAR
	-4	0.018	0.003	0.015	0.48	0.018	-0.007	0.025	0.92
	-3	-0.002	-0.002	0.000	0.08	-0.002	-0.010	0.008	0.46
	-2	-0.016	-0.005b	-0.010	0.07	-0.016	0.014	-0.029	-1.16
	-1	-0.004	0.001	-0.005	-0.13	-0.004	-0.006	0.002	-0.03
	0	0.001	-0.003	0.004	0.30	0.001	0.004	-0.003	-0.25
	1	-0.008	0.003	-0.011	0.35	-0.008	-0.006	-0.002	0.66
	2	0.007	-0.002	0.009	0.79	0.007	0.008	-0.001	-0.51
-1	0	-0.003	-0.002	-0.001	0.12	-0.003	-0.002	-0.001	-0.20
-2	0	-0.018	-0.008	-0.011	0.14	-0.018	0.012	-0.030	-0.83
-2	-1	-0.020	-0.004	-0.015	-0.04	-0.020	0.007	-0.027	-0.84
0	1	-0.007	0.000	-0.006	0.46	-0.007	-0.002	-0.005	0.29
-1	1	-0.010	0.001	-0.011	0.30	-0.010	-0.008	-0.002	0.22
-2	1	-0.026	-0.005	-0.021	0.30	-0.026	0.005	-0.032	-0.39

By Instrument:
Panel 5-7: Preferred vs. Debt

		Preferred (a) vs. Debt (b) (N_a=8)	(N_b=36)		
s	e	CAR_a	CAR_b	DCAR	ZDCAR
	-4	0.018	0.000	0.017	0.50
	-3	-0.002	0.000	-0.001	-0.35
	-2	-0.016	-0.003	-0.013	-0.47
	-1	-0.004	-0.007	0.003	0.44
	0	0.001	-0.004	0.005	0.50
	1	-0.008	-0.007	-0.001	0.55
	2	0.007	0.005	0.001	0.39
-1	0	-0.003	-0.011	0.008	0.67
-2	0	-0.018	-0.014	-0.005	0.27
-2	-1	-0.020	-0.010	-0.010	-0.02
0	1	-0.007	-0.011	0.004	0.74
-1	1	-0.010	-0.018	0.007	0.86
-2	1	-0.026	-0.021	-0.005	0.51

For the description of the table headings, see bottom of Panel 2.

(TABLE 6-4 - continued)

By Instrument:
Panel 5-8: Cash vs. Asset

		Cash (a) vs. Asset (b) (N_a=77)	(N_b=6)		
s	e	CAR_a	CAR_b	DCAR	ZDCAR
	-4	0.003	-0.007	0.010	0.74
	-3	-0.002	-0.010	0.008	0.52
	-2	-0.005b	0.014	-0.019	-1.53
	-1	0.001	-0.006	0.007	0.08
	0	-0.003	0.004	-0.007	-0.59
	1	0.003	-0.006	0.009	0.53
	2	-0.002	0.008	-0.010	-1.34
-1	0	-0.002	-0.002	0.000	-0.36
-2	0	-0.008	0.012	-0.019	-1.18
-2	-1	-0.004	0.007	-0.012	-1.03
0	1	0.000	-0.002	0.002	-0.04
-1	1	0.001	-0.008	0.009	0.01
-2	1	-0.005	0.005	-0.010	-0.76

Panel 5-9: Cash vs. Debt

		Cash (a) vs. Debt (b) (N_a=77)	(N_b=36)		
s	e	CAR_a	CAR_b	DCAR	ZDCAR
	-4	0.003	0.000	0.003	0.07
	-3	-0.002	0.000	-0.001	-0.82
	-2	-0.005b	-0.003	-0.002	-1.02
	-1	0.001	-0.007	0.008	1.07
	0	-0.003	-0.004	0.001	0.41
	1	0.003	-0.007	0.010	0.42
	2	-0.002	0.005	-0.008	-0.69
-1	0	-0.002	-0.011	0.008	1.06
-2	0	-0.008	-0.014	0.006	0.27
-2	-1	-0.004	-0.010	0.005	0.04
0	1	0.000	-0.011	0.011	0.59
-1	1	0.001	-0.018	0.018	1.11
-2	1	-0.005	-0.021	0.016	0.45

By Instrument:
Panel 5-10: Asset vs. Debt

		Asset (a) vs. Debt (b) (N_a=6)	(N_b=36)		
s	e	CAR_a	CAR_b	DCAR	ZDCAR
	-4	-0.007	0.000	-0.007	-0.68
	-3	-0.010	0.000	-0.009	-0.88
	-2	0.014	-0.003	0.017	1.00
	-1	-0.006	-0.007	0.001	0.42
	0	0.004	-0.004	0.008	0.75
	1	-0.006	-0.007	0.001	-0.31
	2	0.008	0.005	0.003	0.96
-1	0	-0.002	-0.011	0.009	0.83
-2	0	0.012	-0.014	0.025	1.26
-2	-1	0.007	-0.010	0.017	1.01
0	1	-0.002	-0.011	0.009	0.31
-1	1	-0.008	-0.018	0.009	0.50
-2	1	0.005	-0.021	0.026	0.93

For the description of the table headings, see bottom of Panel 2.

(TABLE 6-4 - continued)

By Instrument during Early 1980's:

Panel 6-1: Common vs. Cash

s	e	Common (a) vs. Cash (b) CAR_a (N_a=79)	CAR_b (N_b=22)	DCAR	ZDCAR
	-4	-0.003	0.001	-0.004	-0.86
	-3	-0.001	0.002	-0.003	-0.40
	-2	0.002	-0.010c	0.013	1.78*
	-1	-0.008a	0.011b	-0.019	-3.57***
	0	-0.008	-0.013c	0.005	0.82
	1	-0.005	0.001	-0.006	-0.81
	2	-0.001	0.001	-0.002	-0.29
-1	0	-0.016a	-0.002	-0.014	-1.99**
-2	0	-0.013b	-0.012	-0.001	-0.58
-2	-1	-0.006c	0.000	-0.006	-1.30
0	1	-0.013b	-0.011	-0.001	0.00
-1	1	-0.021a	-0.001	-0.020	-2.10**
-2	1	-0.018a	-0.011	-0.007	-0.91

Panel 6-2: Common vs. Debt

s	e	Common (a) vs. Debt (b) CAR_a (N_a=79)	CAR_b (N_b=26)	DCAR	ZDCAR
	-4	-0.003	0.002	-0.005	-0.88
	-3	-0.001	-0.001	0.000	-0.01
	-2	0.002	0.000	0.003	0.07
	-1	-0.008a	-0.007	-0.001	-0.73
	0	-0.008	-0.005	-0.003	0.15
	1	-0.005	-0.007	0.003	-0.59
	2	-0.001	0.004	-0.005	-0.21
-1	0	-0.016a	-0.012	-0.004	-0.42
-2	0	-0.013b	-0.012	-0.001	-0.30
-2	-1	-0.006c	-0.007	0.002	-0.47
0	1	-0.013b	-0.012	0.000	-0.31
-1	1	-0.021a	-0.020	-0.001	-0.68
-2	1	-0.018a	-0.020	0.001	-0.56

By Instrument during Early 1980's:

Panel 6-3: Cash vs. Debt

s	e	Cash (a) vs. Debt (b) CAR_a (N_a=22)	CAR_b (N_b=26)	DCAR	ZDCAR
	-4	0.001	0.002	-0.001	0.02
	-3	0.002	-0.001	0.002	0.33
	-2	-0.010c	0.000	-0.010	-1.42
	-1	0.011b	-0.007	0.018	2.40**
	0	-0.013c	-0.005	-0.008	-0.56
	1	0.001	-0.007	0.009	0.22
	2	0.001	0.004	-0.003	0.08
-1	0	-0.002	-0.012	0.010	1.33
-2	0	-0.012	-0.012	0.000	0.25
-2	-1	0.000	-0.007	0.008	0.71
0	1	-0.011	-0.012	0.001	-0.25
-1	1	-0.001	-0.020	0.019	1.21
-2	1	-0.011	-0.020	0.009	0.33

For the description of the table headings, see bottom of Panel 2.

(TABLE 6-4 - continued)

By Instrument during Late 1980's:
Panel 7-1: Common vs. Cash

		Common (a) vs. Cash (b) (N_a=8) (N_b=55)			
s	e	CAR_a	CAR_b	DCAR	ZDCAR
	-4	-0.018	0.004	-0.021	-1.79*
	-3	-0.010	-0.003	-0.007	-0.69
	-2	-0.018	-0.004	-0.015	-0.11
	-1	-0.038a	-0.003	-0.035	-2.40**
	0	0.016	0.001	0.016	0.52
	1	-0.010	0.004	-0.013	-0.55
	2	0.013	-0.003	0.016	0.00
-1	0	-0.022	-0.002	-0.019	-1.32
-2	0	-0.040	-0.006	-0.034	-1.14
-2	-1	-0.056b	-0.006	-0.050	-1.77*
0	1	0.007	0.004	0.002	-0.02
-1	1	-0.031	0.001	-0.033	-1.40
-2	1	-0.050	-0.002	-0.047	-1.26

Panel 7-2: Common vs. Debt

		Common (a) vs. Debt (b) (N_a=8) (N_b=10)			
s	e	CAR_a	CAR_b	DCAR	ZDCAR
	-4	-0.018	-0.004	-0.014	-1.24
	-3	-0.010	0.000	-0.010	-1.35
	-2	-0.018	-0.010	-0.008	-0.01
	-1	-0.038a	-0.006	-0.032	-2.02**
	0	0.016	-0.001	0.017	0.32
	1	-0.010	-0.006	-0.004	-0.41
	2	0.013	0.010	0.003	-0.63
-1	0	-0.022	-0.007	-0.015	-1.21
-2	0	-0.040	-0.017	-0.023	-0.99
-2	-1	-0.056b	-0.017	-0.040	-1.44
0	1	0.007	-0.006	0.013	-0.06
-1	1	-0.031	-0.013	-0.019	-1.22
-2	1	-0.050	-0.023	-0.027	-1.06

By Instrument during Late 1980's:
Panel 7-3: Cash vs. Debt

		Cash (a) vs. Debt (b) (N_a=55) (N_b=10)			
s	e	CAR_a	CAR_b	DCAR	ZDCAR
	-4	0.004	-0.004	0.008	0.26
	-3	-0.003	0.000	-0.003	-1.10
	-2	-0.004	-0.010	0.007	0.11
	-1	-0.003	-0.006	0.003	-0.15
	0	0.001	-0.001	0.001	-0.14
	1	0.004	-0.006	0.009	0.04
	2	-0.003	0.010	-0.013	-0.87
-1	0	-0.002	-0.007	0.005	-0.21
-2	0	-0.006	-0.017	0.012	-0.11
-2	-1	-0.006	-0.017	0.010	-0.03
0	1	0.004	-0.006	0.010	-0.07
-1	1	0.001	-0.013	0.014	-0.14
-2	1	-0.002	-0.023	0.021	-0.07

For the description of the table headings, see bottom of Panel 2.

(TABLE 6-4 - continued)

By Period Given Instrument:
Panel 8-1: Early vs. Late (Common)

		Early-Common vs. $(N_a=79)$		Late-Common $(N_b=8)$	
s	e	CAR_a	CAR_b	DCAR	ZDCAR
	-4	-0.003	-0.018	0.015	1.36
	-3	-0.001	-0.010	0.009	1.25
	-2	0.002	-0.018	0.021	0.76
	-1	-0.008a	-0.038a	0.030	1.80*
	0	-0.008	0.016	-0.024	-1.34
	1	-0.005	-0.010	0.005	-0.19
	2	-0.001	0.013	-0.014	0.27
-1	0	-0.016a	-0.022	0.006	0.33
-2	0	-0.013b	-0.040	0.027	0.71
-2	-1	-0.006c	-0.056b	0.051	1.81*
0	1	-0.013b	0.007	-0.019	-1.08
-1	1	-0.021a	-0.031	0.011	0.16
-2	1	-0.018a	-0.050	0.031	0.52

Panel 8-2: Early vs. Late (Cash)

		Early-Cash vs. $(N_a=22)$		Late-Cash $(N_b=55)$	
s	e	CAR_a	CAR_b	DCAR	ZDCAR
	-4	0.001	0.004	-0.003	0.14
	-3	0.002	-0.003	0.005	1.18
	-2	-0.010c	-0.004	-0.007	-0.76
	-1	0.011b	-0.003	0.013	2.49**
	0	-0.013c	0.001	-0.013	-1.94*
	1	0.001	0.004	-0.002	-0.31
	2	0.001	-0.003	0.005	0.68
-1	0	-0.002	-0.002	0.000	0.40
-2	0	-0.012	-0.006	-0.007	-0.12
-2	-1	0.000	-0.006	0.007	1.25
0	1	-0.011	0.004	-0.015	-1.62
-1	1	-0.001	0.001	-0.002	0.14
-2	1	-0.011	-0.002	-0.009	-0.26

By Period Given Instrument:
Panel 8-3: Early vs. Late (Debt)

		Early-Debt vs. $(N_a=26)$		Late-Debt $(N_b=10)$	
s	e	CAR_a	CAR_b	DCAR	ZDCAR
	-4	0.002	-0.004	0.006	0.32
	-3	-0.001	0.000	-0.001	-0.46
	-2	0.000	-0.010	0.010	0.70
	-1	-0.007	-0.006	-0.001	-0.33
	0	-0.005	-0.001	-0.004	-1.02
	1	-0.007	-0.006	-0.002	-0.35
	2	0.004	0.010	-0.006	-0.40
-1	0	-0.012	-0.007	-0.005	-0.96
-2	0	-0.012	-0.017	0.005	-0.37
-2	-1	-0.007	-0.017	0.009	0.27
0	1	-0.012	-0.006	-0.006	-0.97
-1	1	-0.020	-0.013	-0.007	-0.98
-2	1	-0.020	-0.023	0.003	-0.50

For the description of the table headings, see bottom of Panel 2.

TABLE 6-5

Summary of Abnormal Returns (AR) and Cumulative Abnormal Returns (CAR) around the EDR Announcement

Portfolio	AR				CAR			
	-2	-1	0	+1	[-2,-1]	[-1,0]	[-2,0]	[-2,+1]
All EDRs	-	-b(a)	-	-	-b	-c	-c	-c
<u>By Period</u>:								
Early	-	-c(a)	-b	- (c)	-	-a	-b	-b
Late	-	-c	+	-	-b	-	-	-
<u>By Effect</u>:								
EDR-Gain	-	-c(b)	-b	-	-c	-a	-a	-b
EDR-Loss	-	- (b)	+	-	-	-	-	-
Zero-Gain	-	-	+	-	-	-	+	+
<u>By Method</u>:								
D/E Swaps	-	-b(a)	-c	-	-	-a	-b	-c
Others	-	-	+	-	-b	-	-	-
<u>By Instrument</u>:								
Cash	-b	+	-	+	-	-	-	-
Debt	-	-	-	-	-	-	-	-
Common	+	-a(a)	-	-	-b	-a	-a	-a
Preferred	-	-	+	-	-	-	-	-
Asset	+	-	+	-	+	-	+	+
<u>Early</u>:								
Cash	-c(c)	+b	-c(c)	+	+	-	-	-
Debt	+	-	-	-	-	-	-	-
Common	+	-a(a)	-	-	-c	-a	-b	-a
<u>Late</u>:								
Cash	-	-	+	+	-	-	-	-
Debt	-	-	-	-	-	-	-	-
Common	-	-a(b)	+	-	-b	-	-	-

a : significant at the 0.01 level (two-tailed) for ZAR and ZCAR.
b : significant at the 0.05 level (two-tailed) for ZAR and ZCAR.
c : significant at the 0.10 level (two-tailed) for ZAR and ZCAR.

The characters in parenthesis stand for the significance level for the Z-statistics on the proportion of negative ARs out of all ARs at day t.

TABLE 6-6
Summary of the Difference in AR and CAR between Portfolios

Portfolio	AR				CAR			
	-2	-1	0	+1	[-2,-1]	[-1,0]	[-2,0]	[-2,+1]
By Period:								
Early	-	-c(a)	-b	- (c)	-	-a	-b	-b
Late	-	-c	+	-	-b	-	-	-
Difference	+	+	-**	-	+	-	-	-
By Effect:								
EDR-Gain	-	-c(b)	-b	-	-c	-a	-a	-b
EDR-Loss	-	- (b)	+	-	-	-	-	-
Difference	+	+	-**	+	-	-*	-	-
EDR-Gain	-	-c(b)	-b	-	-c	-a	-a	-b
Zero-Gain	-	-	+	-	-	-	+	+
Difference	-	+	-**	+	+	-	-	-
EDR-Loss	-	- (b)	+	-	-	-	-	-
Zero-Gain	-	-	+	-	-	-	+	+
Difference	-	+	-	-	-	-	-	-
By Method:								
D/E Swaps	-	-b(a)	-c	-	-	-a	-b	-c
Others	-	-	+	-	-b	-	-	-
Difference	+	+	-*	+	+	-**	-	-
By Instrument:								
Common	+	-a(a)	-	-	-b	-a	-a	-a
Preferred	-	-	+	-	-	-	-	-
Difference	+	-	-	+	+	-	+	+
Common	+	-a(a)	-	-	-b	-a	-a	-a
Cash	-b	+	-	+	-	-	-	-
Difference	+*	-***	-	-	-	-***	-	-*
Common	+	-a(a)	-	-	-b	-a	-a	-a
Asset	+	-	+	-	+	-	+	+
Difference	-	-	-	+	-	-	-	-
Common	+	-a(a)	-	-	-b	-a	-a	-a
Debt	+	-	-	-	-	-	-	-
Difference	+	-	-	+	+	-	-	-

a[***]: significant at the 0.01 level for ZAR and ZCAR [ZDAR and ZDCAR].
b[**] : significant at the 0.05 level for ZAR and ZCAR [ZDAR and ZDCAR].
c[*] : significant at the 0.10 level for ZAR and ZCAR [ZDAR and ZDCAR].
The characters in parenthesis stand for the significance level for the Z-statistics on the proportion of negative ARs out of all ARs at day t.

(TABLE 6-6 - continued)

Summary of the Difference in AR and CAR between Portfolios

Portfolio	AR				CAR			
	-2	-1	0	+1	[-2,-1]	[-1,0]	[-2,0]	[-2,+1]
By Instrument:								
Preferred	-	-	+	-	-	-	-	-
Cash	-b	+	-	+	-	-	-	-
Difference	-	-	+	-	-	-	-	-
Preferred	-	-	+	-	-	-	-	-
Asset	+	-	+	-	+	-	+	+
Difference	-	+	-	-	-	-	-	-
Preferred	-	-	+	-	-	-	-	-
Debt	-	-	-	-	-	-	-	-
Difference	-	+	+	+	-	+	-	-
Cash	-b	+	-	+	-	-	-	-
Asset	+	-	+	-	+	-	+	+
Difference	-	+	-	+	-	+	-	-
Cash	-b	+	-	+	-	-	-	-
Debt	-	-	-	-	-	-	-	-
Difference	-	+	+	+	+	+	+	+
Asset	+	-	+	-	+	-	+	+
Debt	-	-	-	-	-	-	-	-
Difference	+	+	+	+	+	+	+	+
By Instrument: Early:								
Common	+	-a(a)	-	-	-c	-a	-b	-a
Cash	-c(c)	+b	-c(c)	+	+	-	-	-
Difference	+*	-***	+	-	-	-**	-	-
Common	+	-a(a)	-	-	-c	-a	-b	-a
Debt	-	-	-	-	-	-	-	-
Difference	+	-	-	-	+	-	-	+
Cash	-c(c)	+b	-c(c)	+	+	-	-	-
Debt	+	-	-	-	-	-	-	-
Difference	-	+**	-	+	+	+	+	+

a[***]: significant at the 0.01 level for ZAR and ZCAR [ZDAR and ZDCAR].
b[**] : significant at the 0.05 level for ZAR and ZCAR [ZDAR and ZDCAR].
c[*] : significant at the 0.10 level for ZAR and ZCAR [ZDAR and ZDCAR].
The characters in parenthesis stand for the significance level for the Z-statistics on the proportion of negative ARs out of all ARs at day t.

(TABLE 6-6 - continued)

Summary of the Difference in AR and CAR between Portfolios

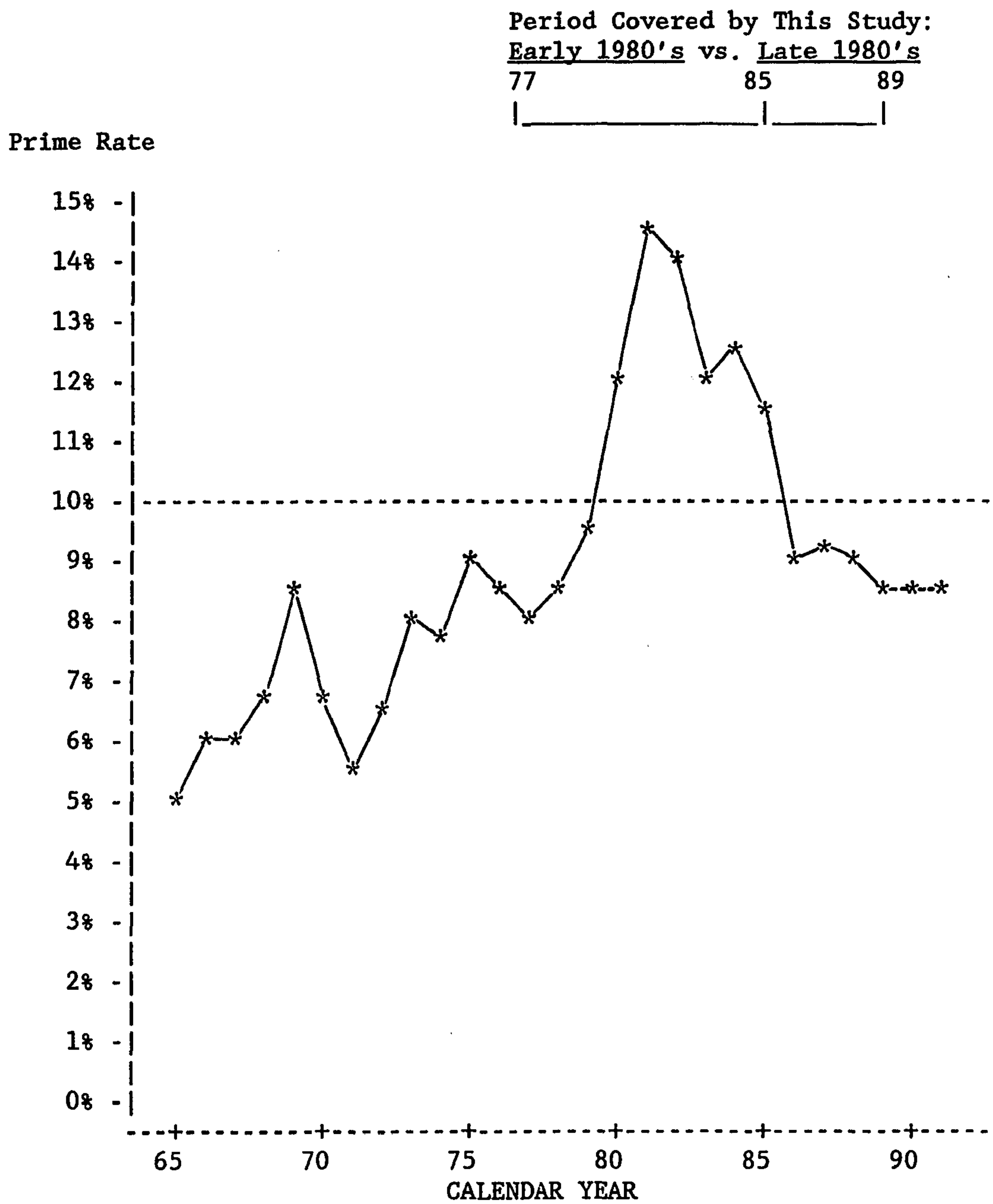
Portfolio	AR				CAR			
	-2	-1	0	+1	[-2,-1]	[-1,0]	[-2,0]	[-2,+1]
By Instrument; Late:								
Common	-	-a(b)	+	-	-b	-	-	-
Cash	-	-	+	+	-	-	-	-
Difference	-	-**	+	-	-*	-	-	-
Common	-	-a(b)	+	-	-b	-	-	-
Debt	-	-	-	-	-	-	-	-
Difference	-	-**	+	-	-	-	-	-
Cash	-	-	+	+	-	-	-	-
Debt	-	-	-	-	-	-	-	-
Difference	+	+	+	+	+	+	+	+
Cash:								
Early	-c(c)	+b	-c(c)	+	+	-	-	-
Late	-	-	+	+	-	-	-	-
Difference	+	+*	-	+	+*	+	+	+
Debt:								
Early	-	-	-	-	-	-	-	-
Late	+	-	-	-	-	-	-	-
Difference	+	-	-	-	+	-	+	+
Common:								
Early	+	-a(a)	-	-	-c	-a	-b	-a
Late	-	-a(b)	+	-	-b	-	-	-
Difference	-	+**	-*	-	+	+	-	-

a[***]: significant at the 0.01 level for ZAR and ZCAR [ZDAR and ZDCAR].
b[**] : significant at the 0.05 level for ZAR and ZCAR [ZDAR and ZDCAR].
c[*] : significant at the 0.10 level for ZAR and ZCAR [ZDAR and ZDCAR].

The characters in parenthesis stand for the significance level for the Z-statistics on the proportion of negative ARs out of all ARs at day t.

FIGURE 1-1

TIME-SERIES PATTERN OF PRIME RATES CHARGED BY BANKS
(PERCENT PER ANNUM)



Source: Value-Line Investment Survey (March 1990).
Prime Rates in 1990 and 1991 are based on the Value-Line forecasts.

FIGURE 5-1.1

TIME-SERIES PATTERN OF ANNUAL EARNINGS PER SHARE (EPSc)

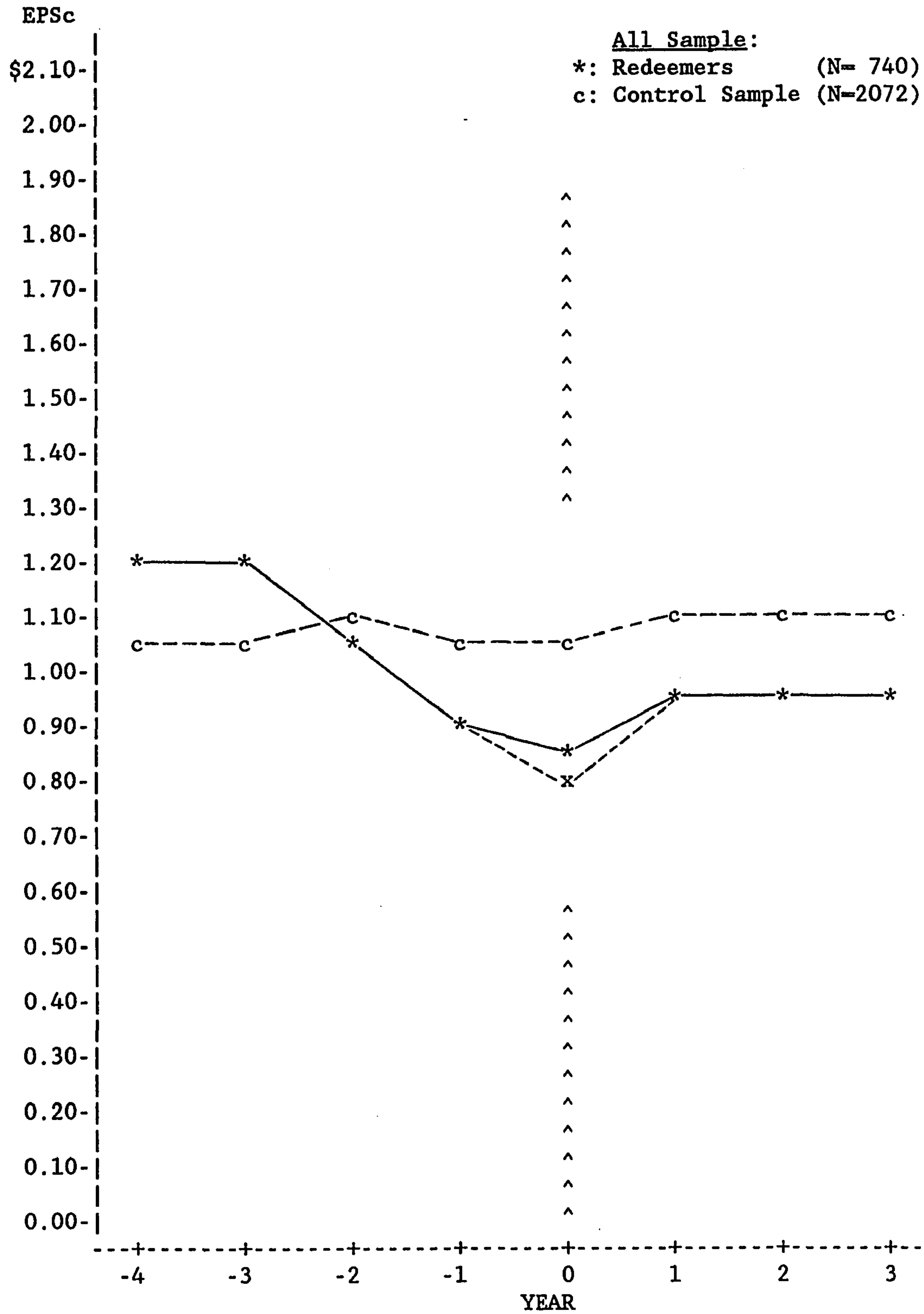


FIGURE 5-1.2

TIME-SERIES PATTERN OF ANNUAL EARNINGS PER SHARE (EPSb)

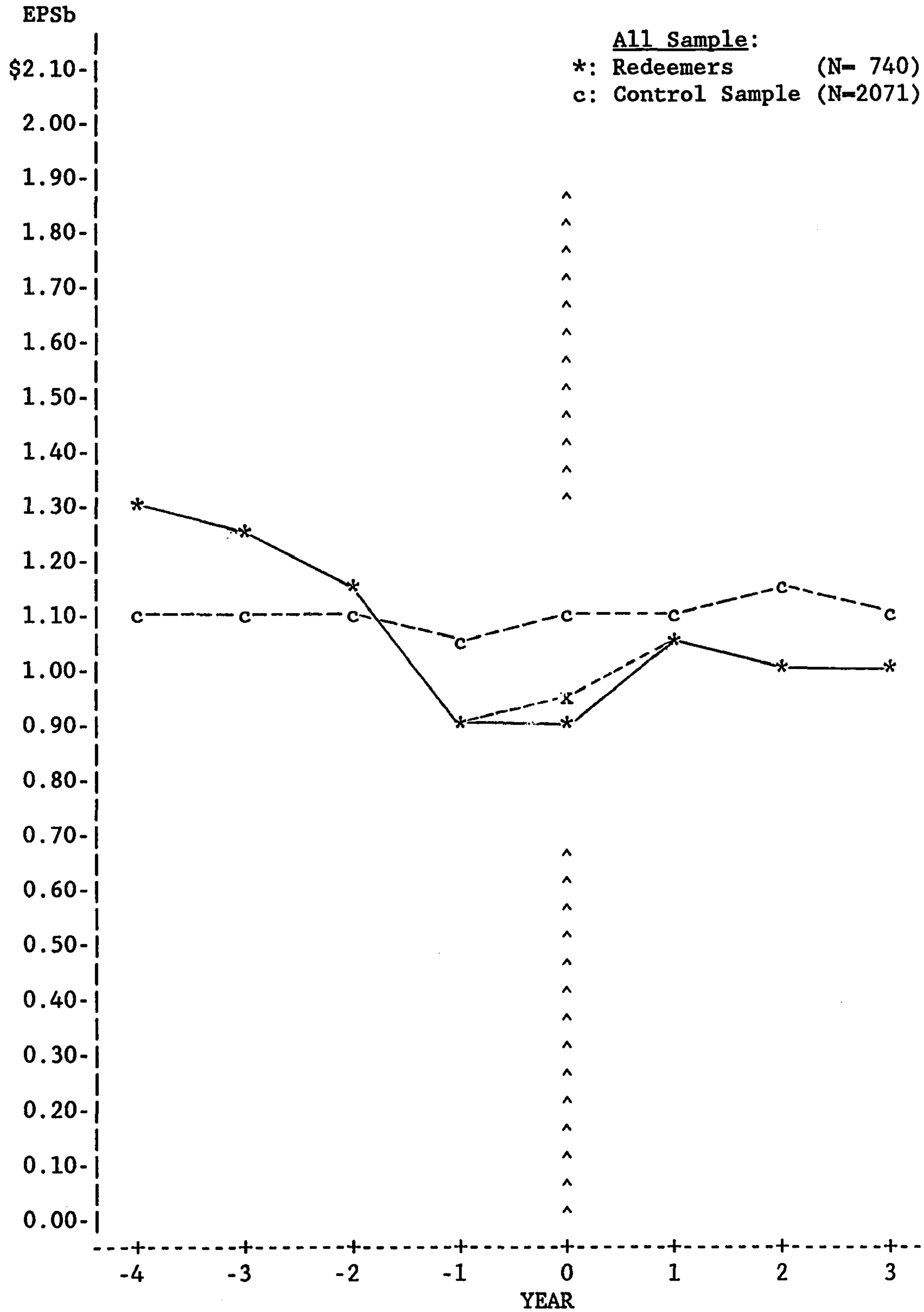


FIGURE 5-1.3

TIME-SERIES PATTERN OF RETURN ON ASSETS (ROAc)

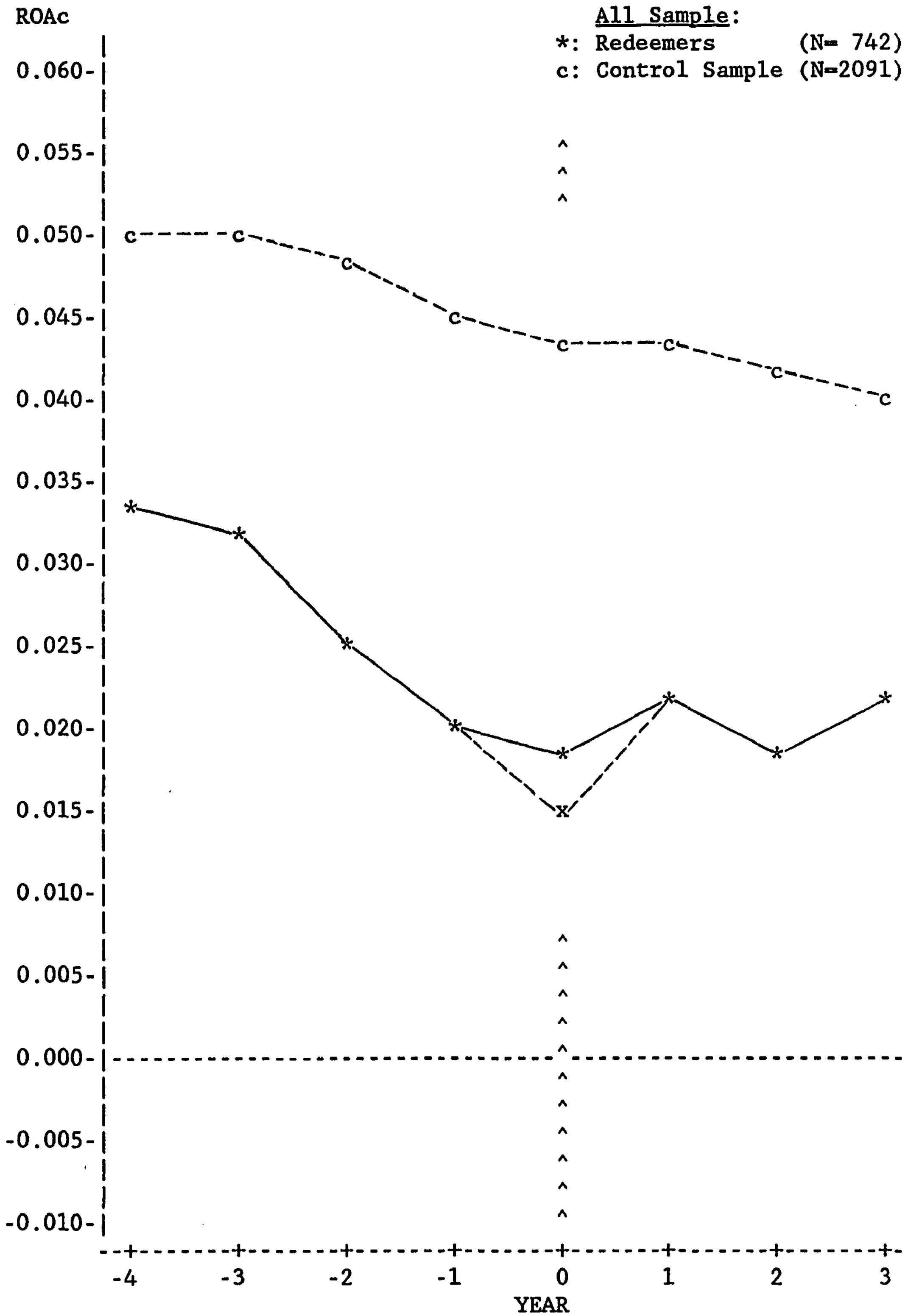


FIGURE 5-1.4

TIME-SERIES PATTERN OF RETURN ON ASSETS (ROAb)

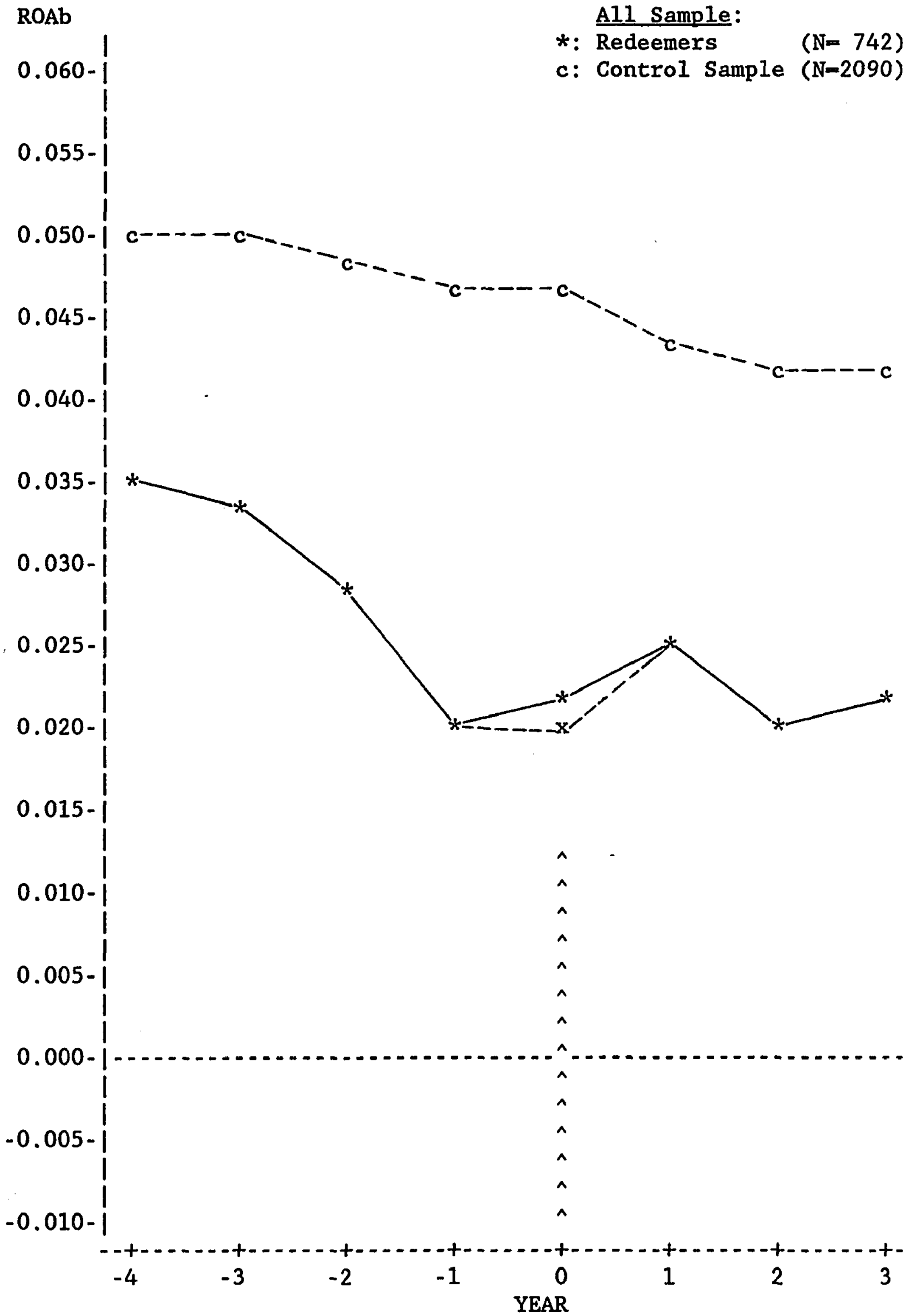


FIGURE 5-1.5

TIME-SERIES PATTERN OF DEBT TO EQUITY RATIO (LTDSE)

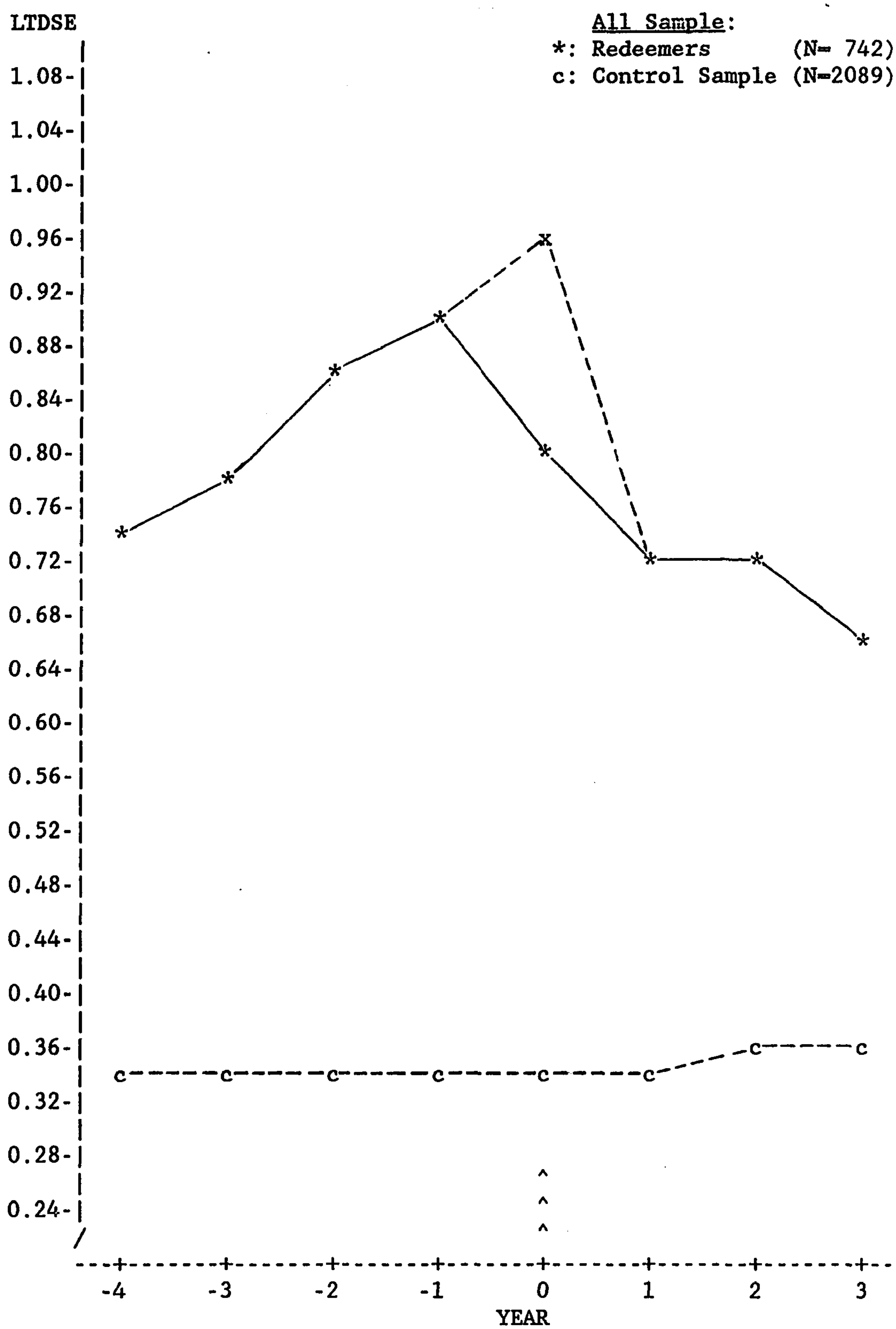


FIGURE 5-1.6

TIME-SERIES PATTERN OF TOTAL DEBT TO TOTAL ASSET RATIO (TDTA)

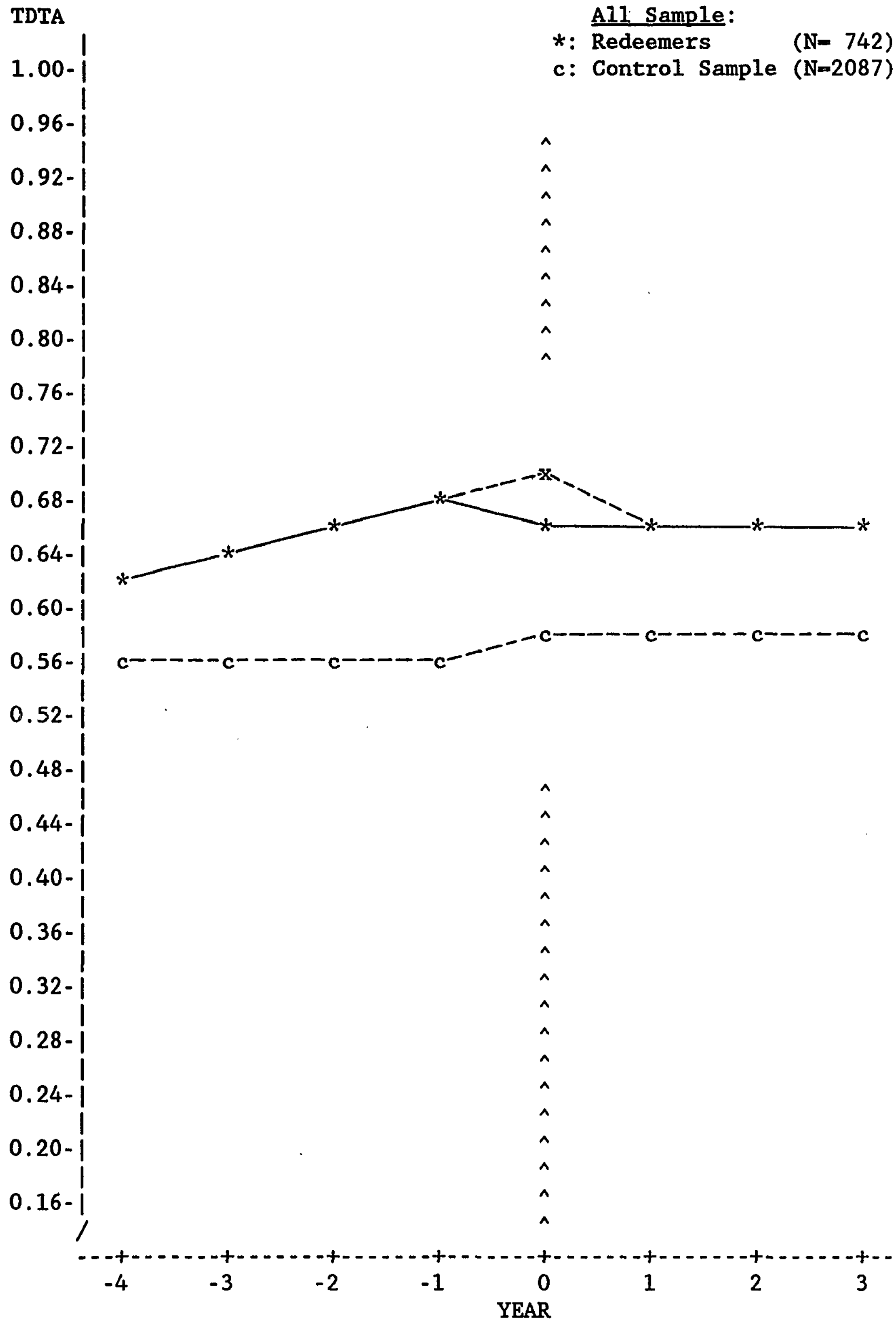


FIGURE 5-1.7
TIME-SERIES PATTERN OF DEBT TO MARKET VALUE RATIO (LTDMV)

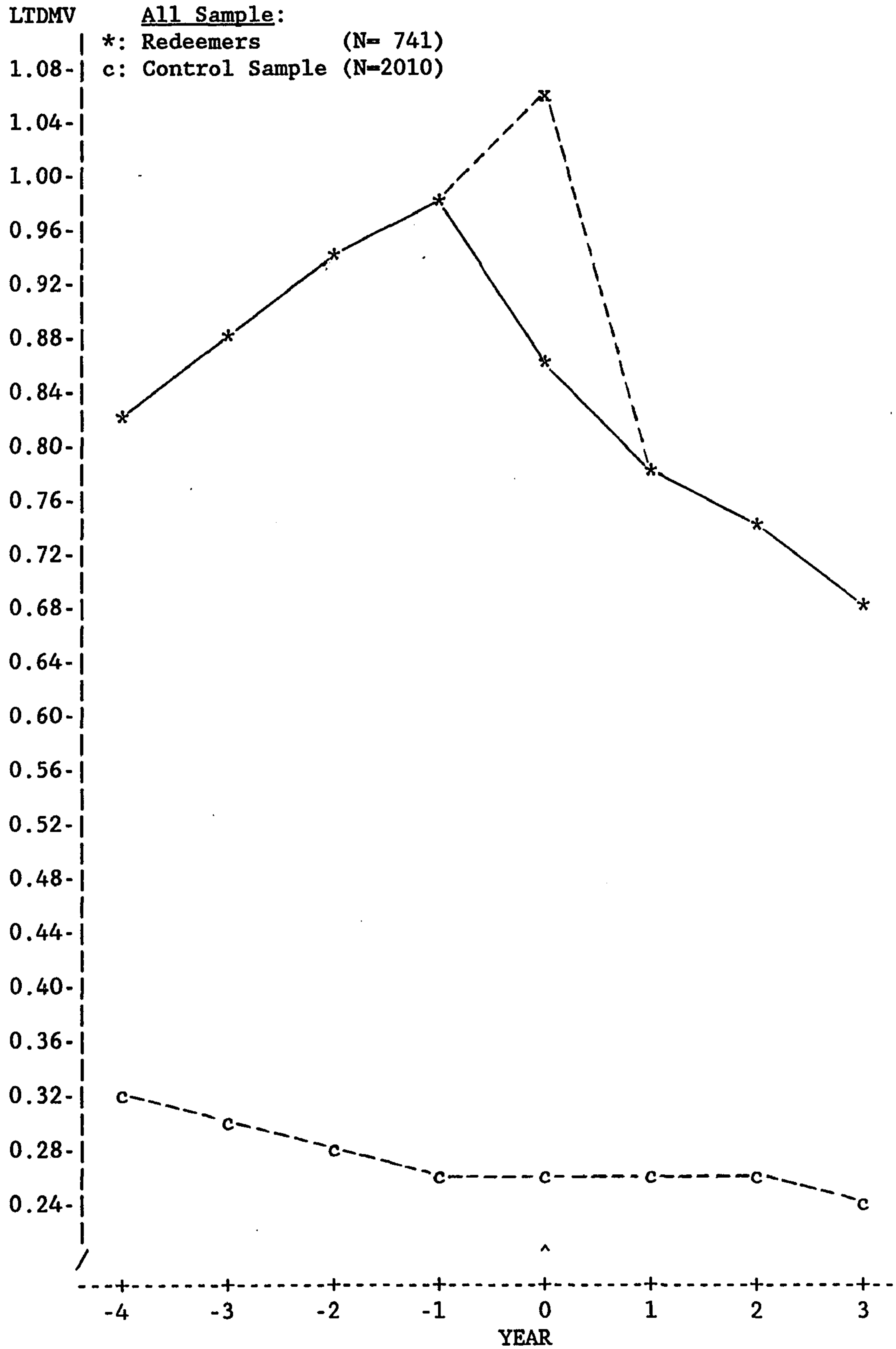


FIGURE 5-1.8

TIME-SERIES PATTERN OF ALTMAN'S Z-SCORE (ZSCORE)

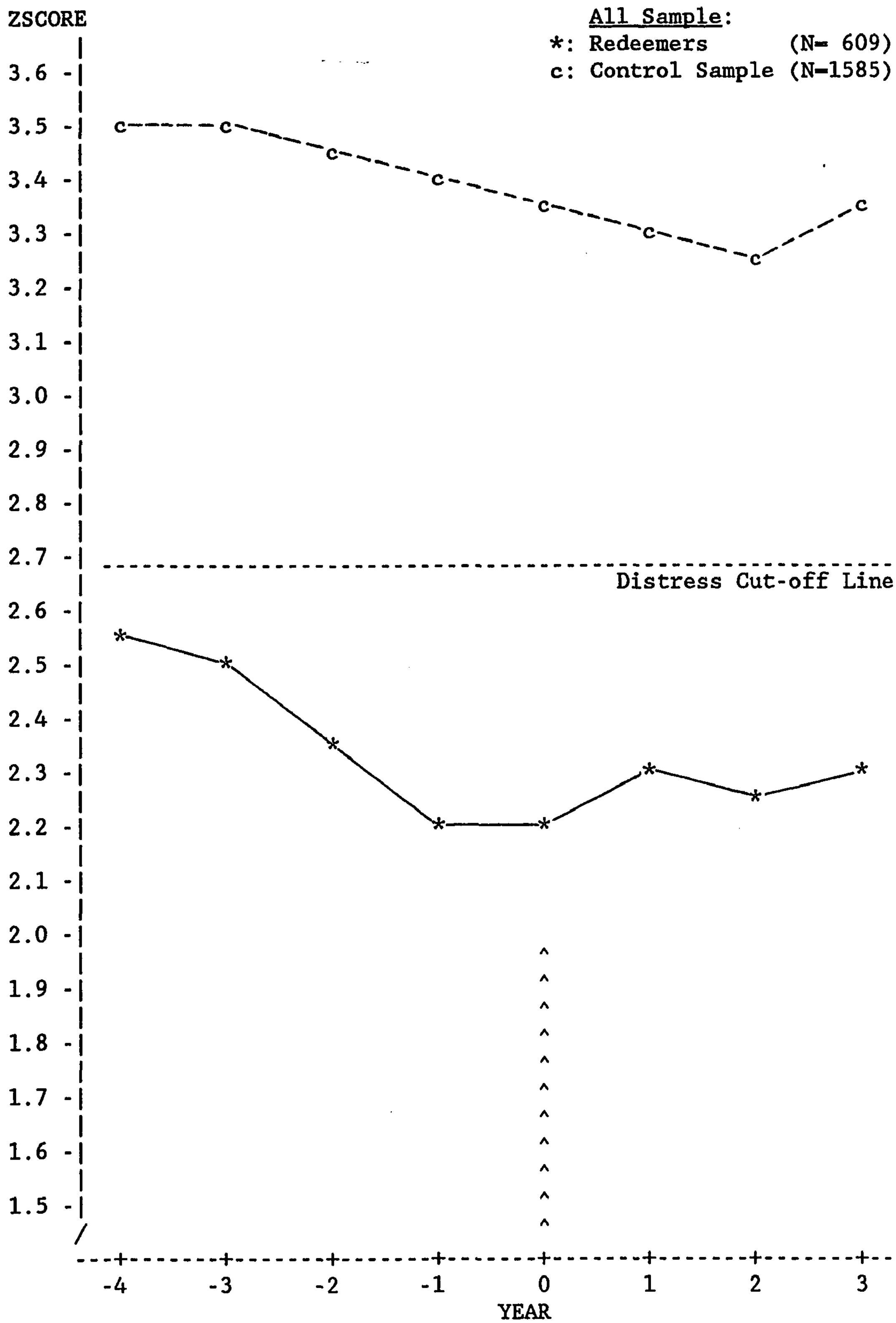


FIGURE 5-1.9

TIME-SERIES PATTERN OF CREDIT-RATING (RATING)

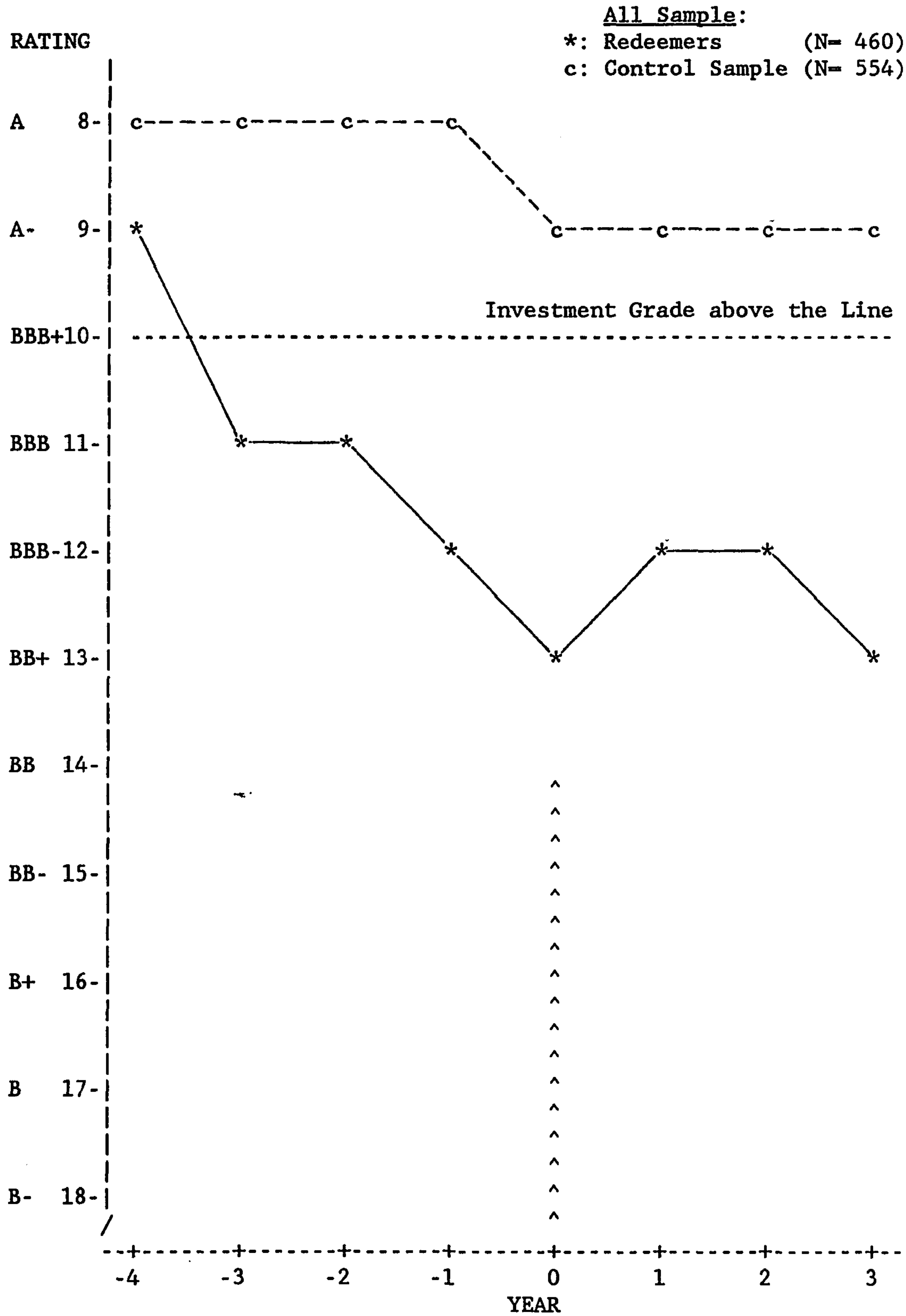


FIGURE 5-2.1

TIME-SERIES PATTERN OF ANNUAL EARNINGS PER SHARE (EPSc)

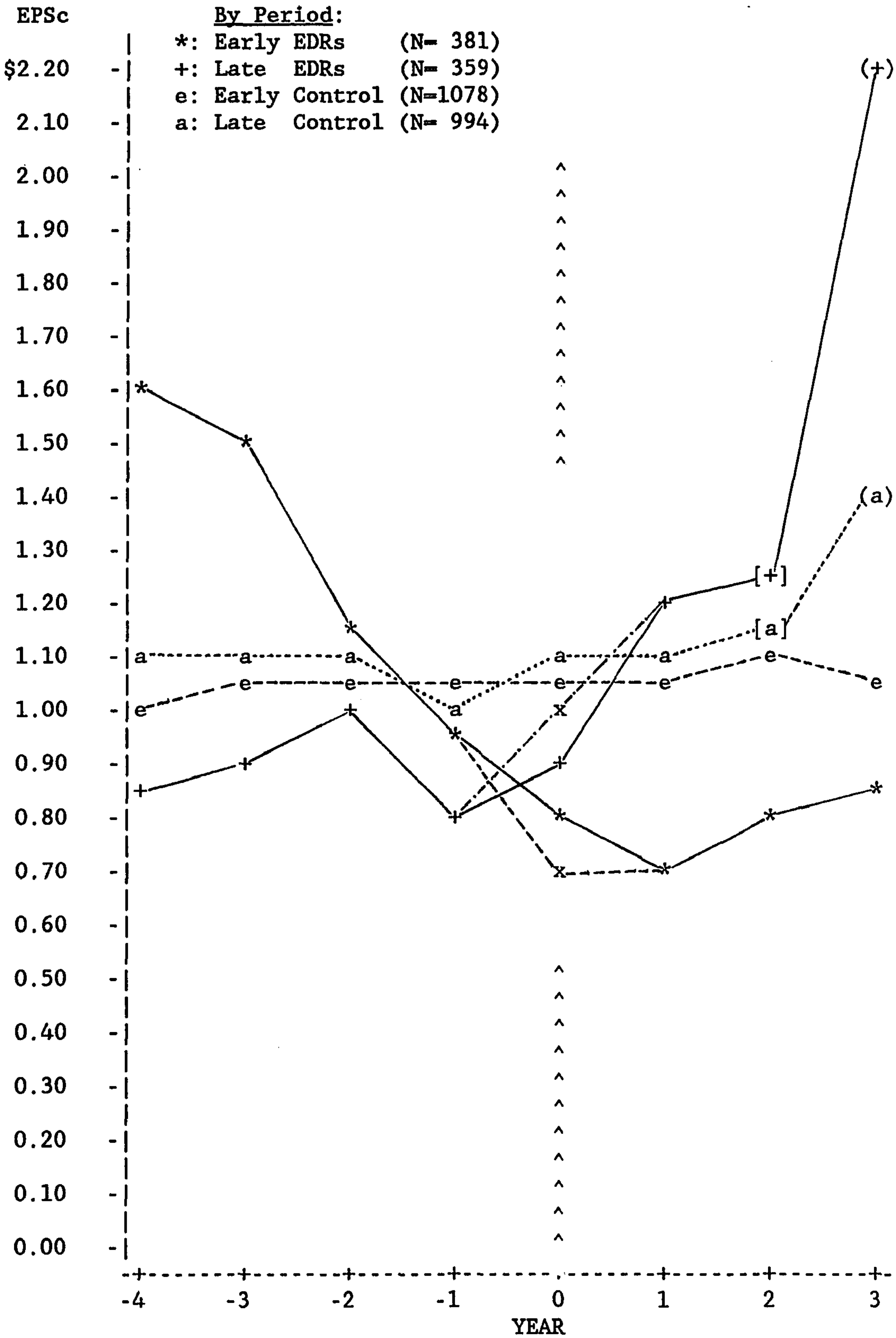


FIGURE 5-2.2

TIME-SERIES PATTERN OF ANNUAL EARNINGS PER SHARE (EPSb)

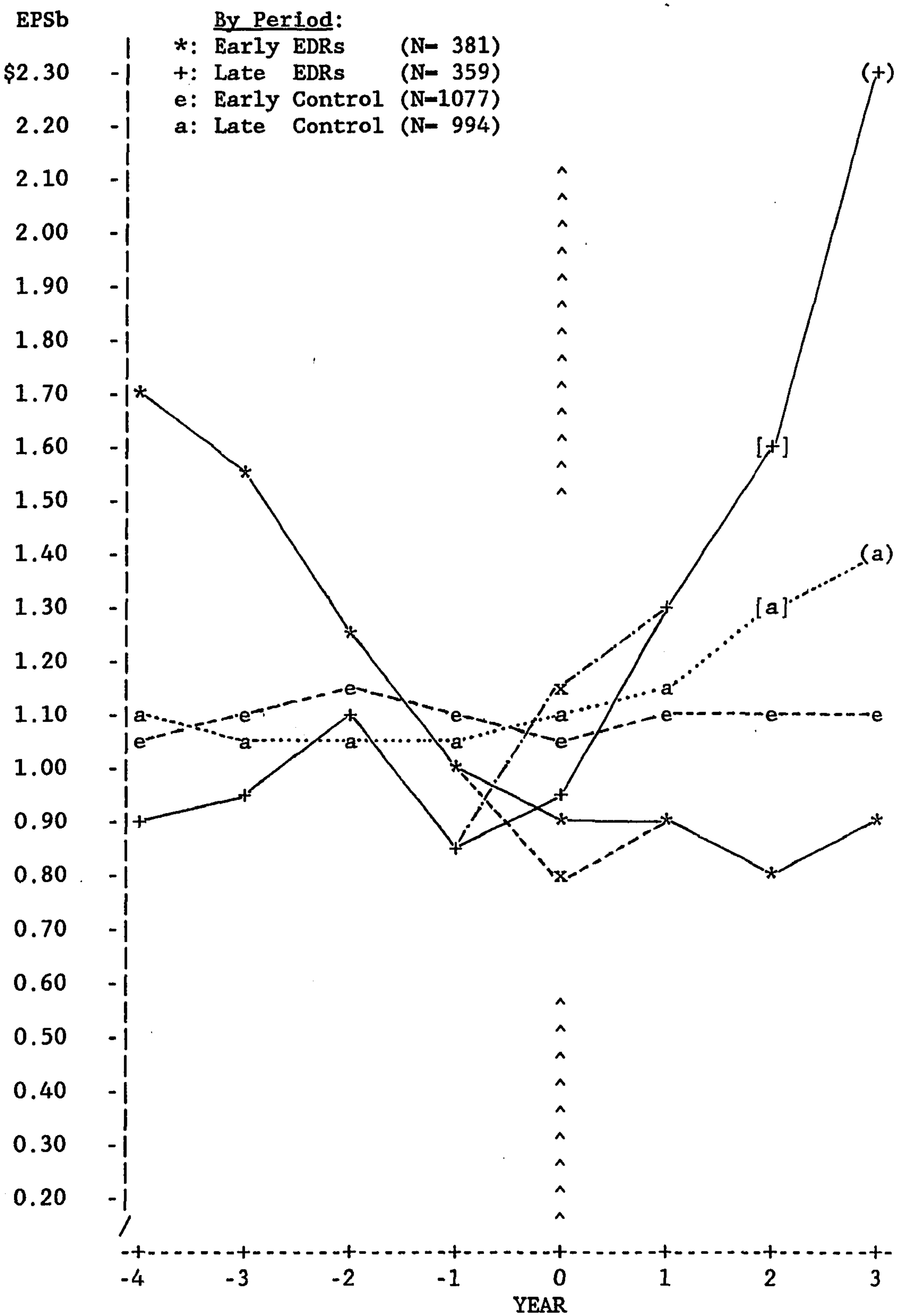


FIGURE 5-2.3

TIME-SERIES PATTERN OF RETURN ON ASSETS (ROAc)

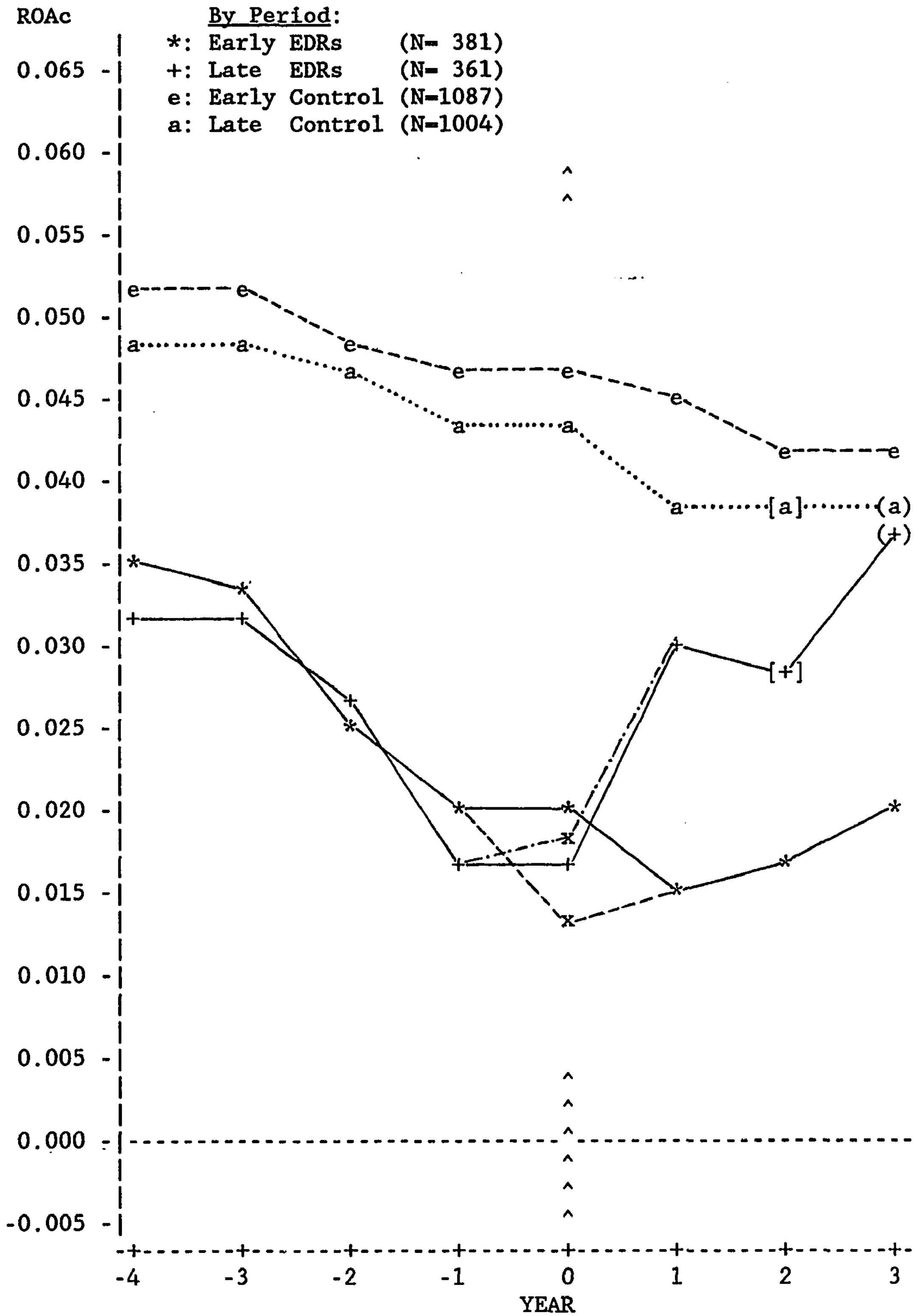


FIGURE 5-2.4

TIME-SERIES PATTERN OF RETURN ON ASSETS (ROAb)

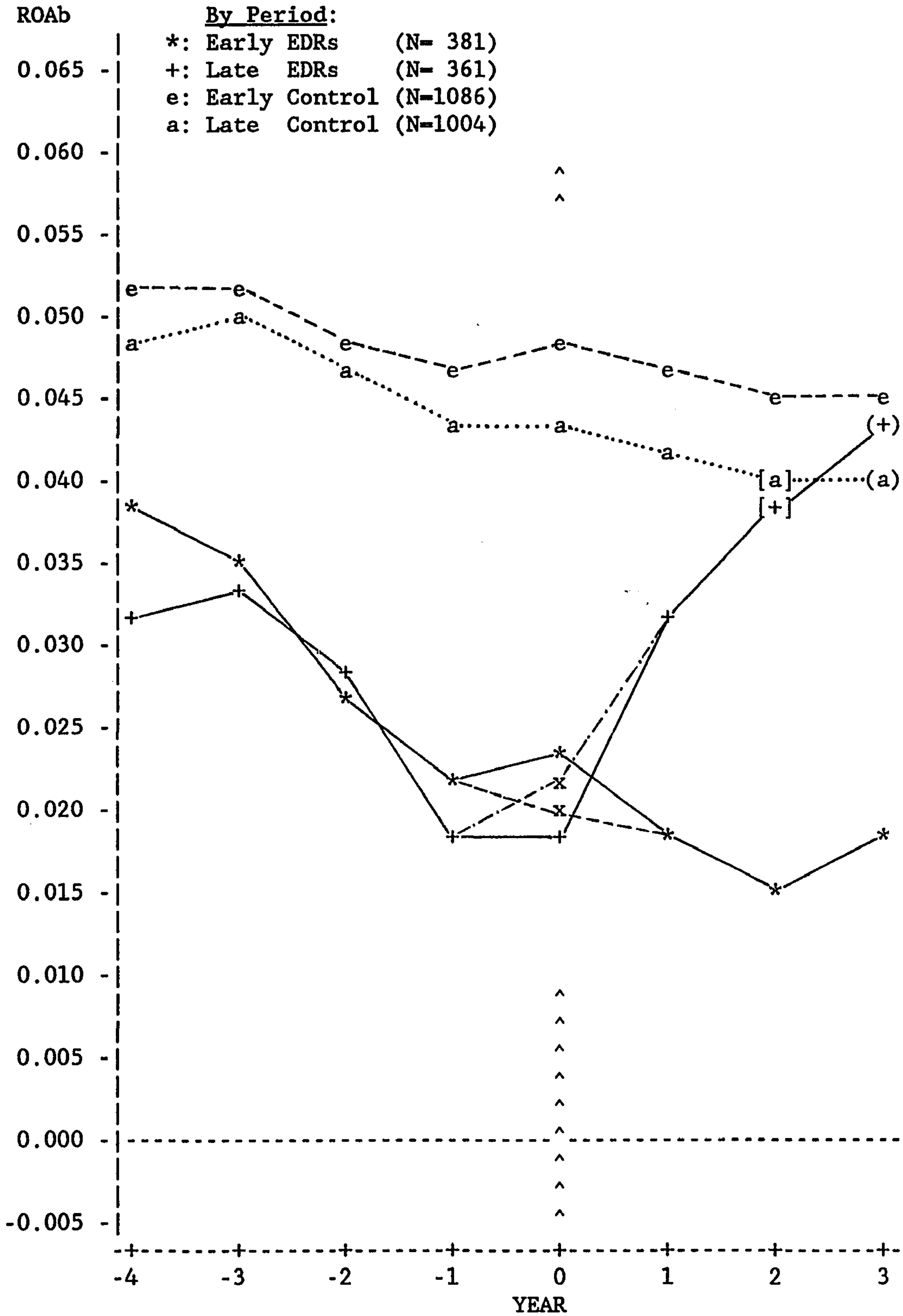


FIGURE 5-2.5

TIME-SERIES PATTERN OF DEBT TO EQUITY RATIO (LTDSE)

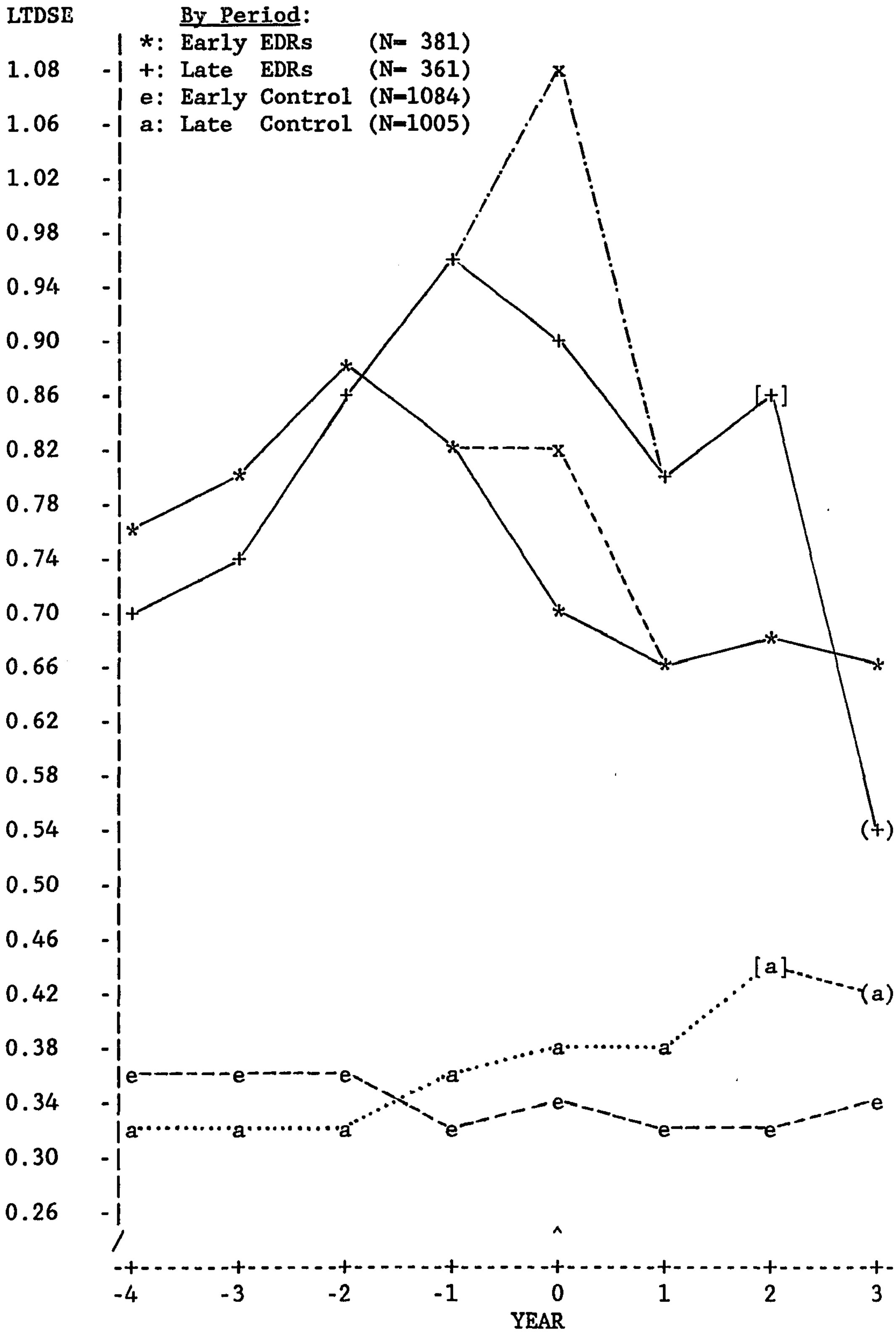


FIGURE 5-2.6

TIME-SERIES PATTERN OF TOTAL DEBT TO TOTAL ASSET RATIO (TDTA)

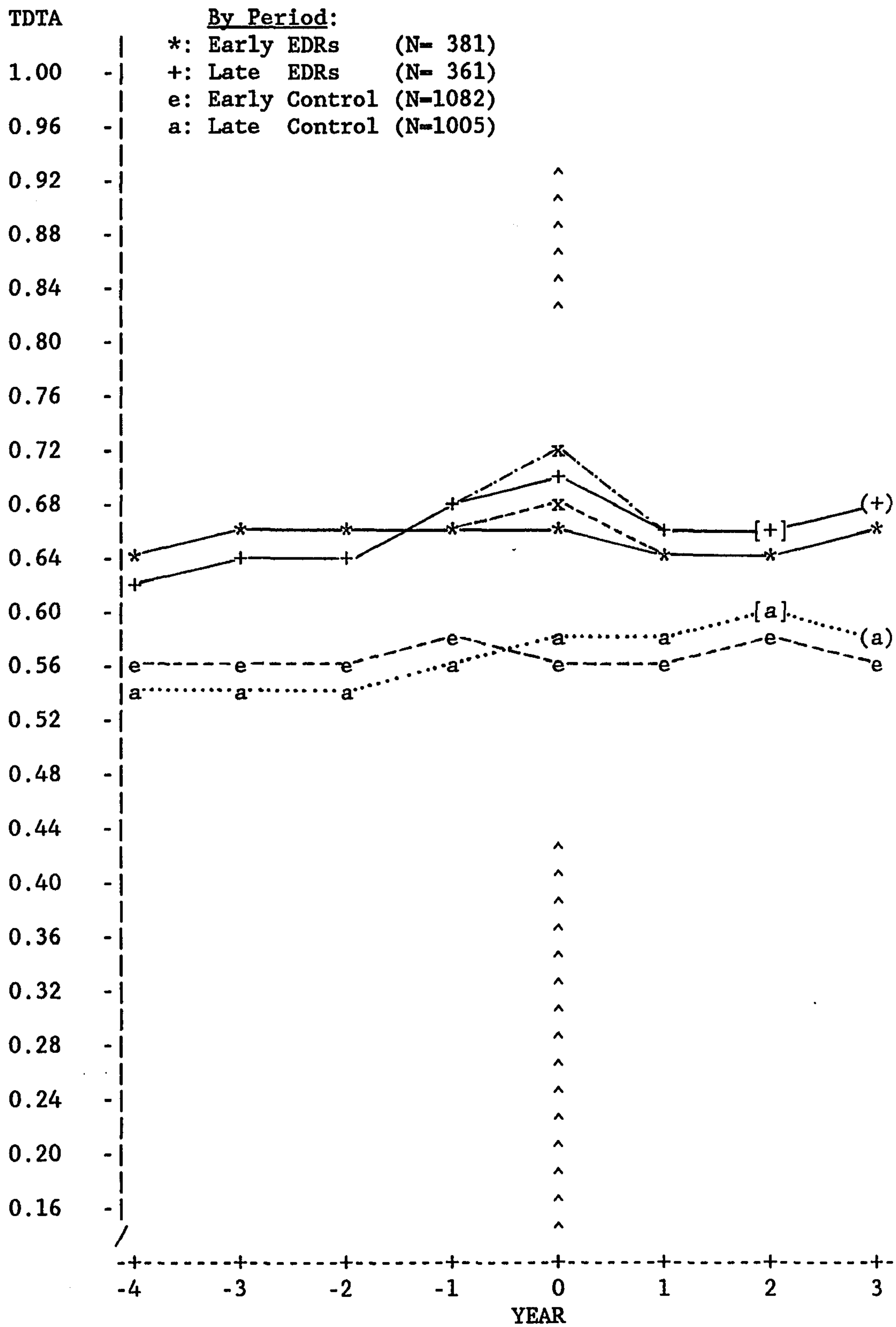


FIGURE 5-2.7
TIME-SERIES PATTERN OF DEBT TO MARKET VALUE RATIO (LTDMV)

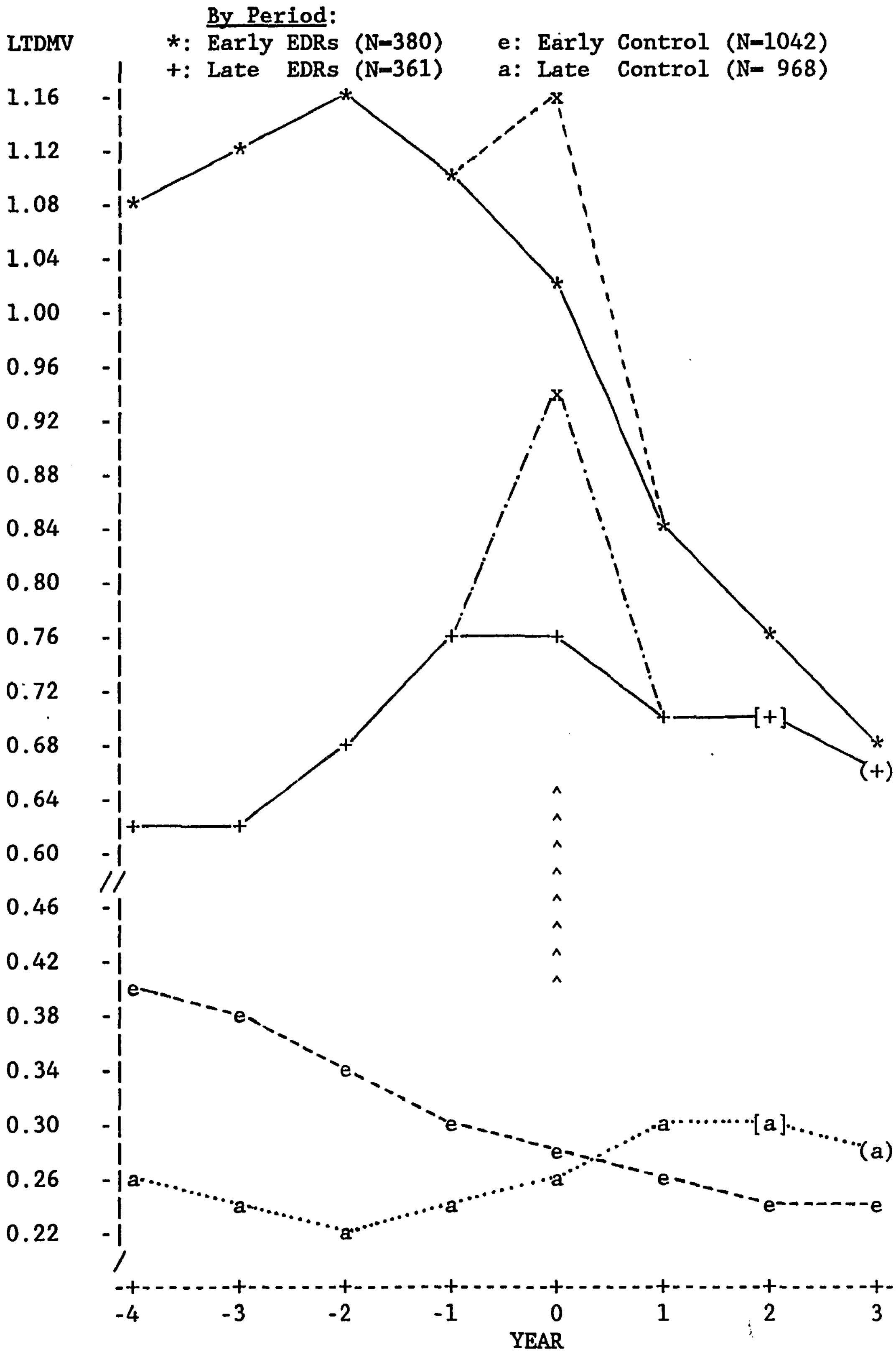


FIGURE 5-2.8

TIME-SERIES PATTERN OF ALTMAN'S Z-SCORE (ZSCORE)

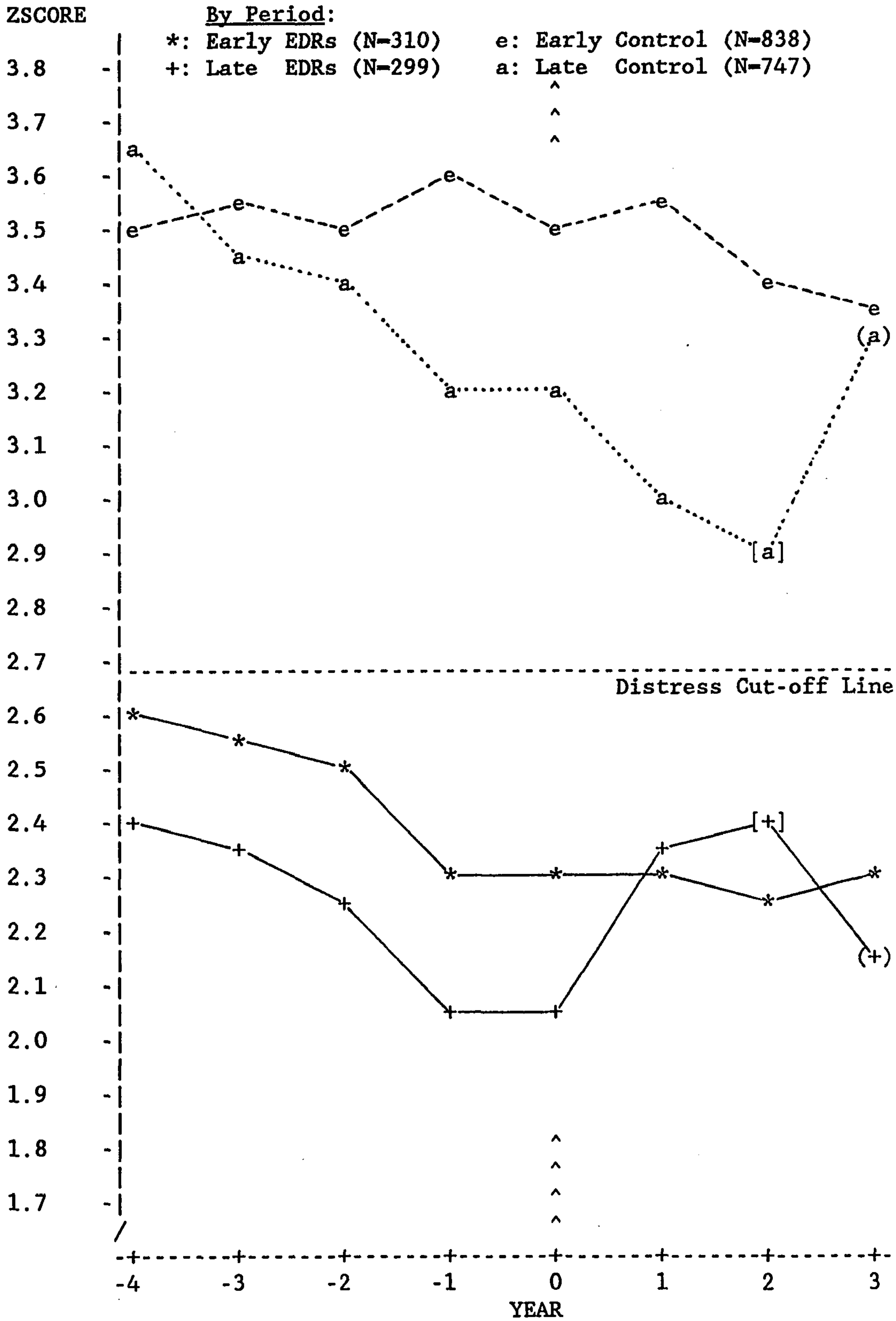


FIGURE 5-2.9

TIME-SERIES PATTERN OF CREDIT-RATING (RATING)

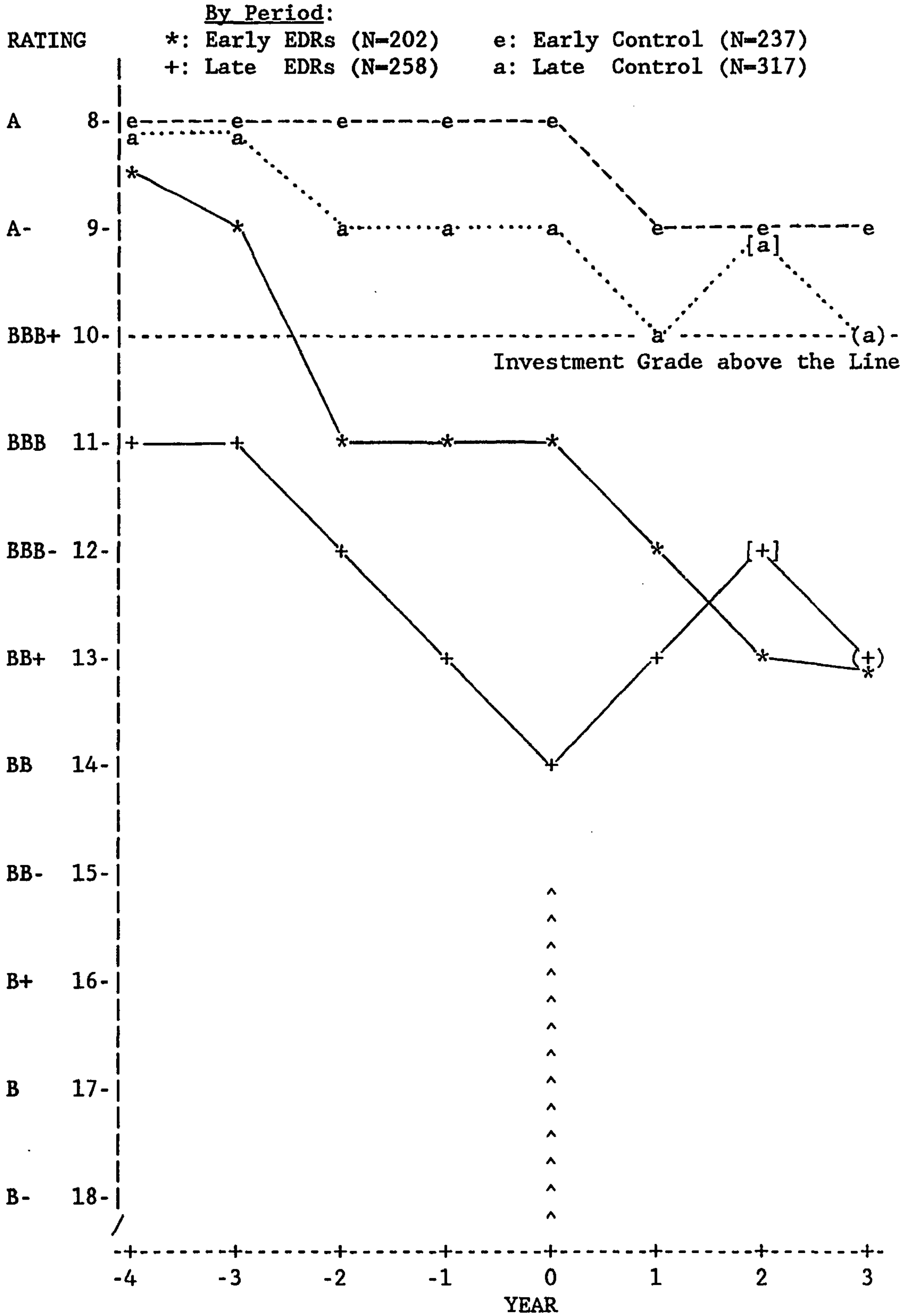


FIGURE 5-3.1

TIME-SERIES PATTERN OF ANNUAL EARNINGS PER SHARE (EPSc)

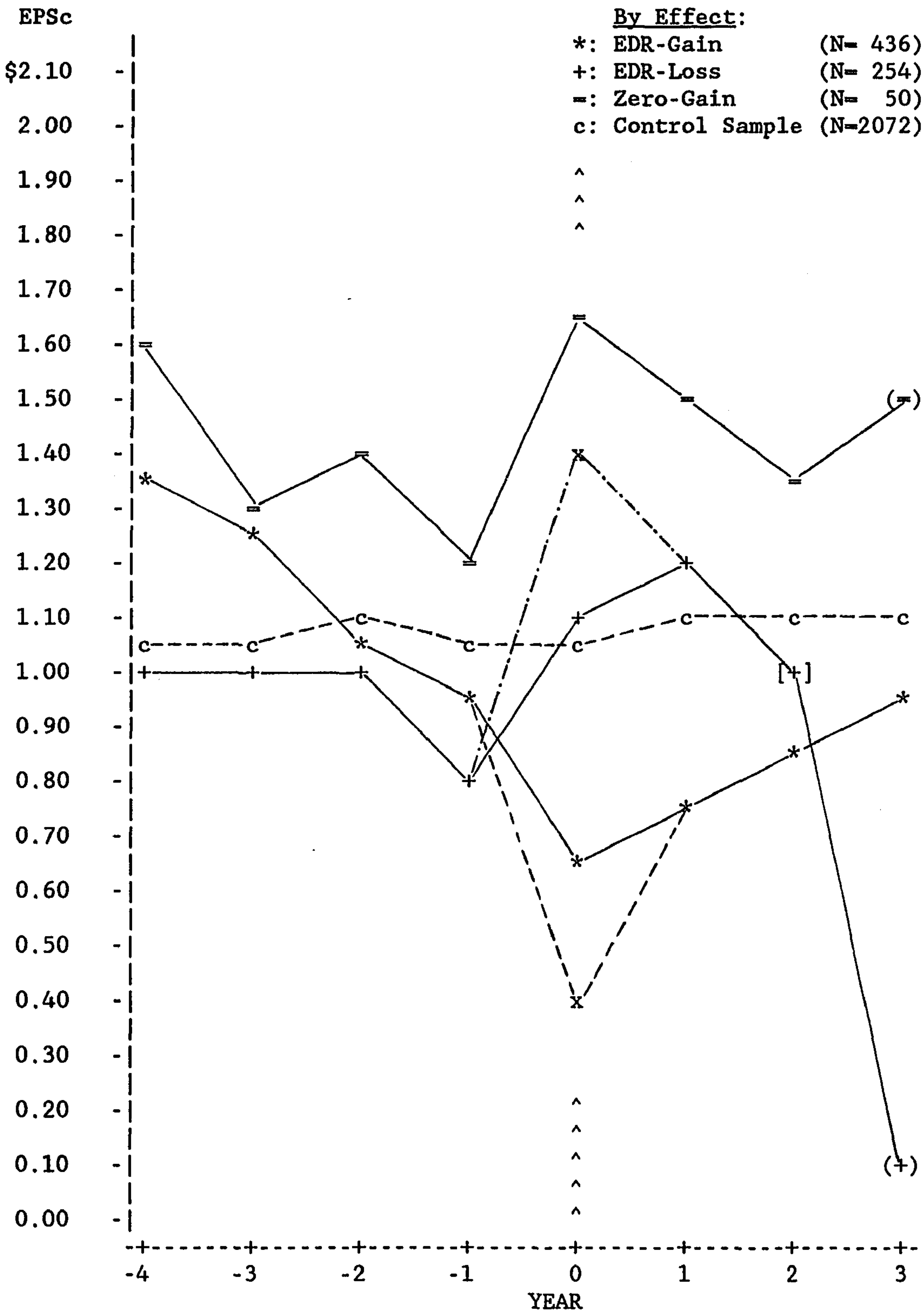


FIGURE 5-3.2

TIME-SERIES PATTERN OF ANNUAL EARNINGS PER SHARE (EPSb)

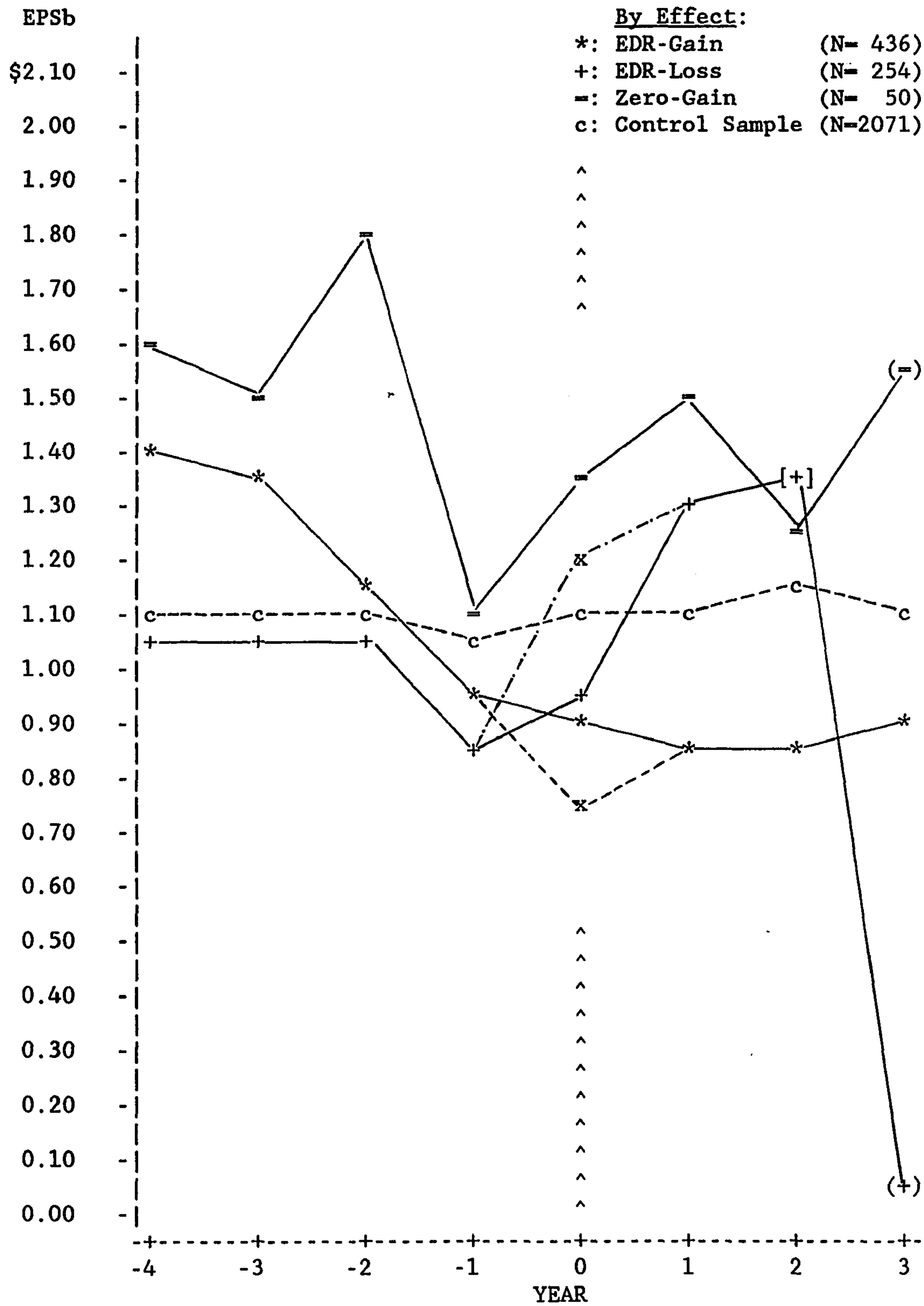


FIGURE 5-3.3

TIME-SERIES PATTERN OF RETURN ON ASSETS (ROAc)

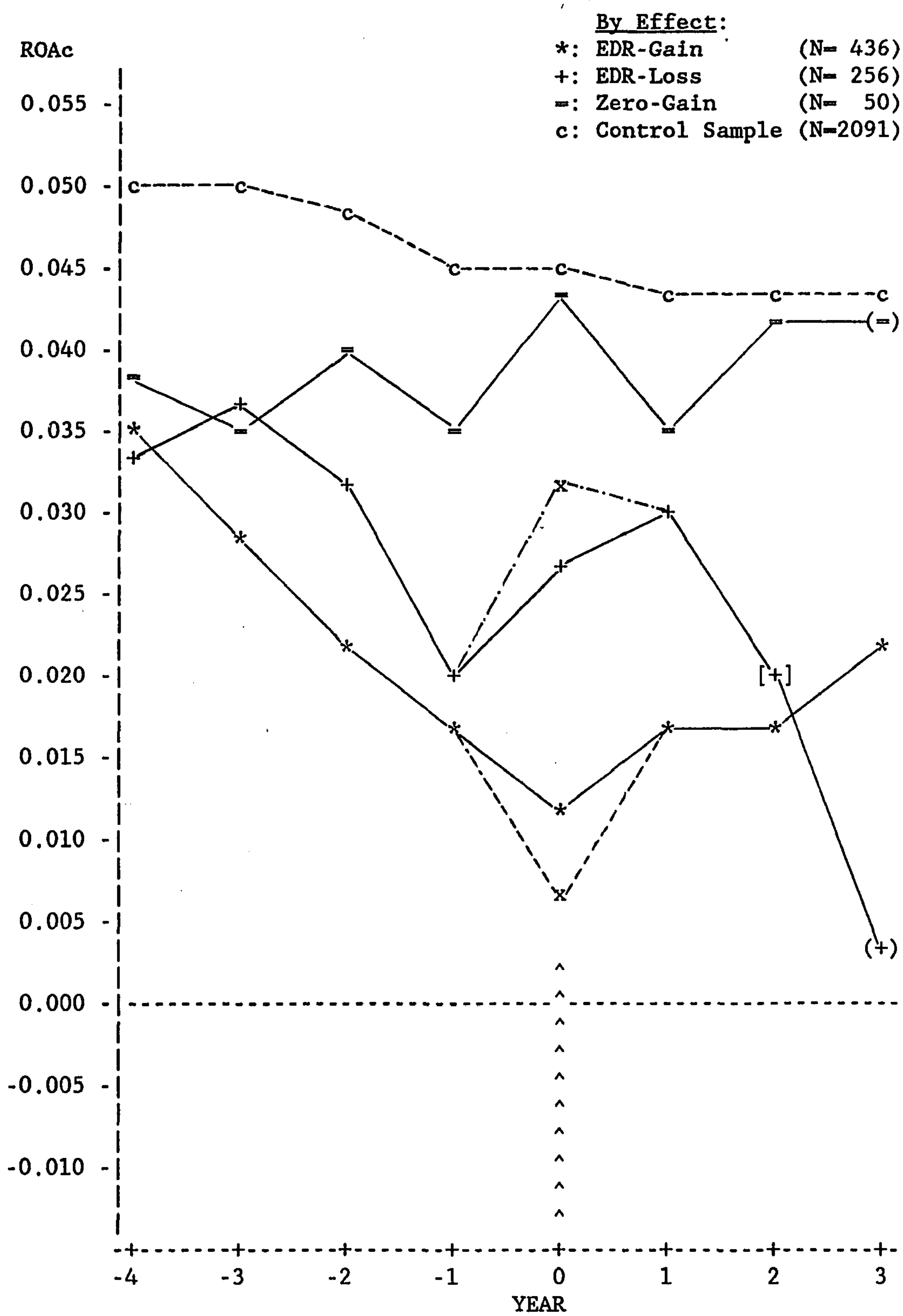


FIGURE 5-3.4

TIME-SERIES PATTERN OF RETURN ON ASSETS (ROAb)

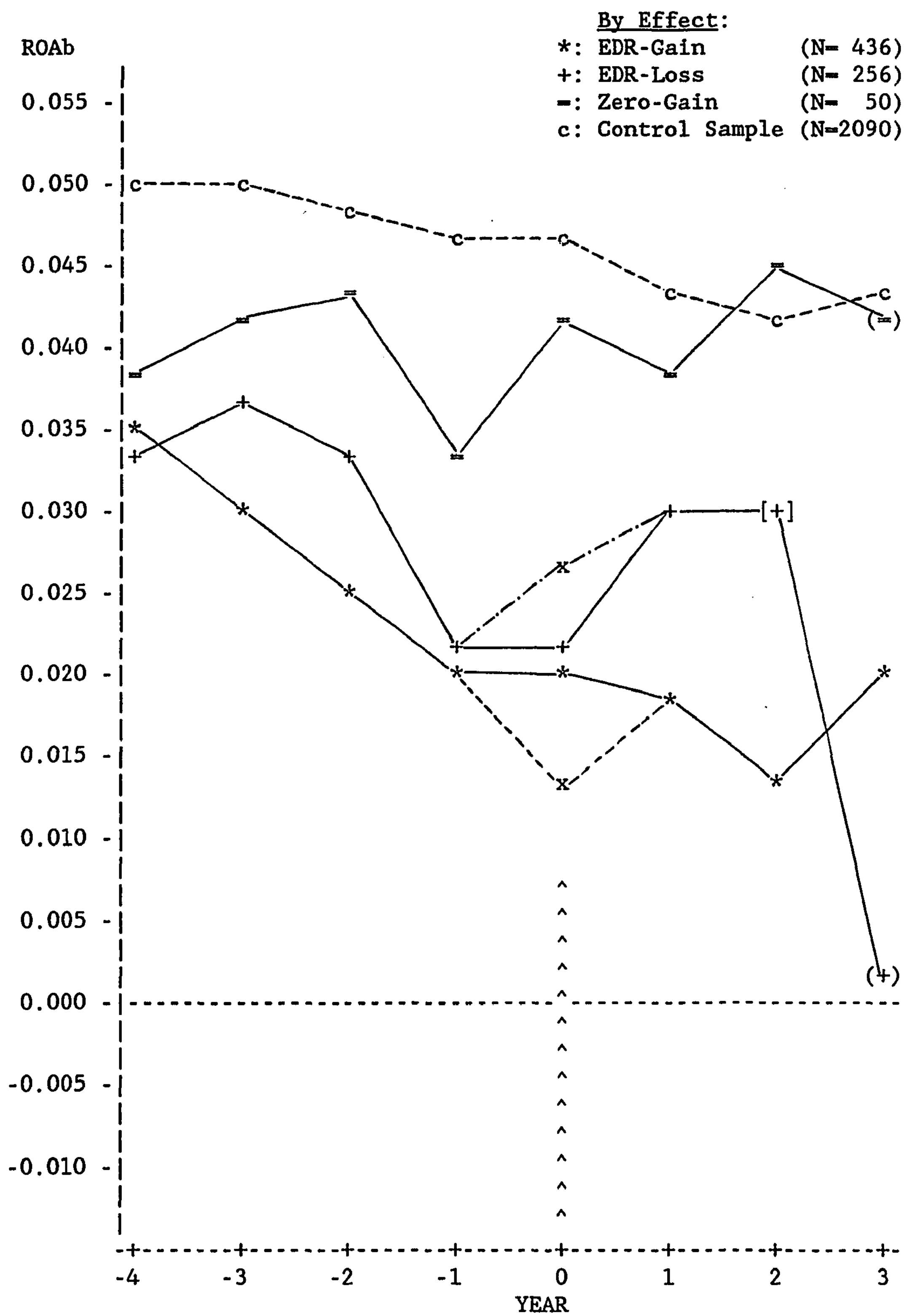


FIGURE 5-3.5
TIME-SERIES PATTERN OF DEBT TO EQUITY RATIO (LTDSE)

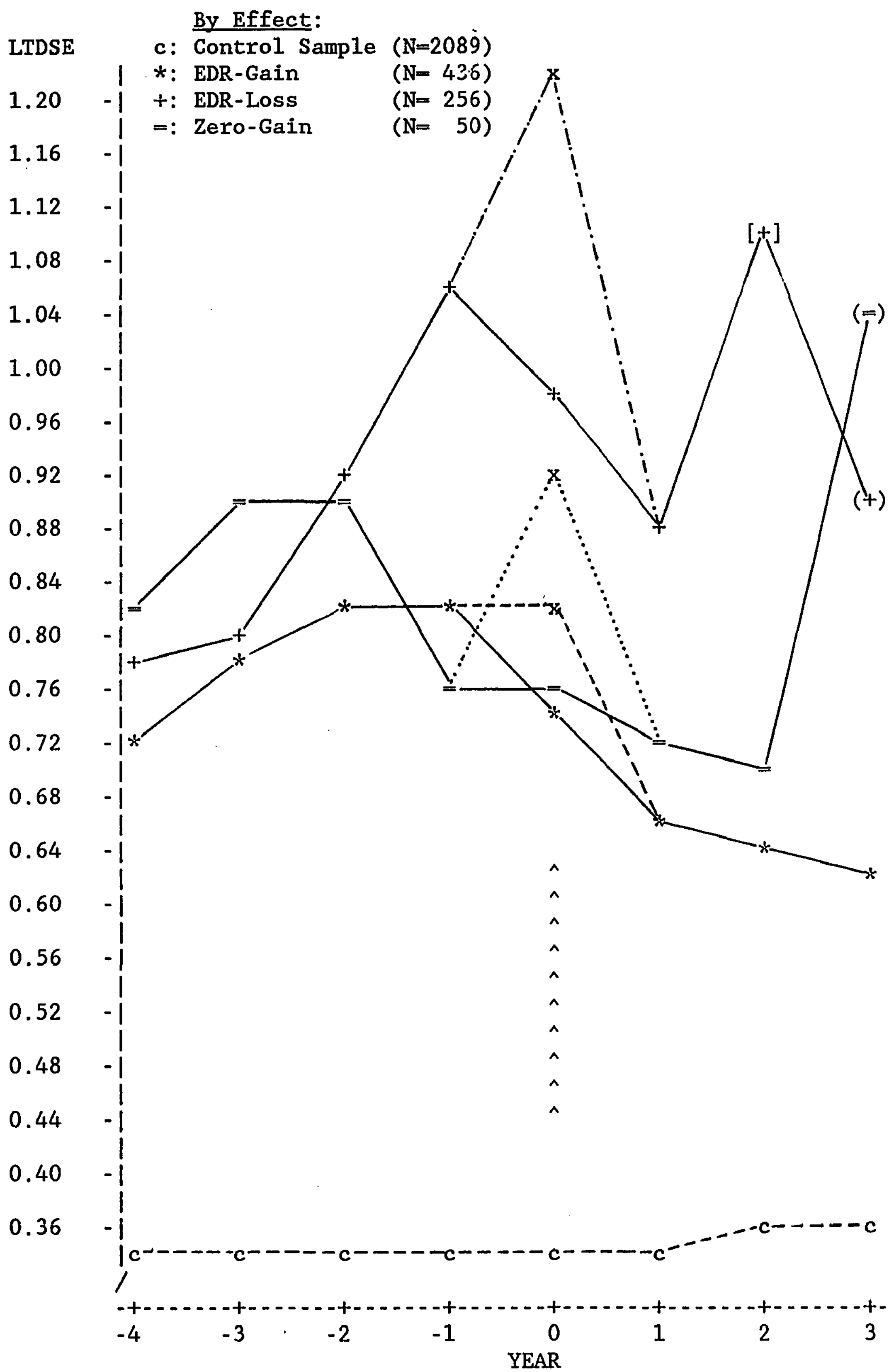


FIGURE 5-3.6

TIME-SERIES PATTERN OF TOTAL DEBT TO TOTAL ASSET RATIO (TDTA)

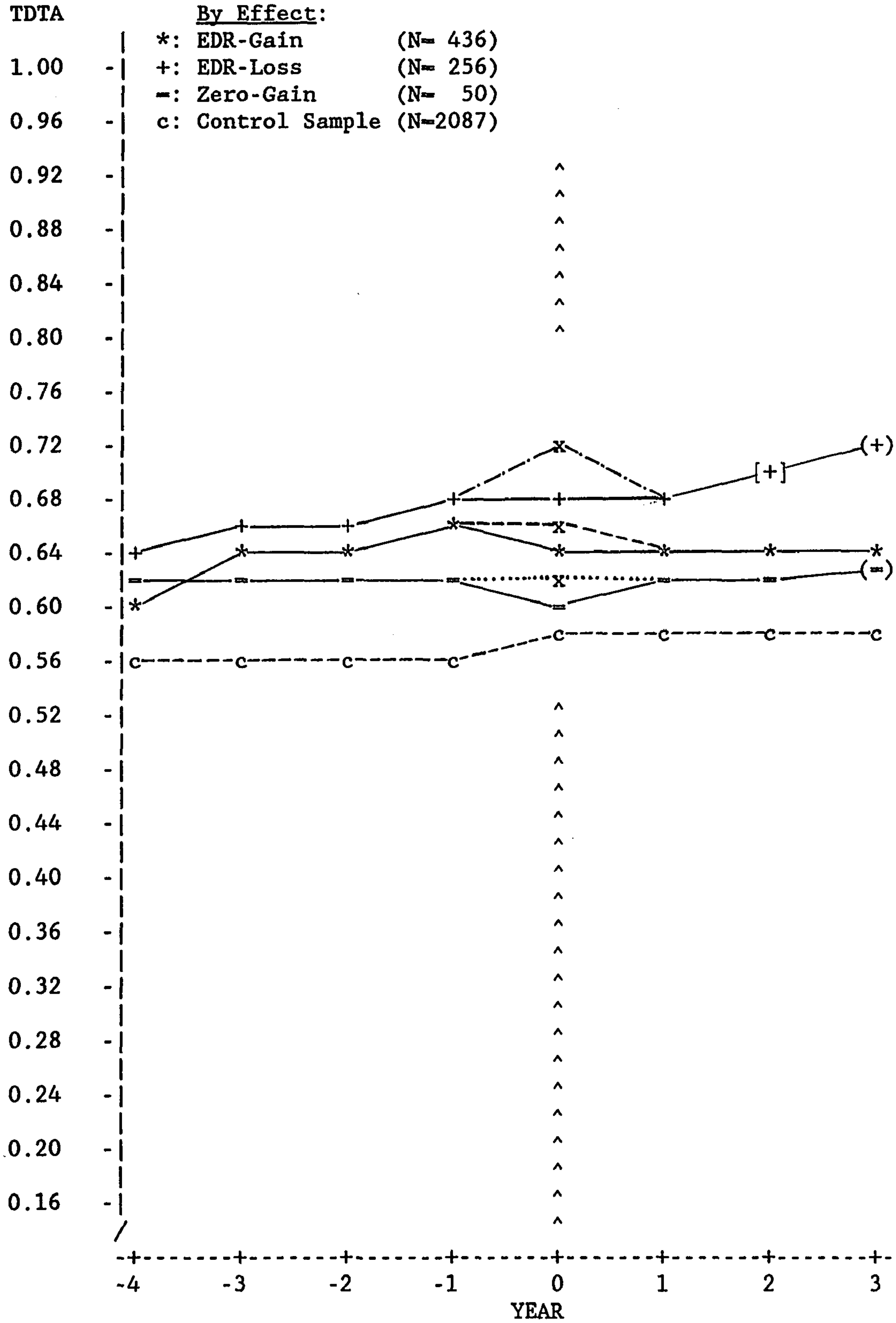


FIGURE 5-3.7
TIME-SERIES PATTERN OF DEBT TO MARKET VALUE RATIO (LTDMV)

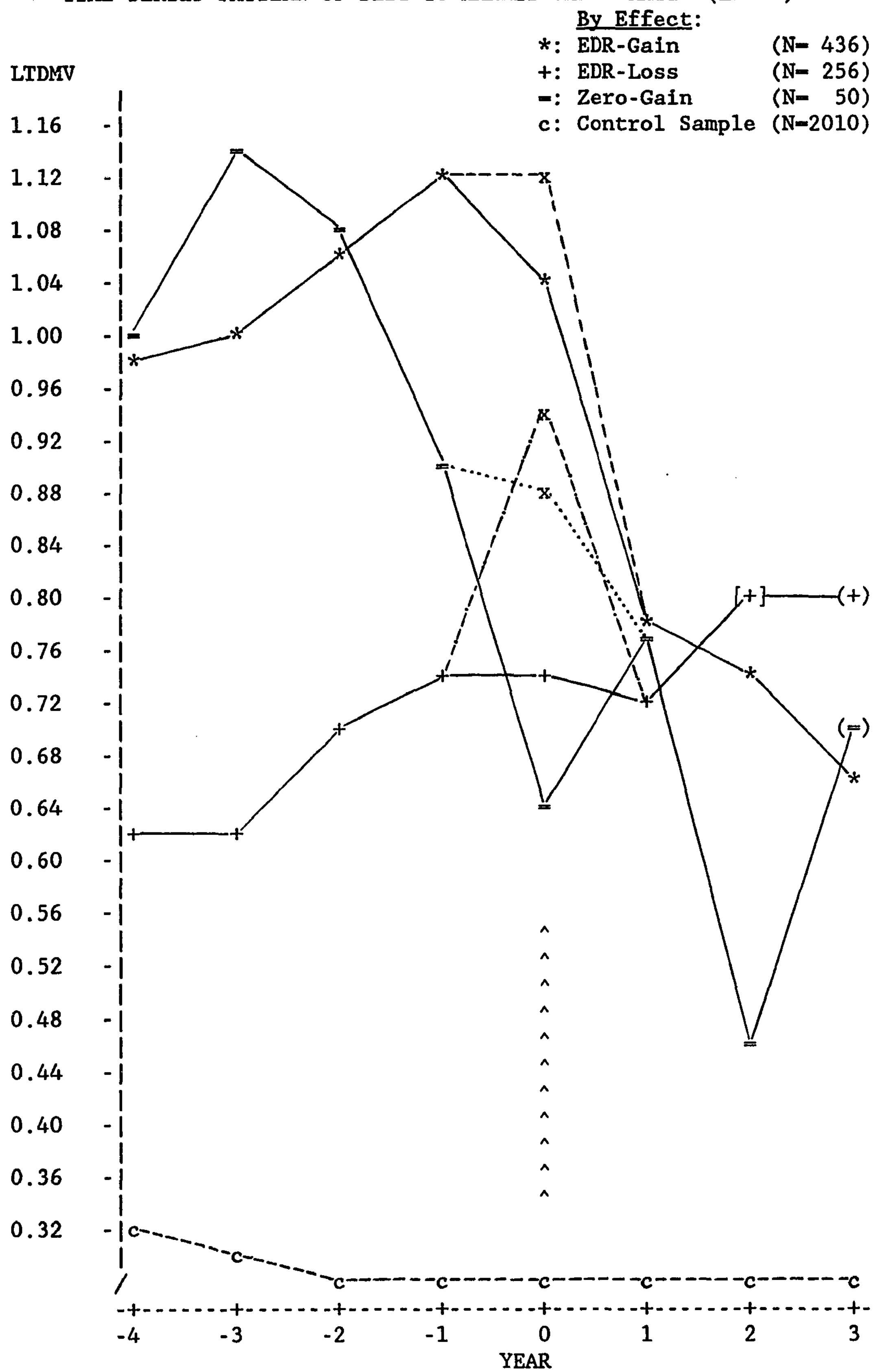


FIGURE 5-3.8

TIME-SERIES PATTERN OF ALTMAN'S Z-SCORE (ZSCORE)

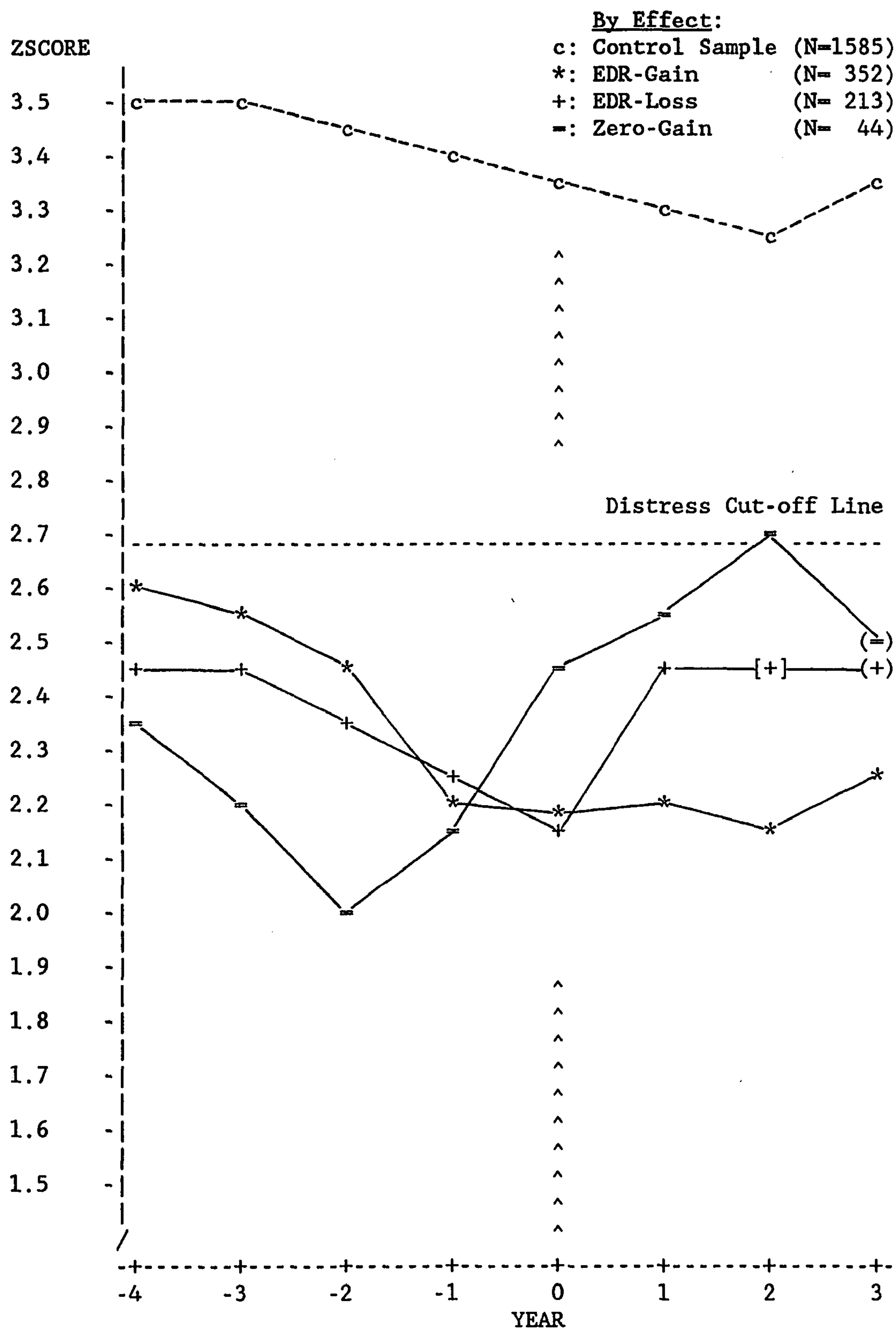


FIGURE 5-3.9

TIME-SERIES PATTERN OF CREDIT-RATING (RATING)

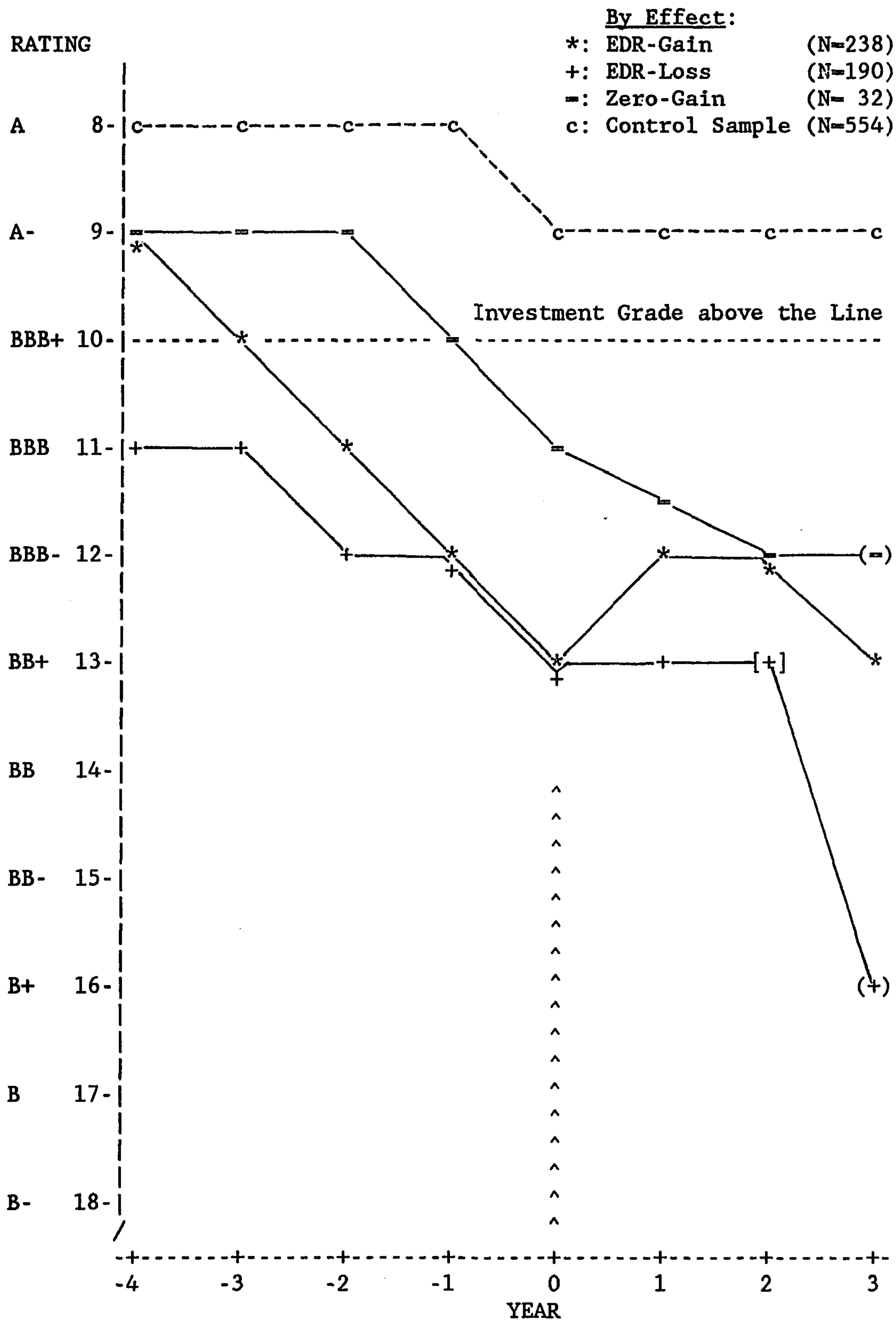


FIGURE 5-4.1

TIME-SERIES PATTERN OF ANNUAL EARNINGS PER SHARE (EPSc)

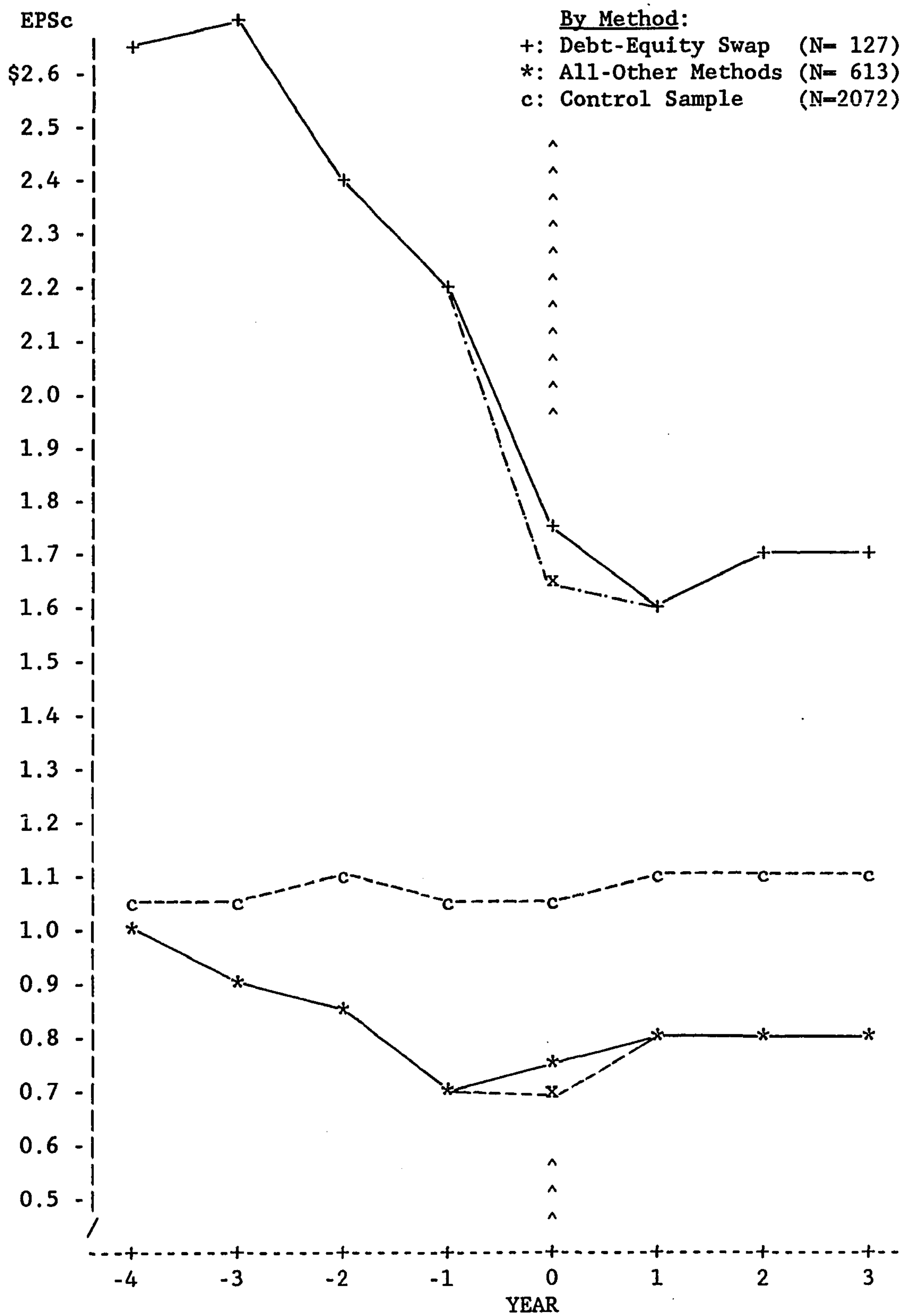


FIGURE 5-4.2
TIME-SERIES PATTERN OF ANNUAL EARNINGS PER SHARE (EPSb)

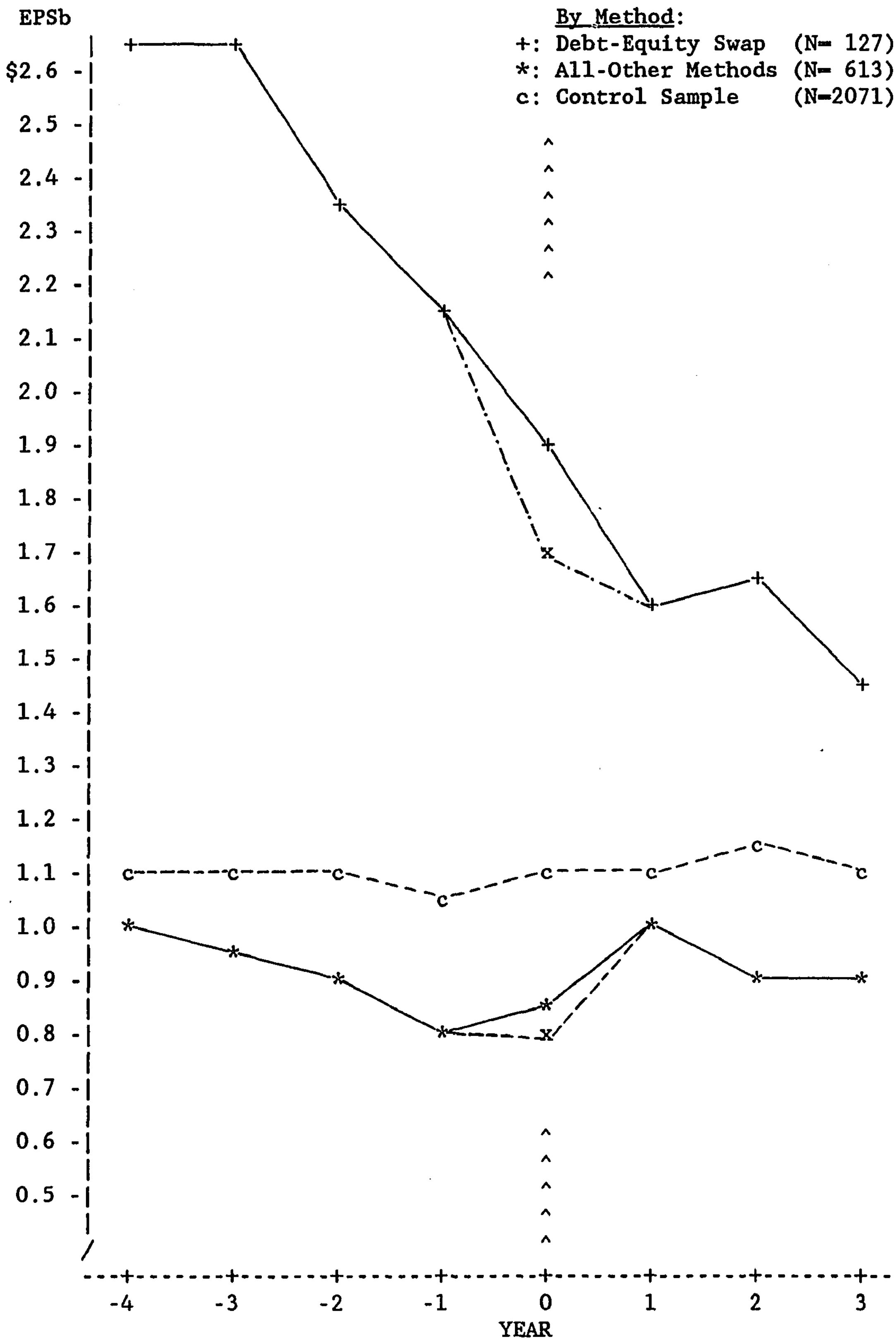


FIGURE 5-4.3

TIME-SERIES PATTERN OF RETURN ON ASSETS (ROAc)

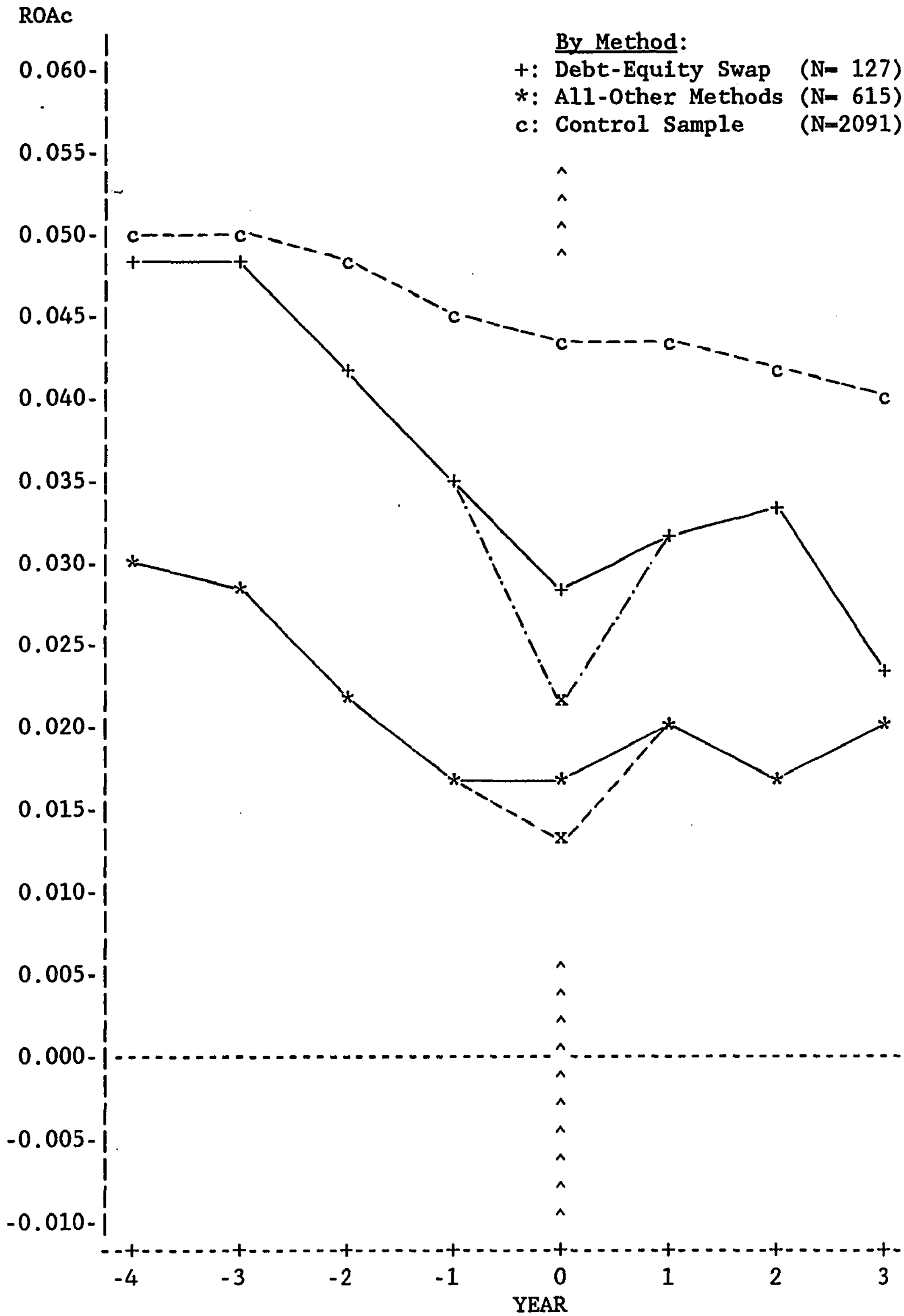


FIGURE 5-4.4

TIME-SERIES PATTERN OF RETURN ON ASSETS (ROAb)

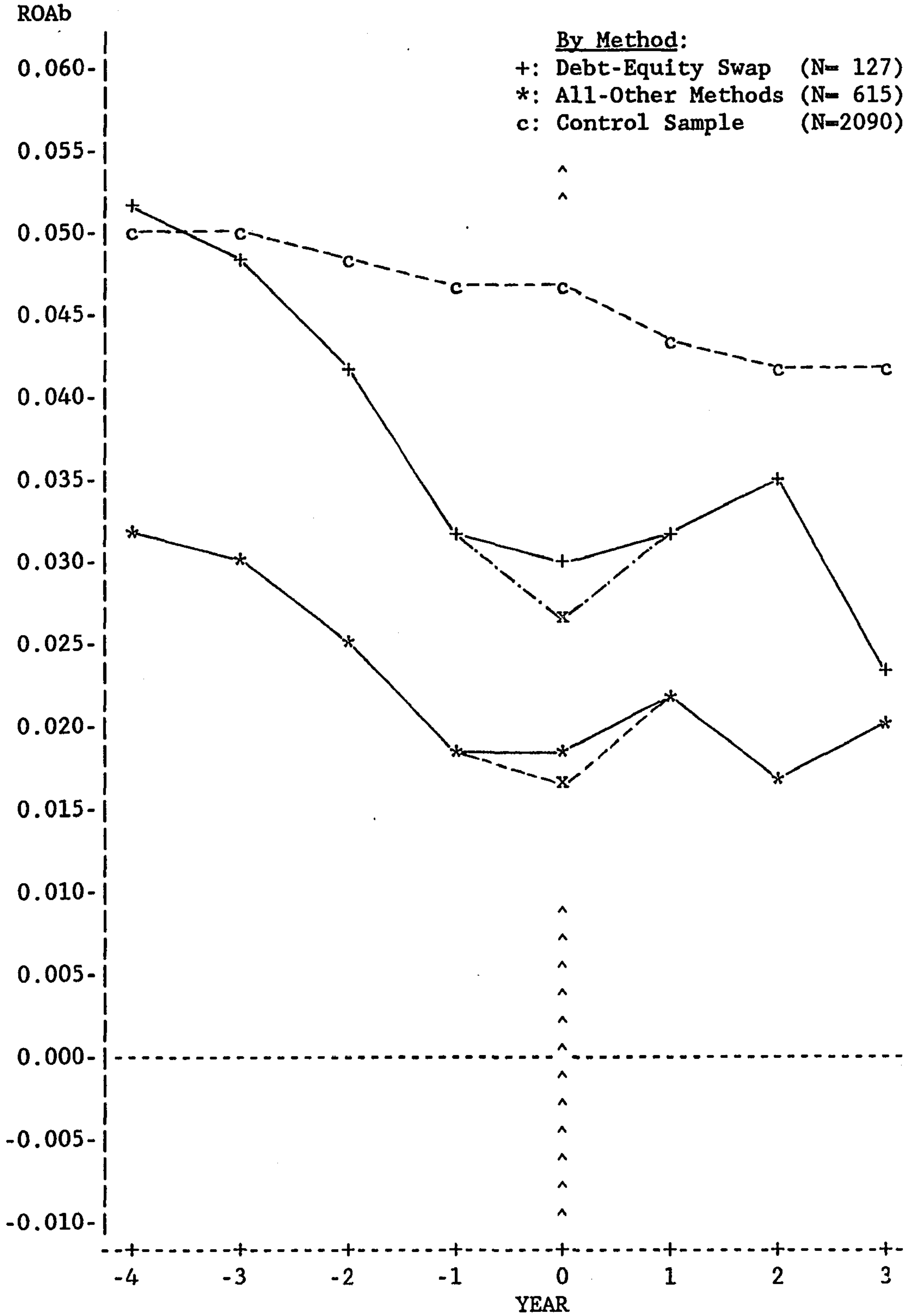


FIGURE 5-4.5
TIME-SERIES PATTERN OF DEBT TO EQUITY RATIO (LTDSE)

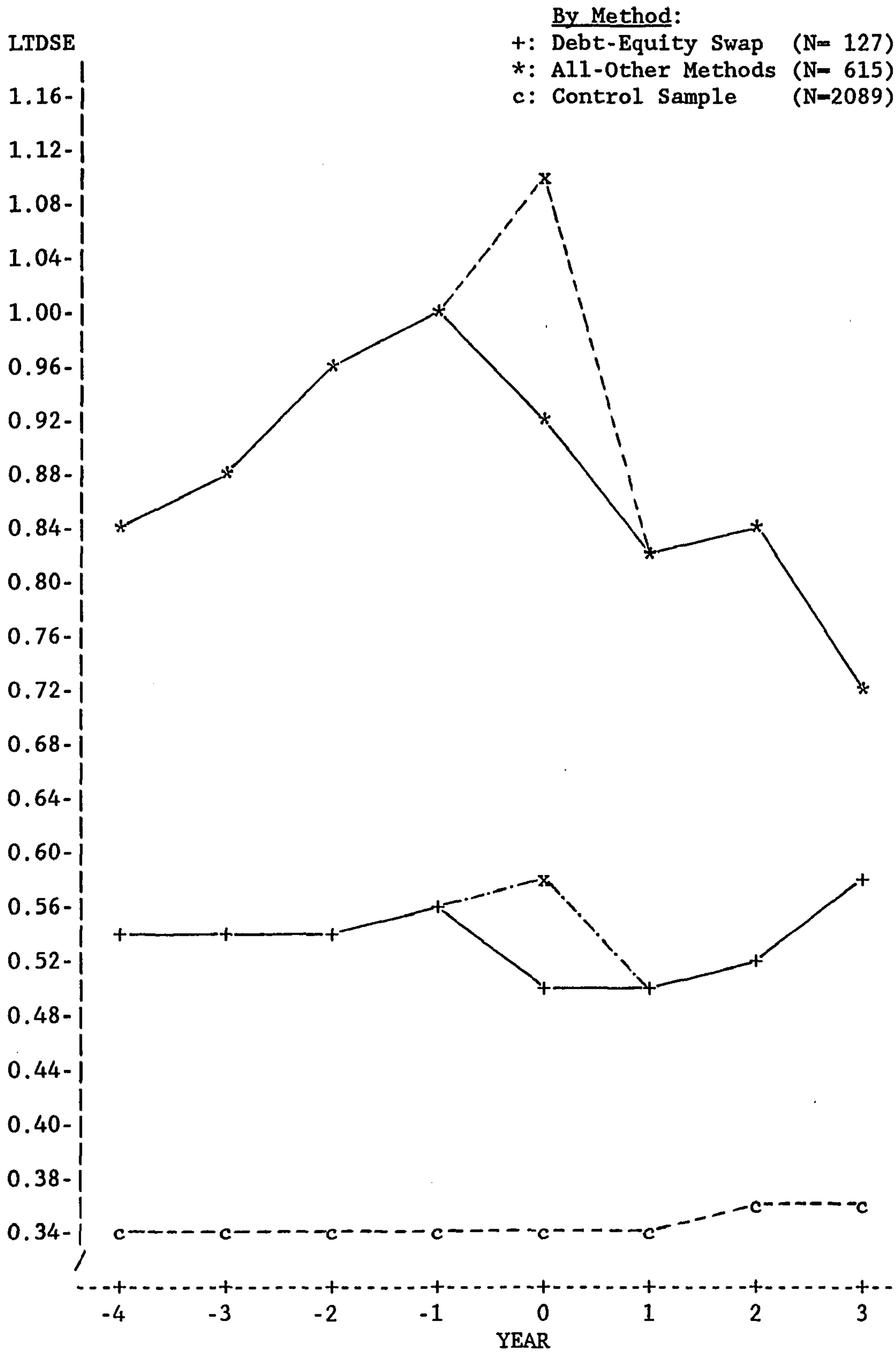


FIGURE 5-4.6

TIME-SERIES PATTERN OF TOTAL DEBT TO TOTAL ASSET RATIO (TDTA)

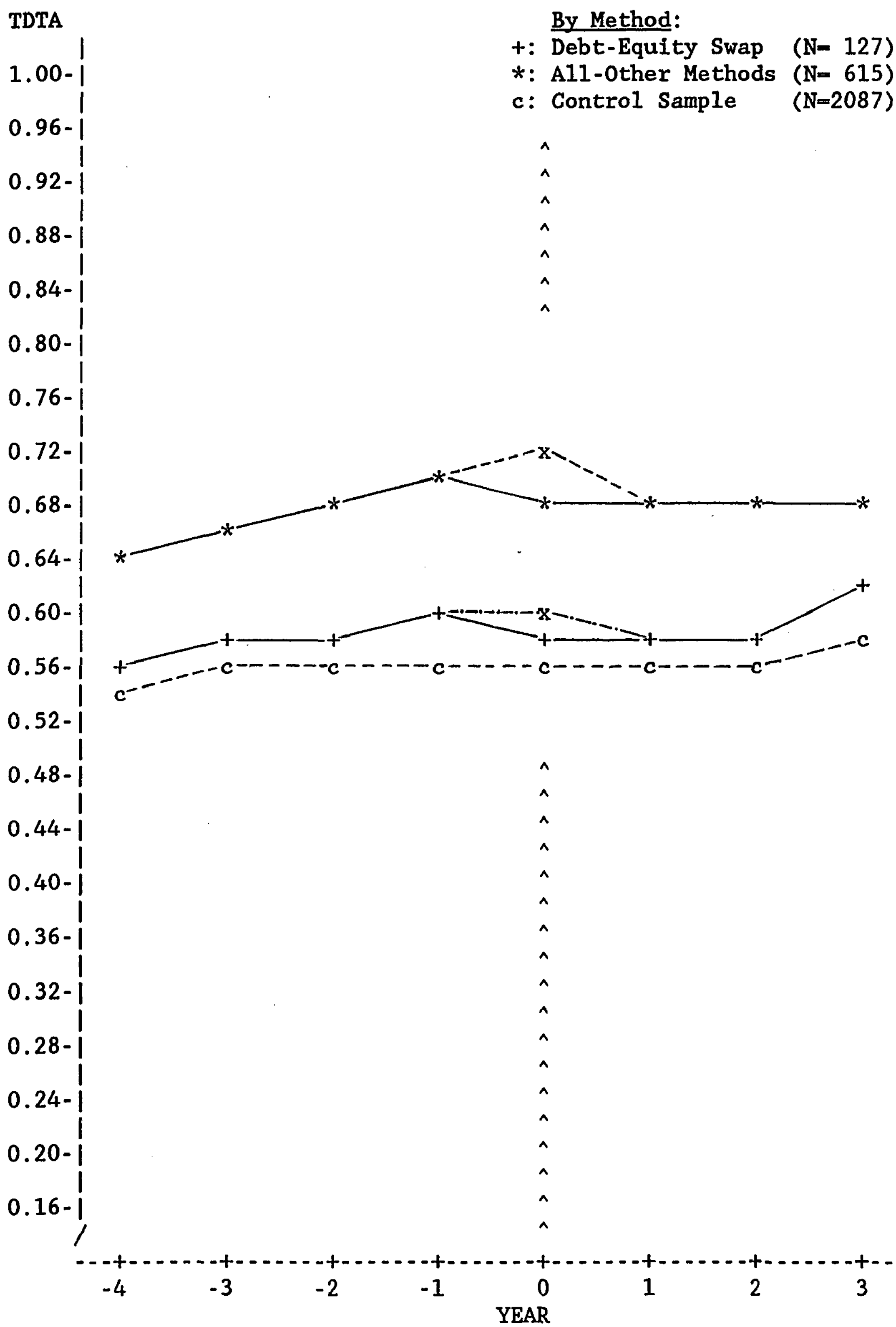


FIGURE 5-4.7

TIME-SERIES PATTERN OF DEBT TO MARKET VALUE RATIO (LTDMV)

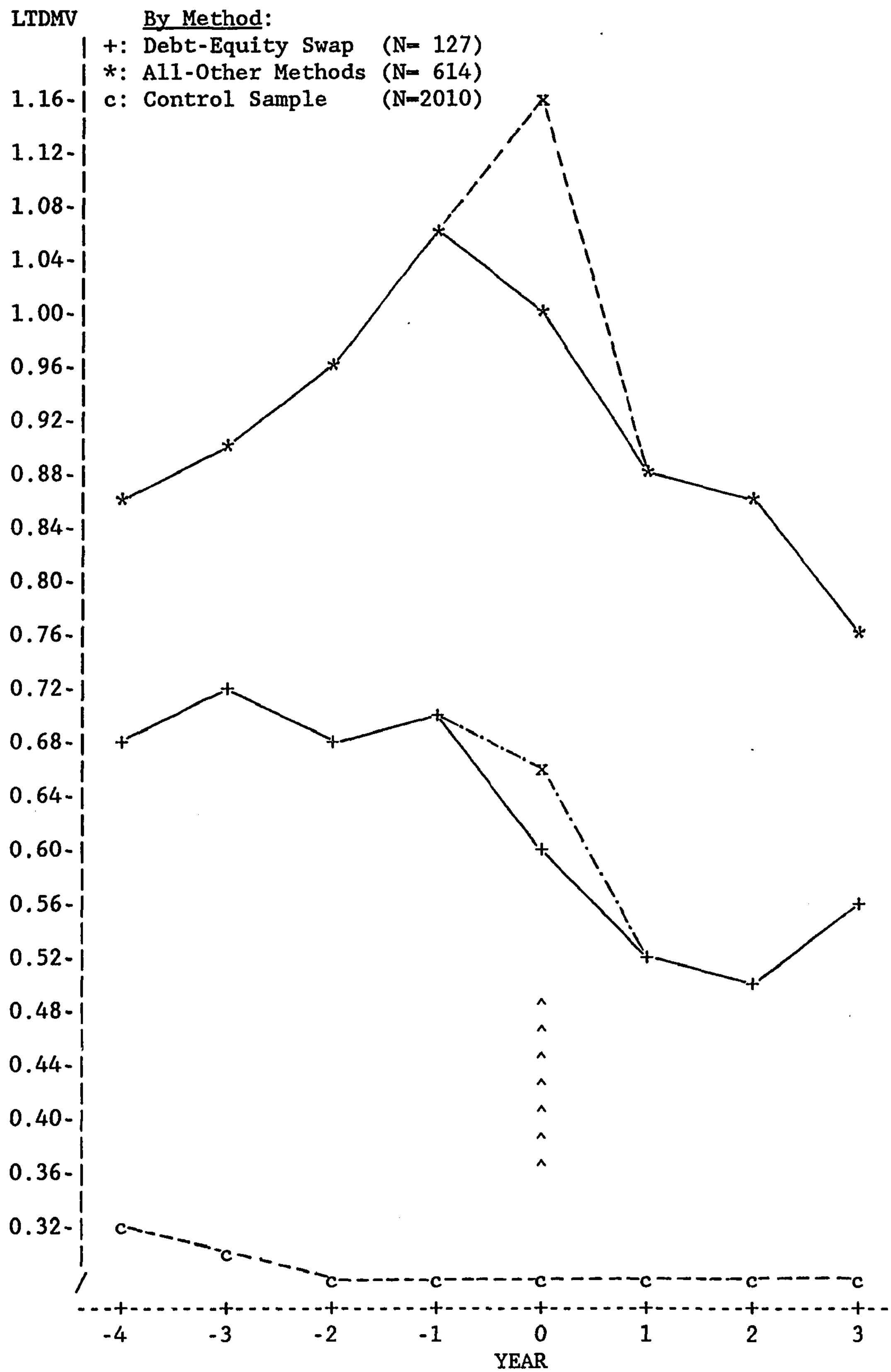


FIGURE 5-4.8

TIME-SERIES PATTERN OF ALTMAN'S Z-SCORE (ZSCORE)

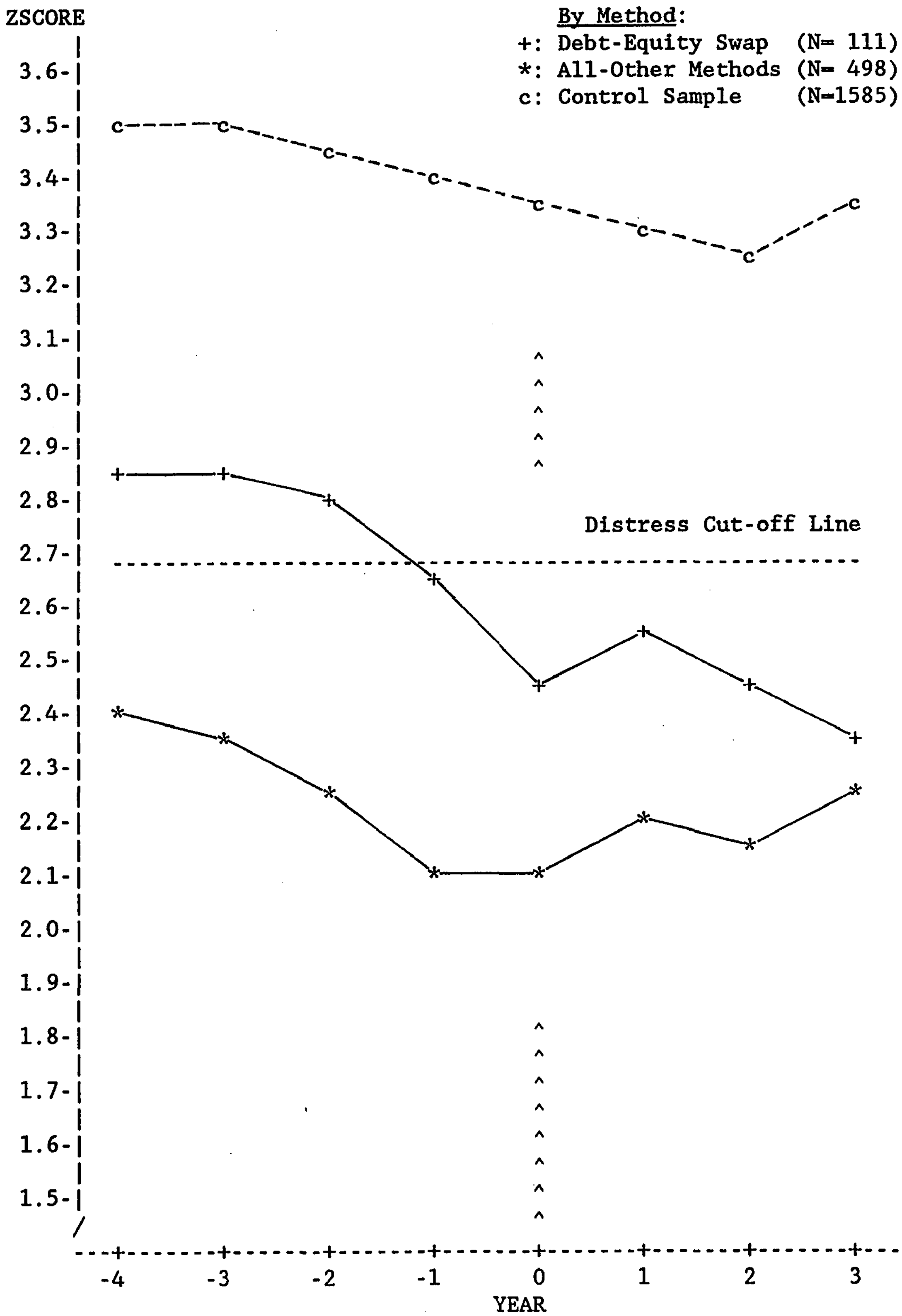


FIGURE 5-4.9

TIME-SERIES PATTERN OF CREDIT-RATING (RATING)

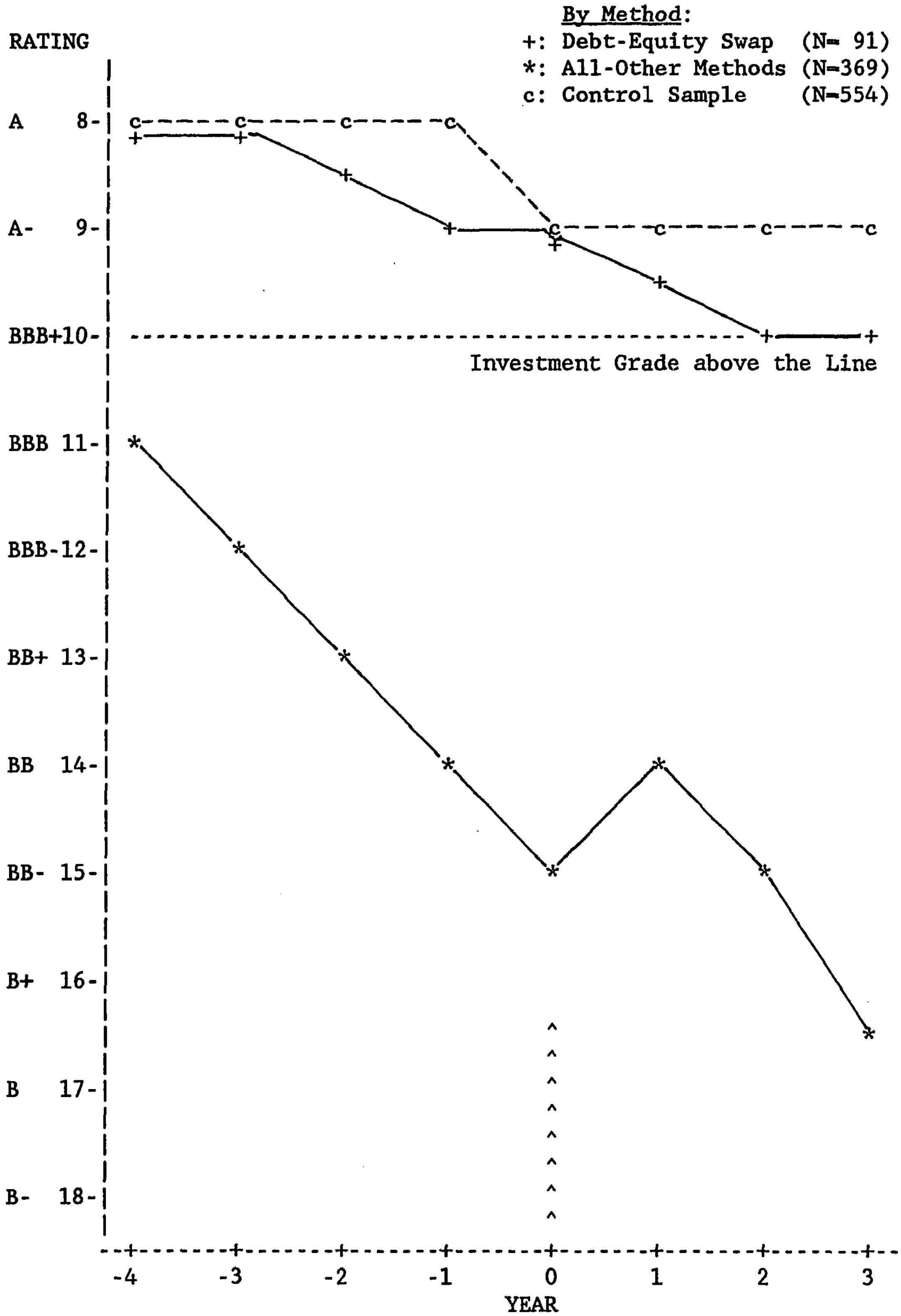


FIGURE 5-5.1
TIME-SERIES PATTERN OF ANNUAL EARNINGS PER SHARE (EPSc)

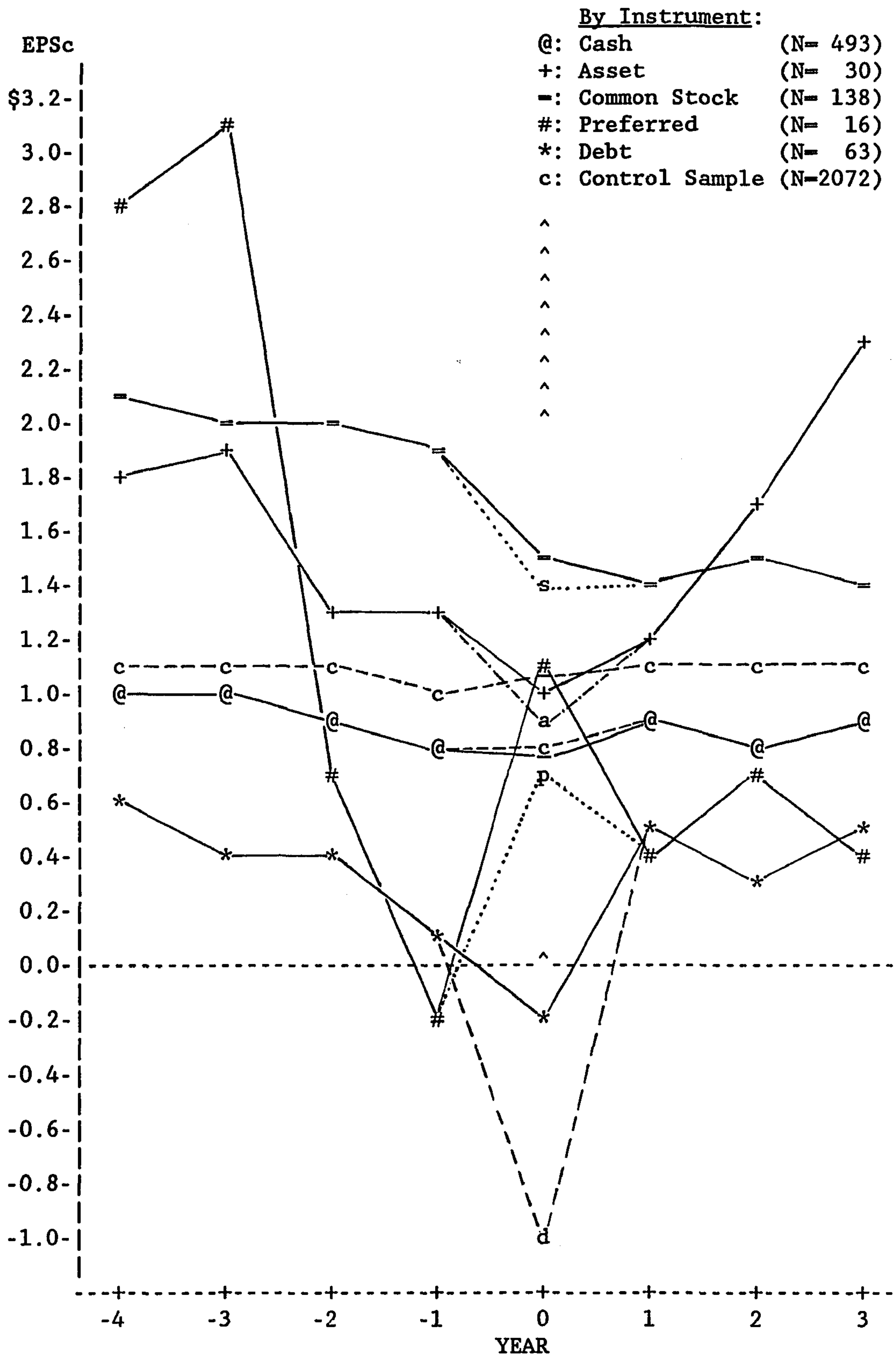


FIGURE 5-5.2
TIME-SERIES PATTERN OF ANNUAL EARNINGS PER SHARE (EPSb)

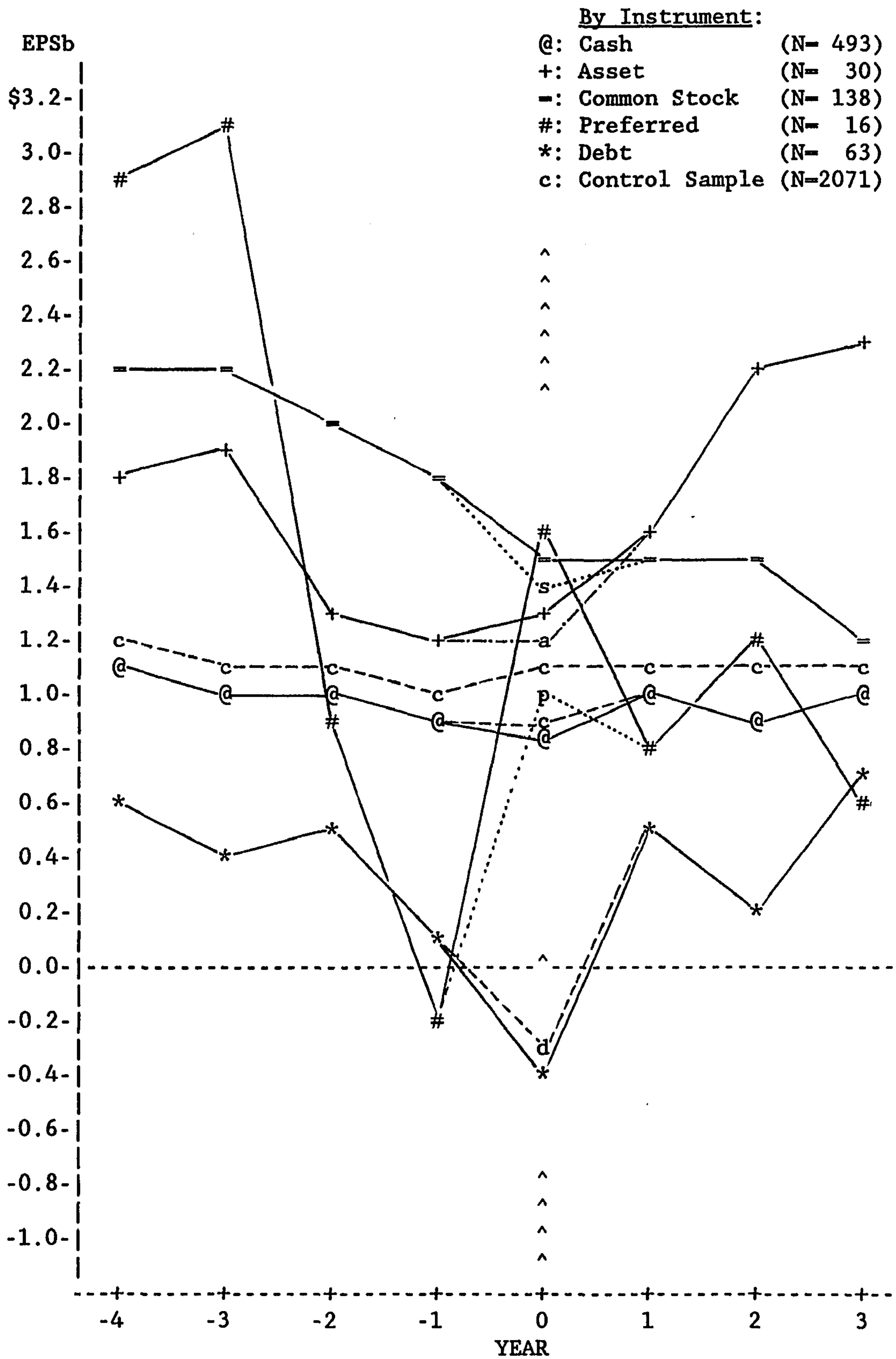


FIGURE 5-5.3
TIME-SERIES PATTERN OF RETURN ON ASSETS (ROAc)

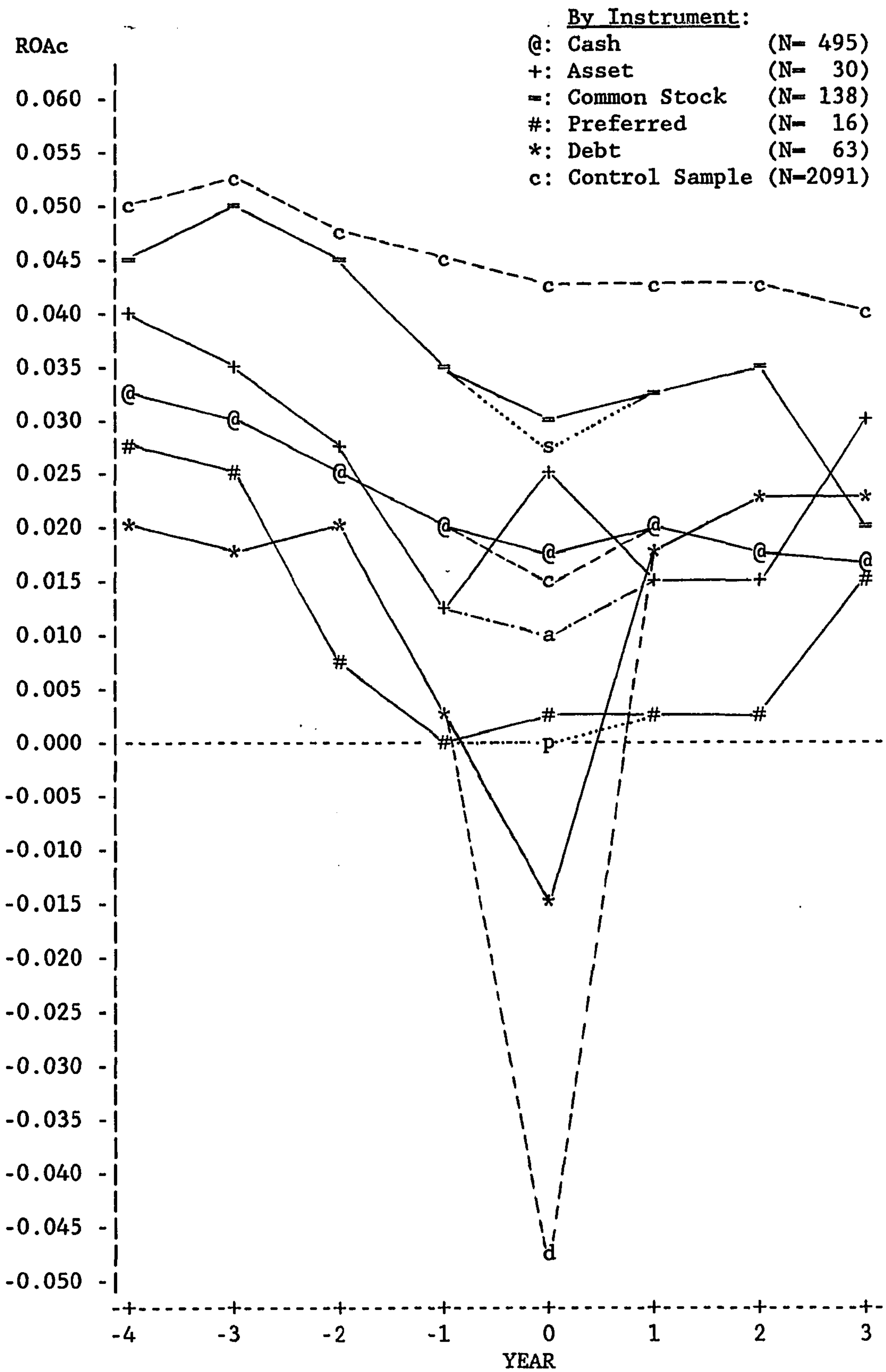


FIGURE 5-5.4
TIME-SERIES PATTERN OF RETURN ON ASSETS (ROAb)

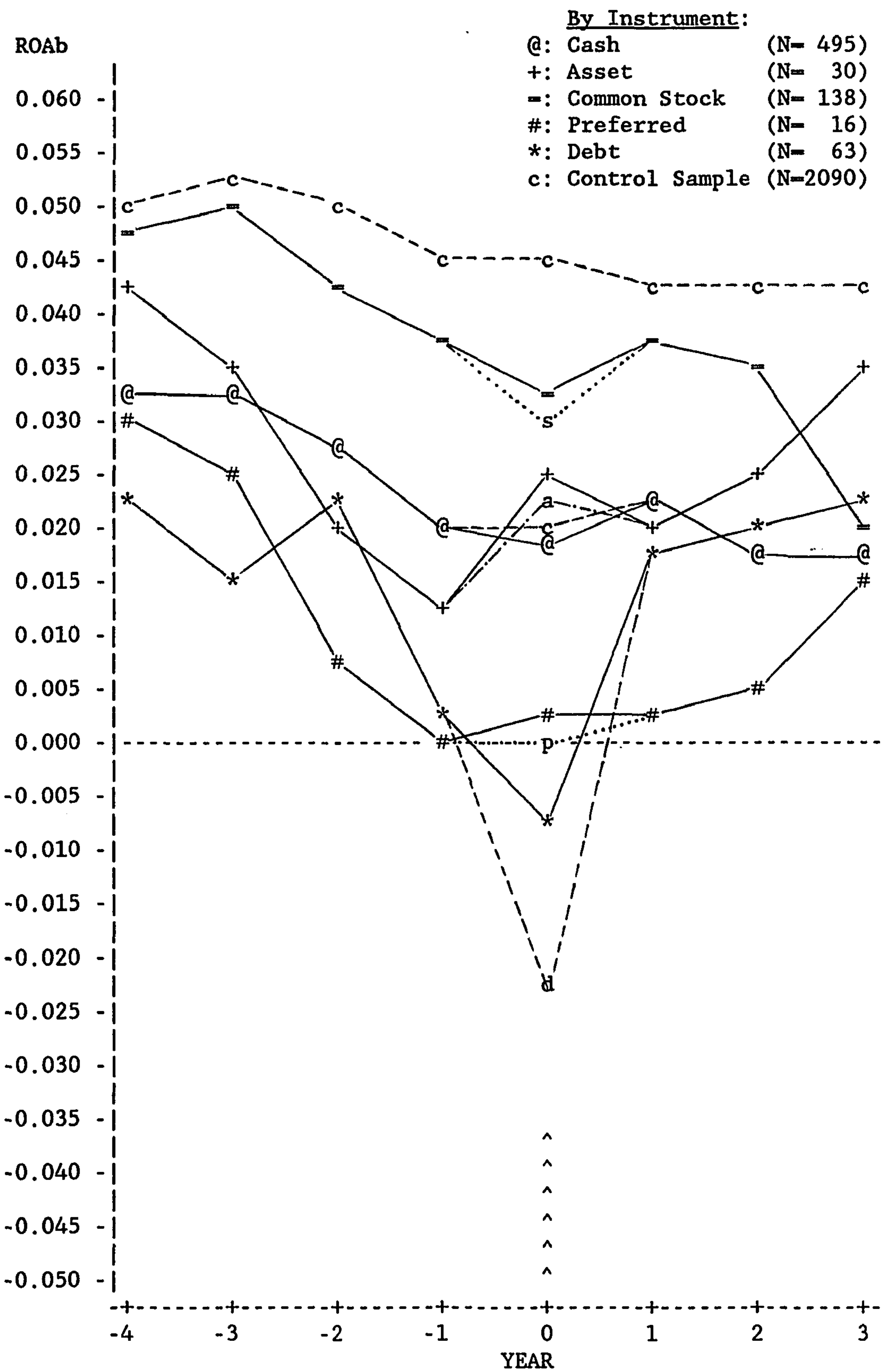


FIGURE 5-5.5
TIME-SERIES PATTERN OF DEBT TO EQUITY RATIO (LTDSE)

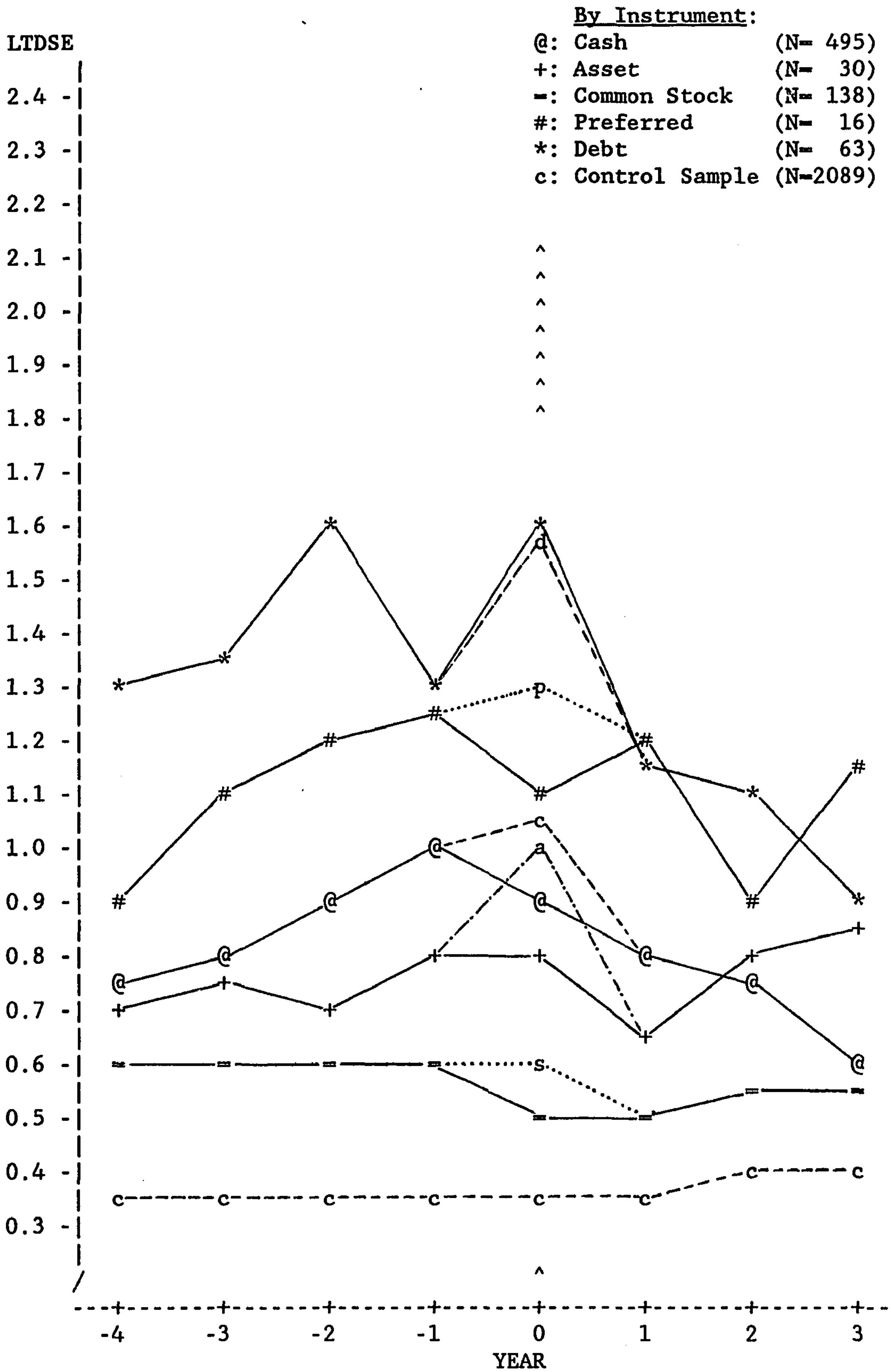


FIGURE 5-5.6

TIME-SERIES PATTERN OF TOTAL DEBT TO TOTAL ASSET RATIO (TDTA)

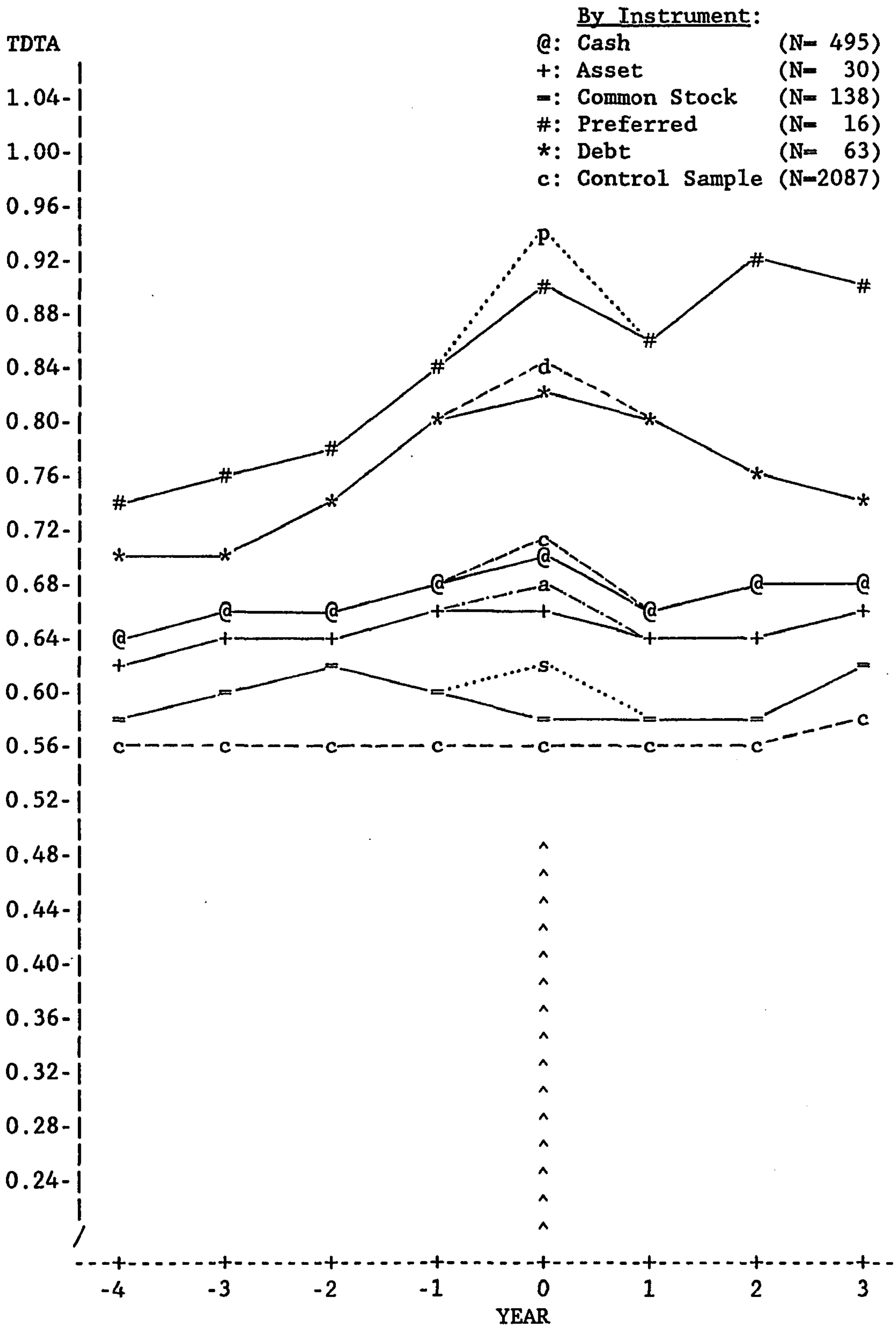


FIGURE 5-5.7
TIME-SERIES PATTERN OF DEBT TO MARKET VALUE RATIO (LTDMV)

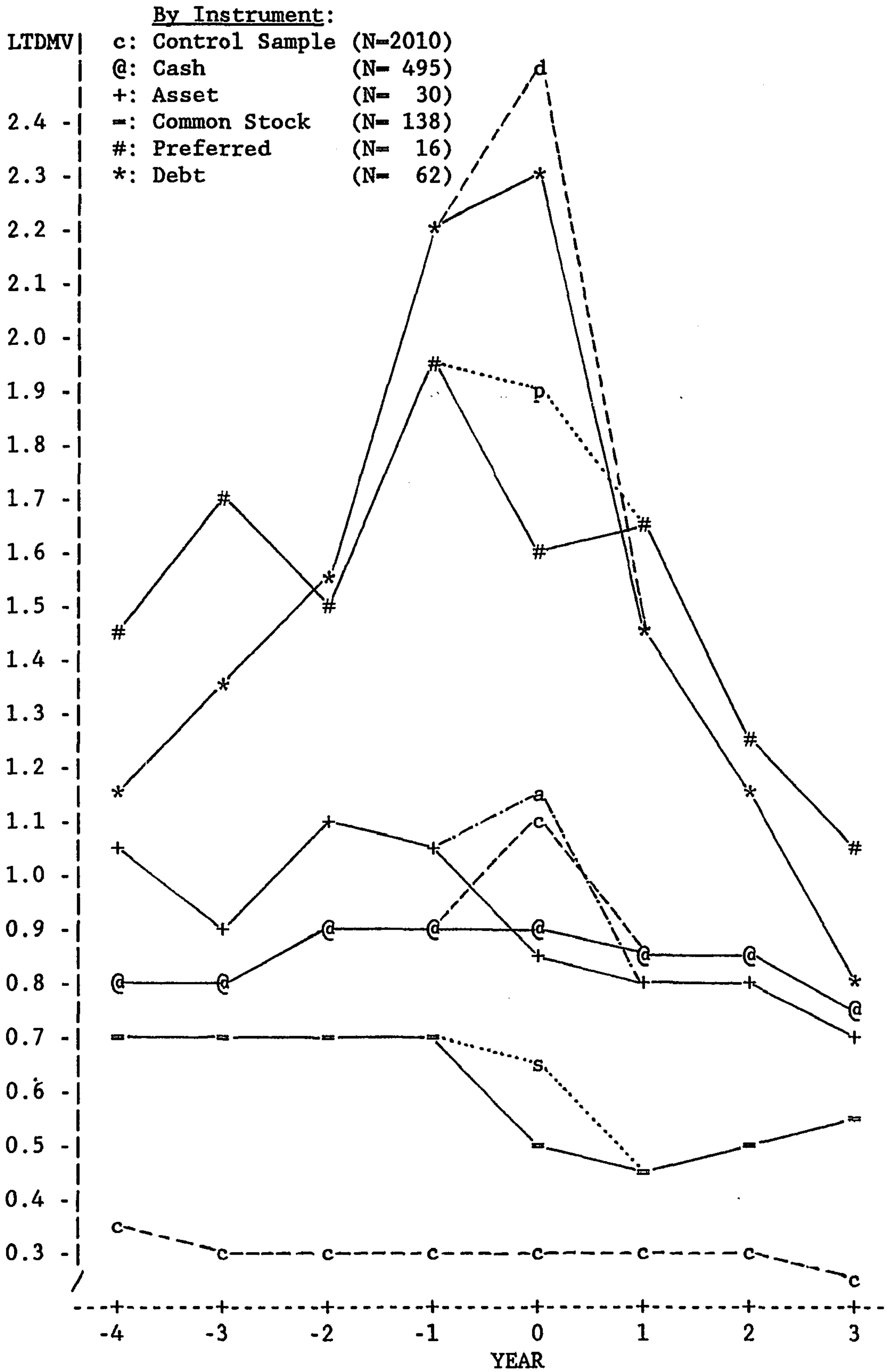


FIGURE 5-5.8

TIME-SERIES PATTERN OF ALTMAN'S Z-SCORE (ZSCORE)

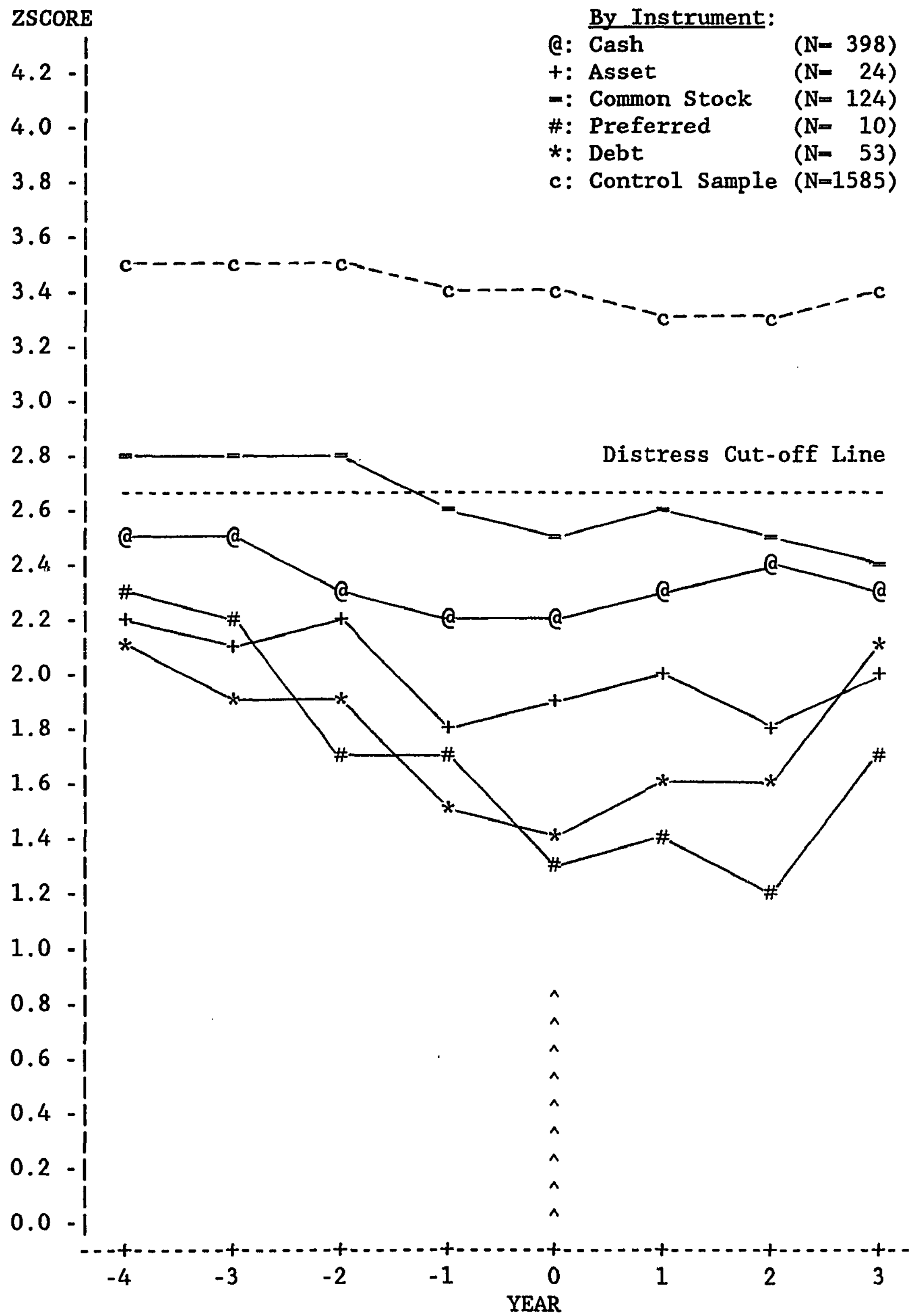


FIGURE 5-5.9

TIME-SERIES PATTERN OF CREDIT-RATING (RATING)

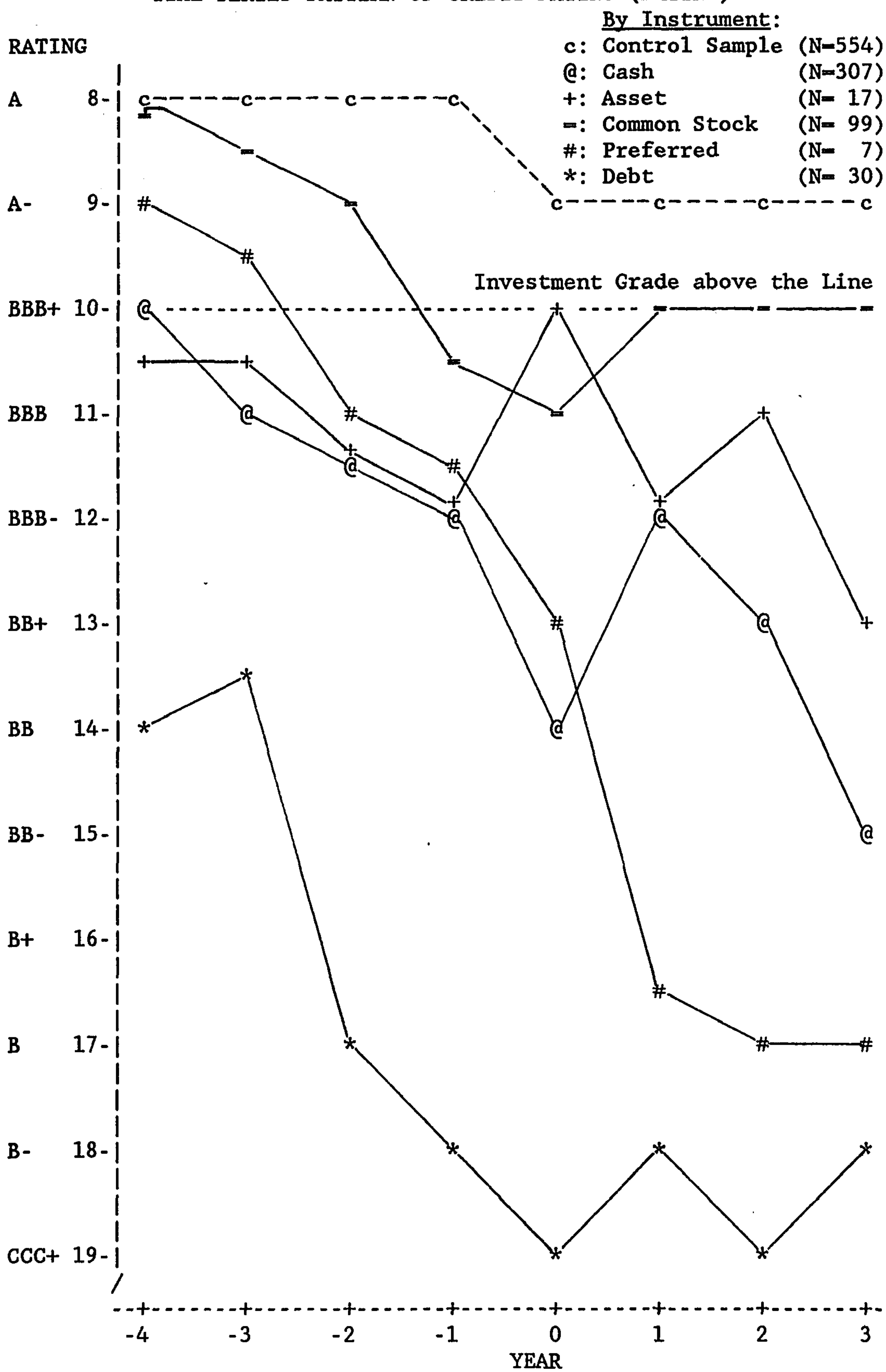


FIGURE 5-6.1
TIME-SERIES PATTERN OF ANNUAL EARNINGS PER SHARE (EPSc)

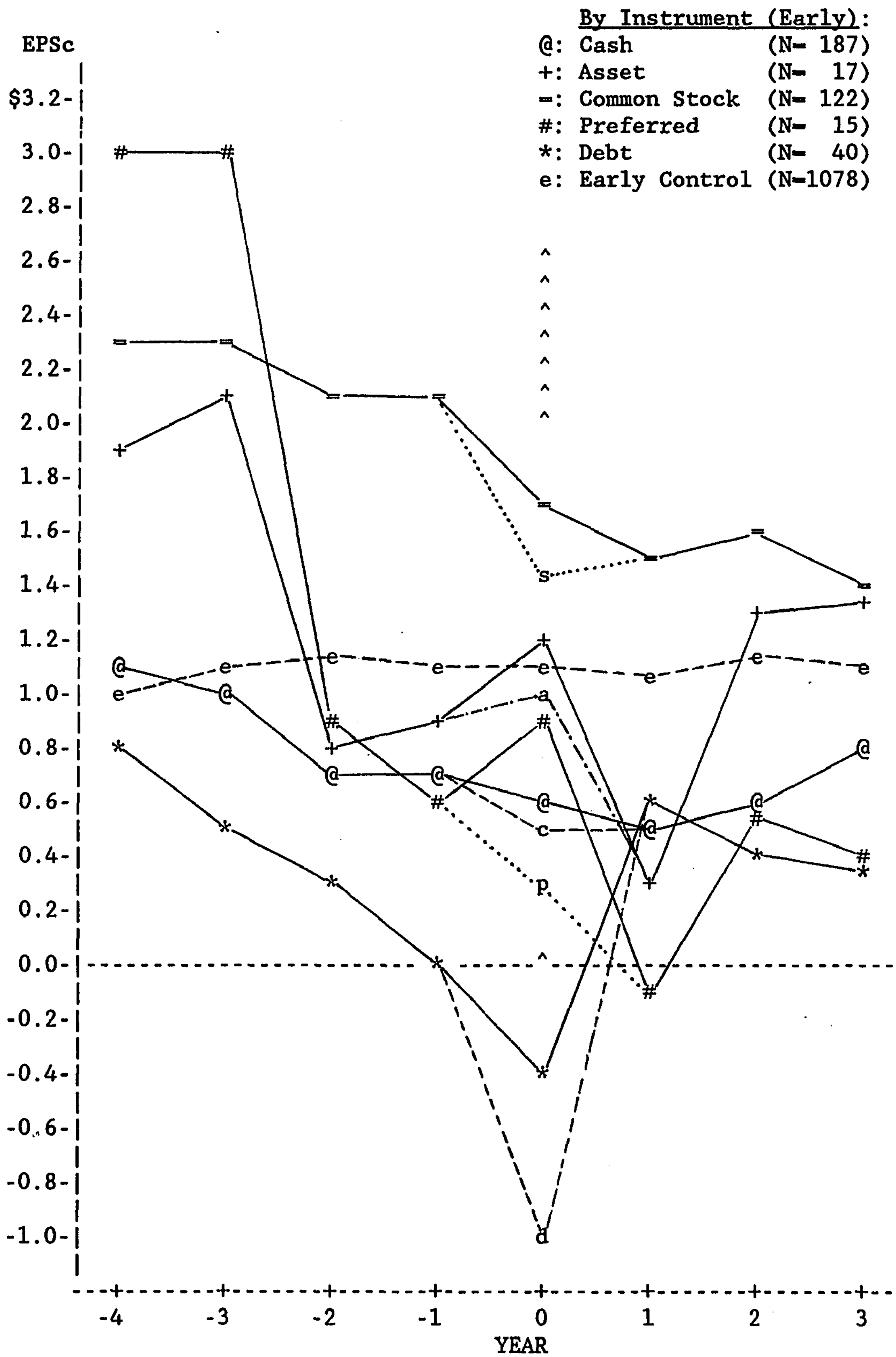


FIGURE 5-6.2
TIME-SERIES PATTERN OF ANNUAL EARNINGS PER SHARE (EPSb)

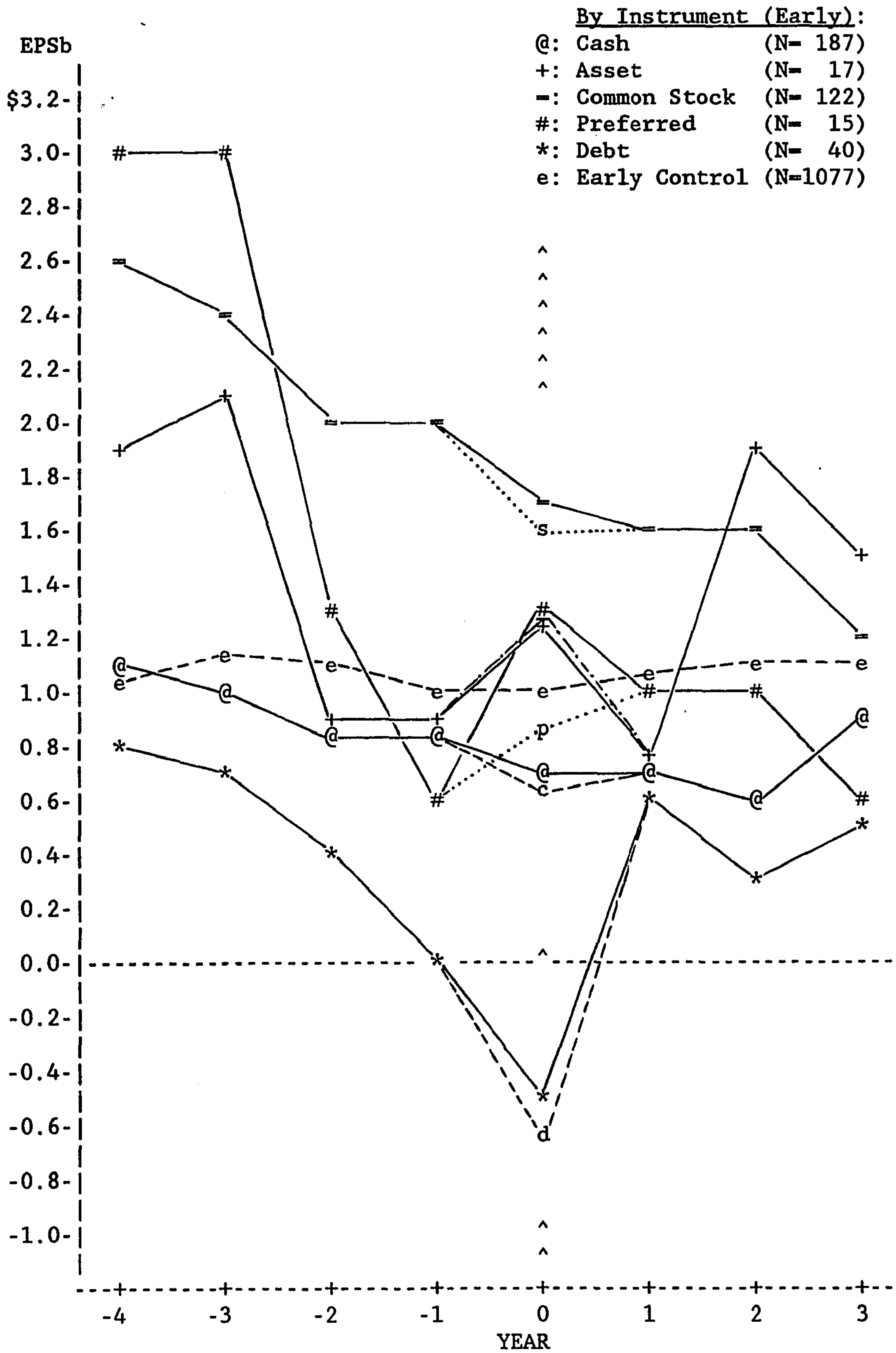


FIGURE 5-6.3
TIME-SERIES PATTERN OF RETURN ON ASSETS (ROAc)

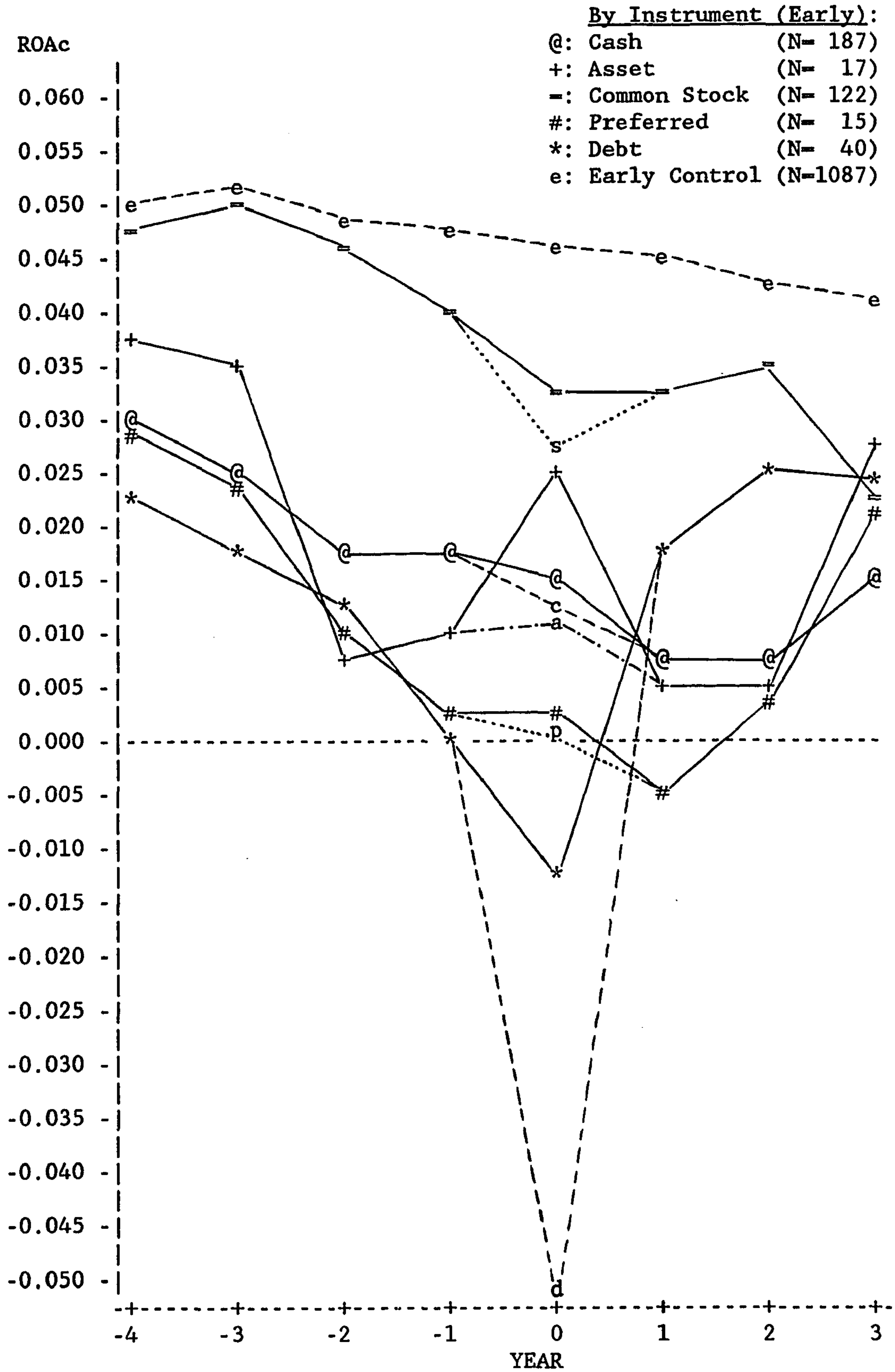


FIGURE 5-6.4
TIME-SERIES PATTERN OF RETURN ON ASSETS (ROAb)

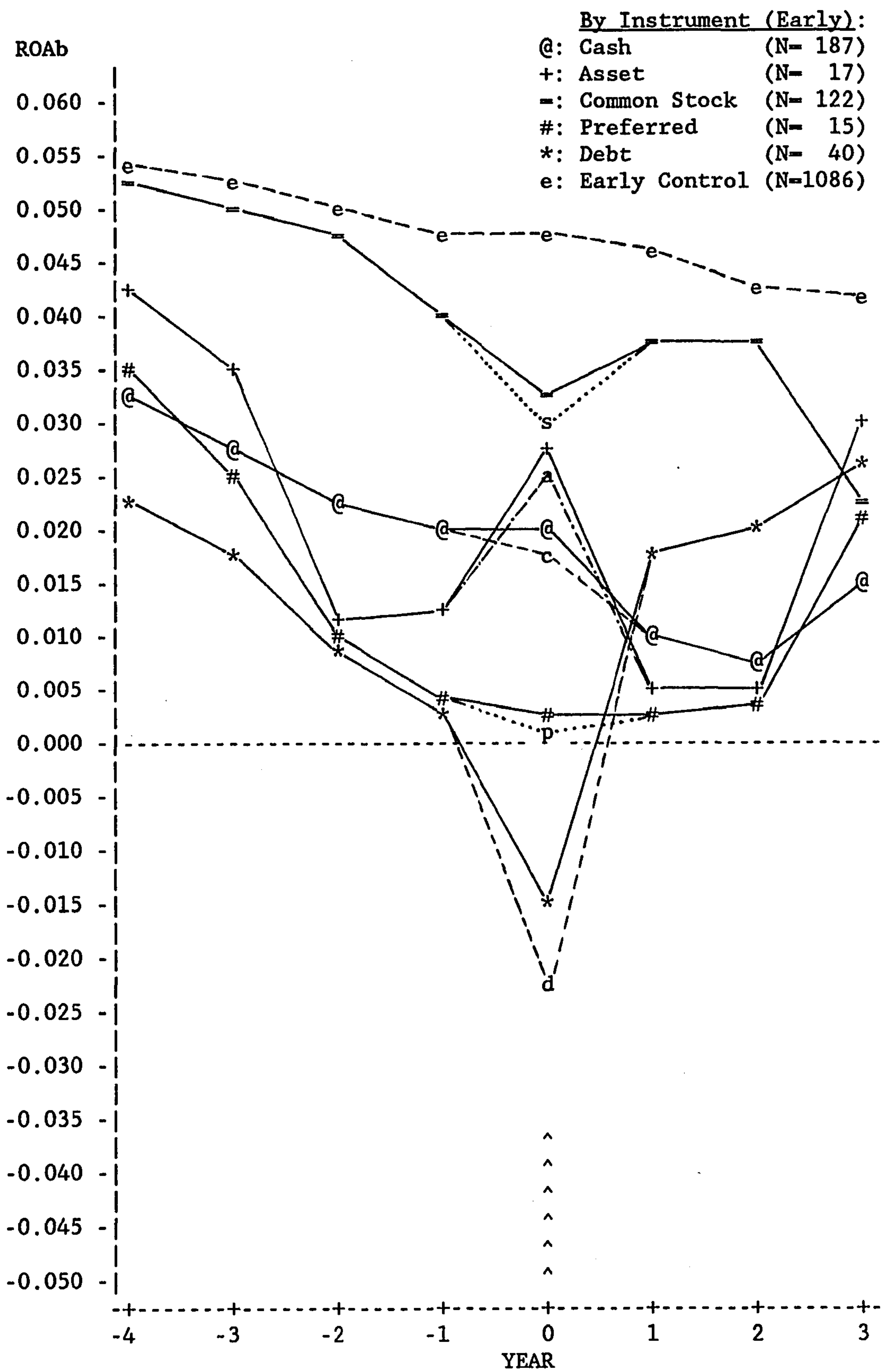


FIGURE 5-6.5
TIME-SERIES PATTERN OF DEBT TO EQUITY RATIO (LTDSE)

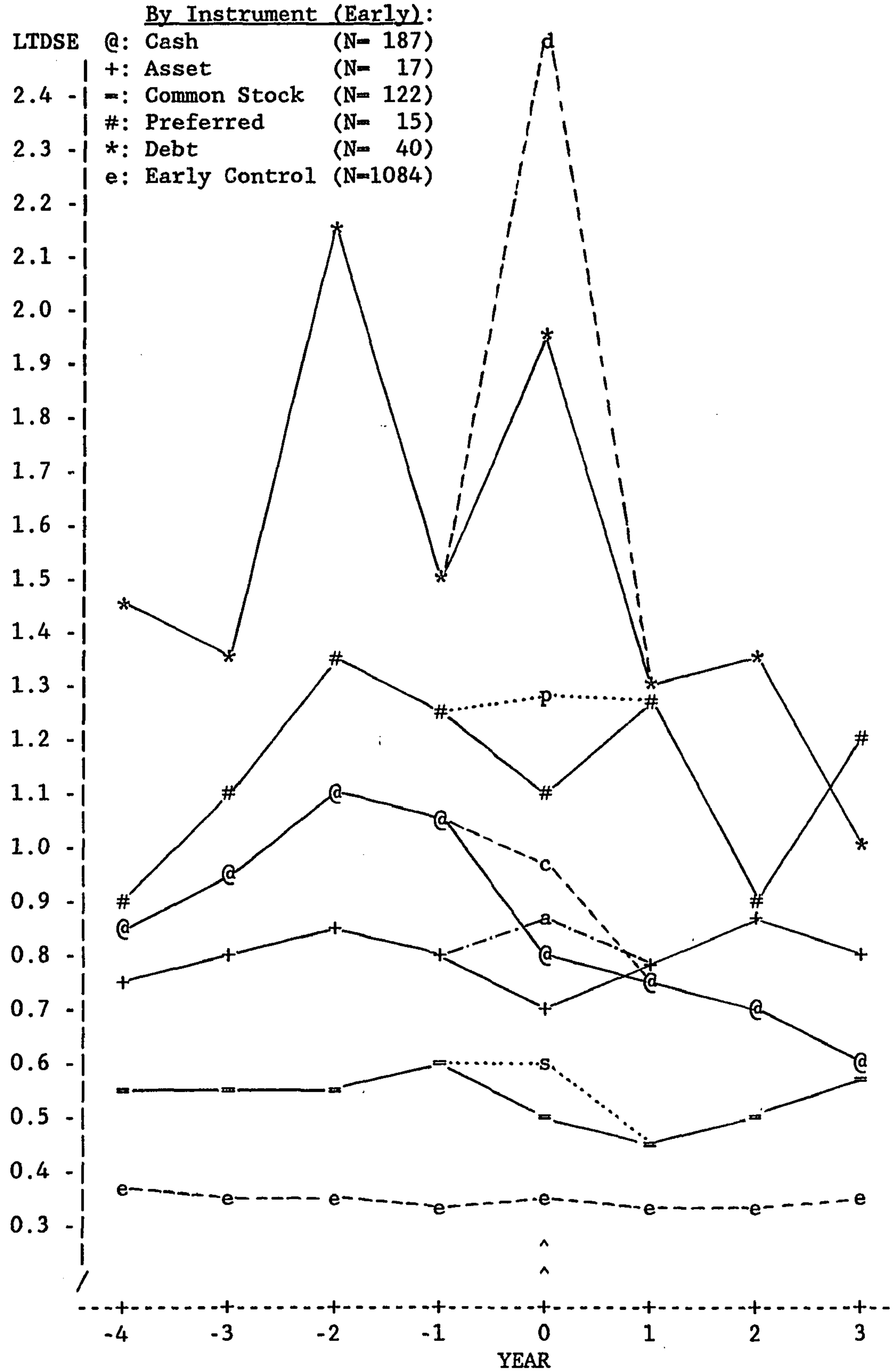


FIGURE 5-6.6

TIME-SERIES PATTERN OF TOTAL DEBT TO TOTAL ASSET RATIO (TDTA)

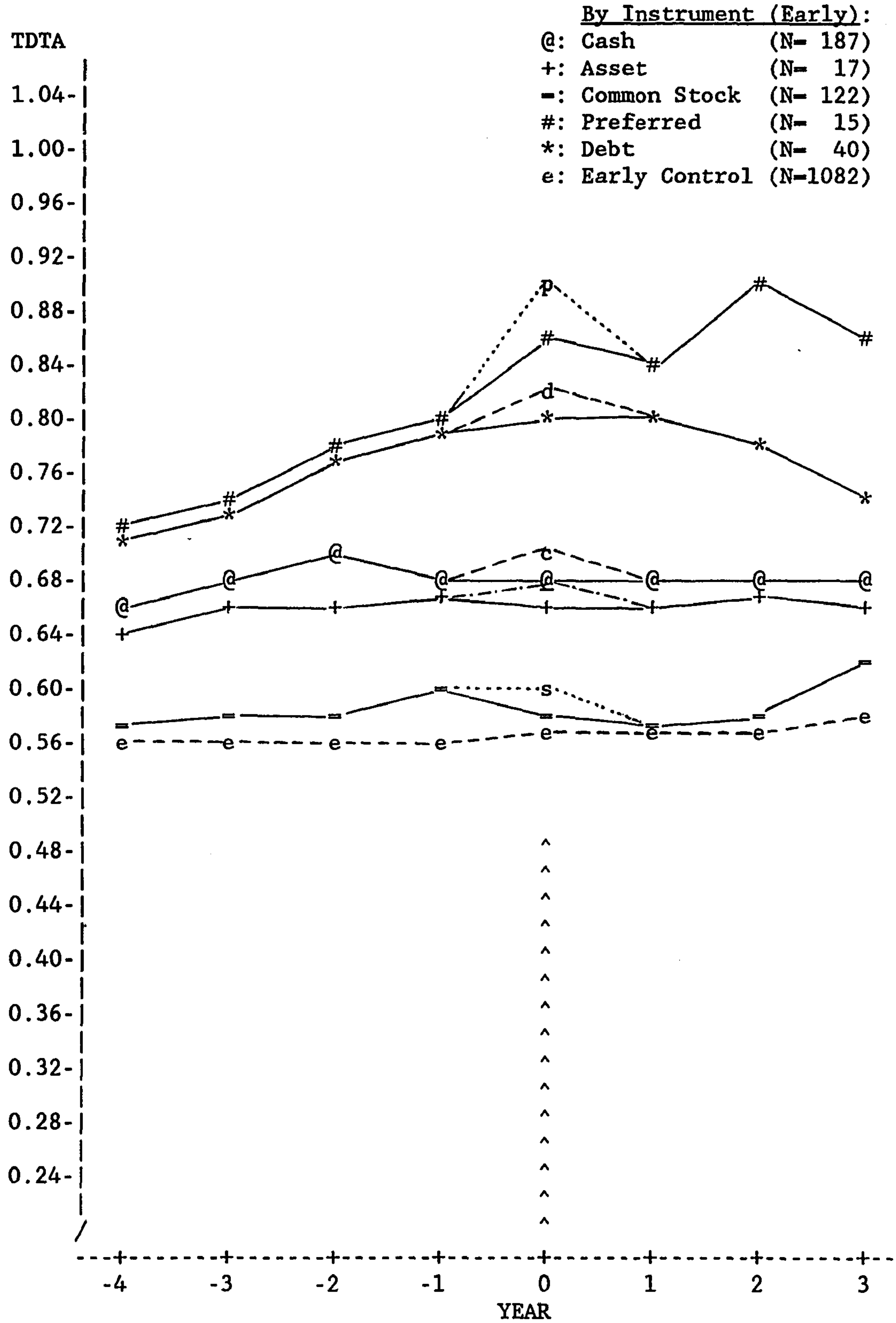


FIGURE 5-6.7
TIME-SERIES PATTERN OF DEBT TO MARKET VALUE RATIO (LTDMV)

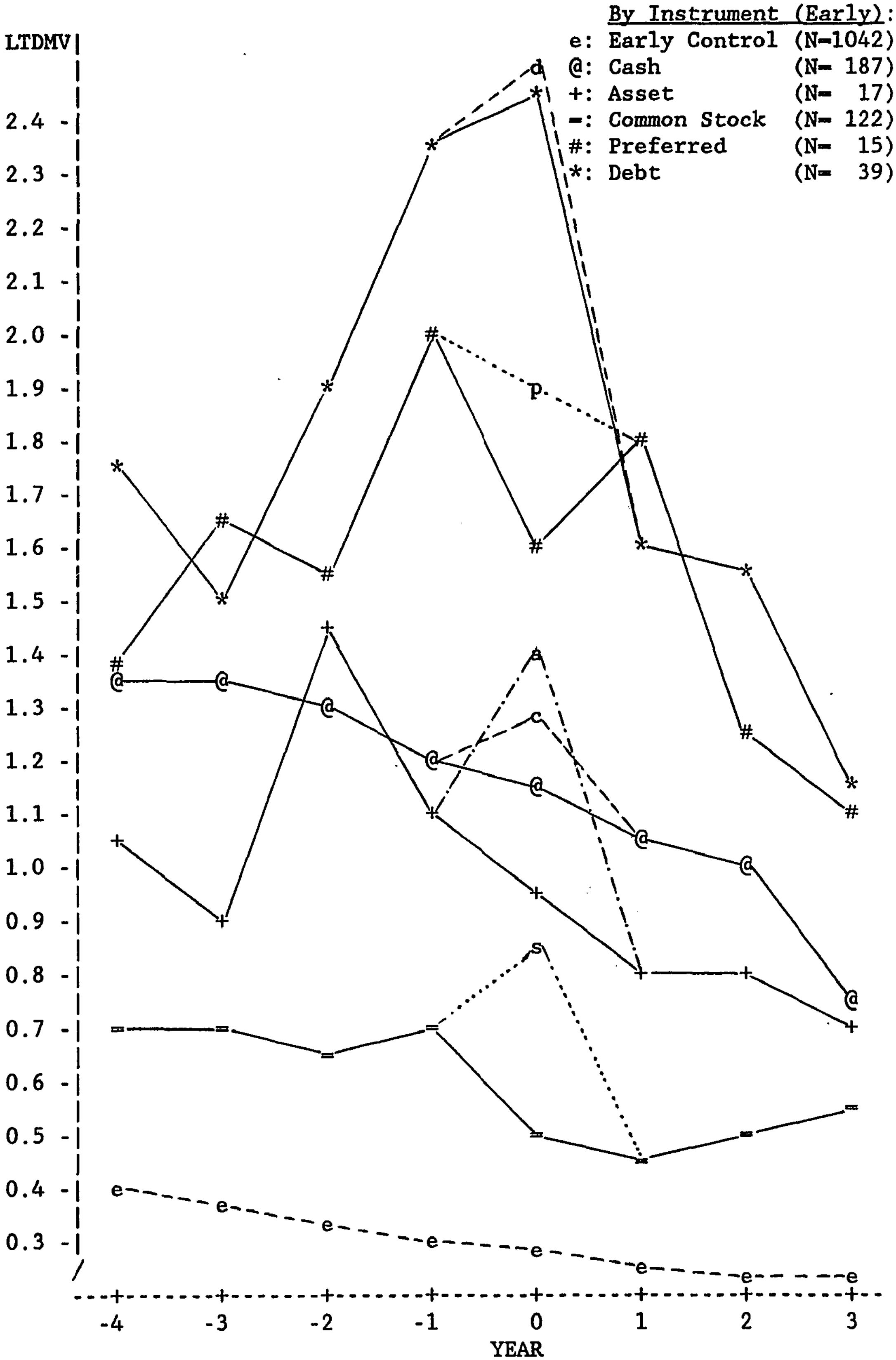


FIGURE 5-6.8

TIME-SERIES PATTERN OF ALTMAN'S Z-SCORE (ZSCORE)

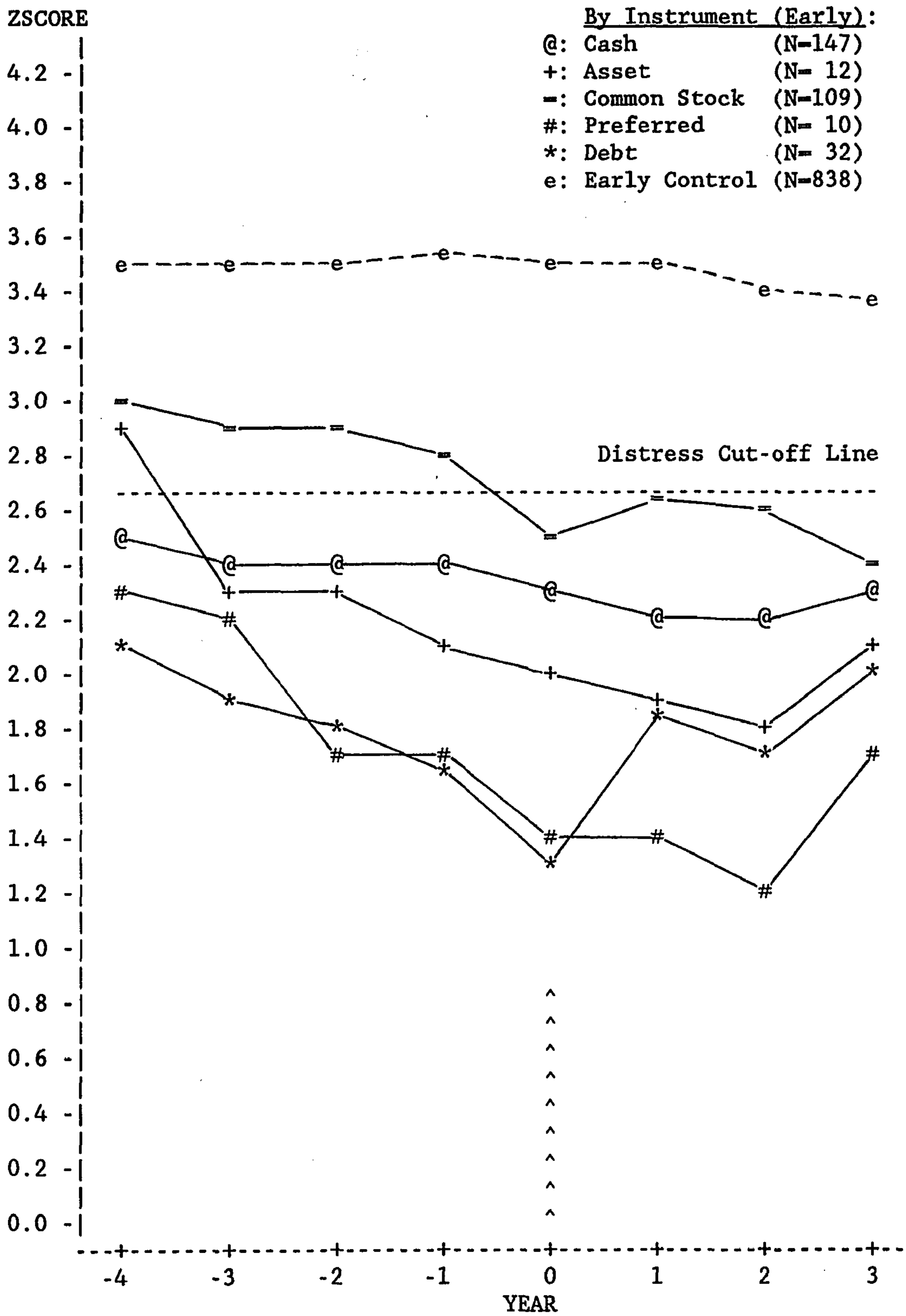


FIGURE 5-6.9
TIME-SERIES PATTERN OF CREDIT-RATING (RATING)

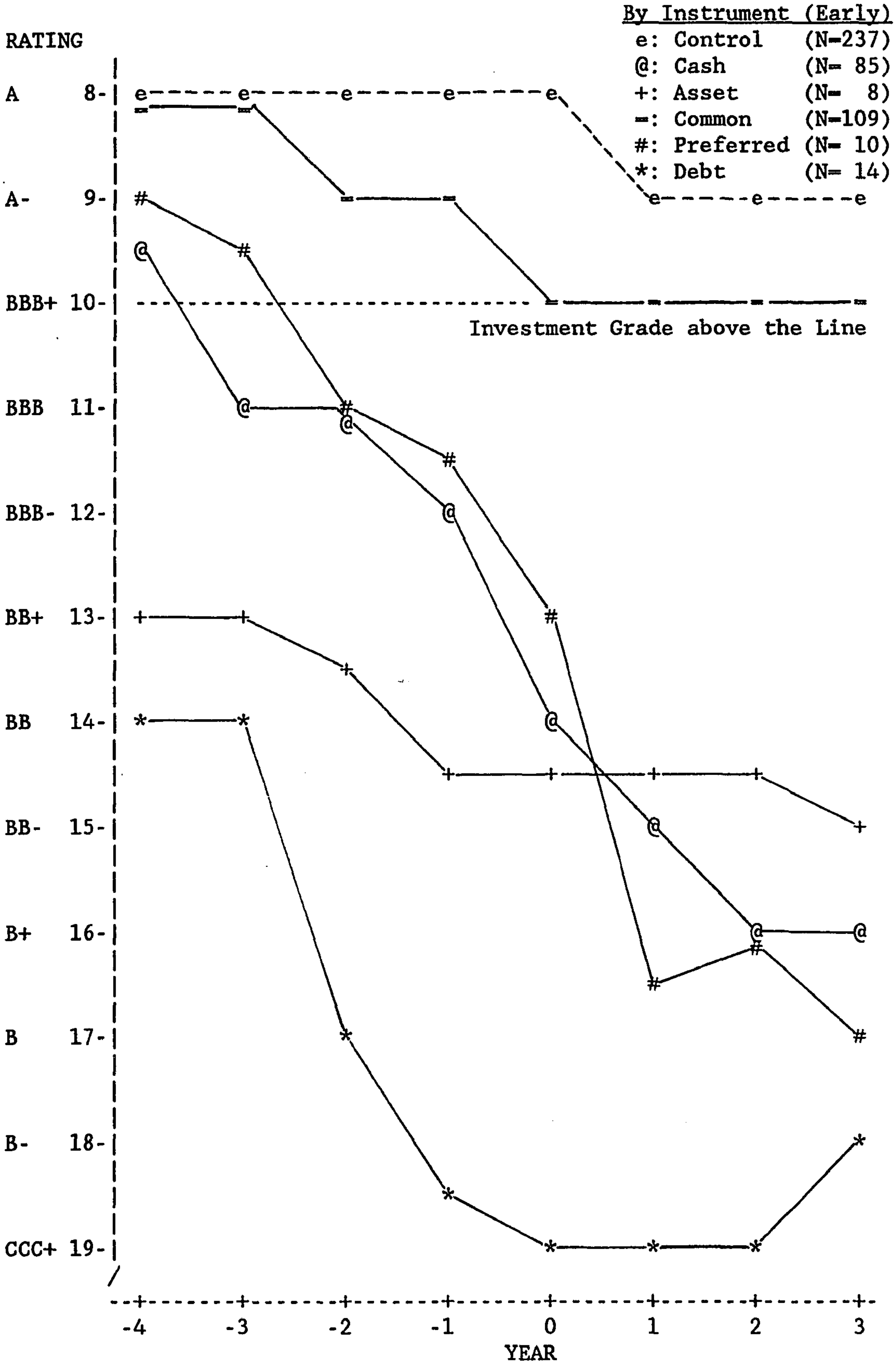


FIGURE 5-7.1
TIME-SERIES PATTERN OF ANNUAL EARNINGS PER SHARE (EPSc)

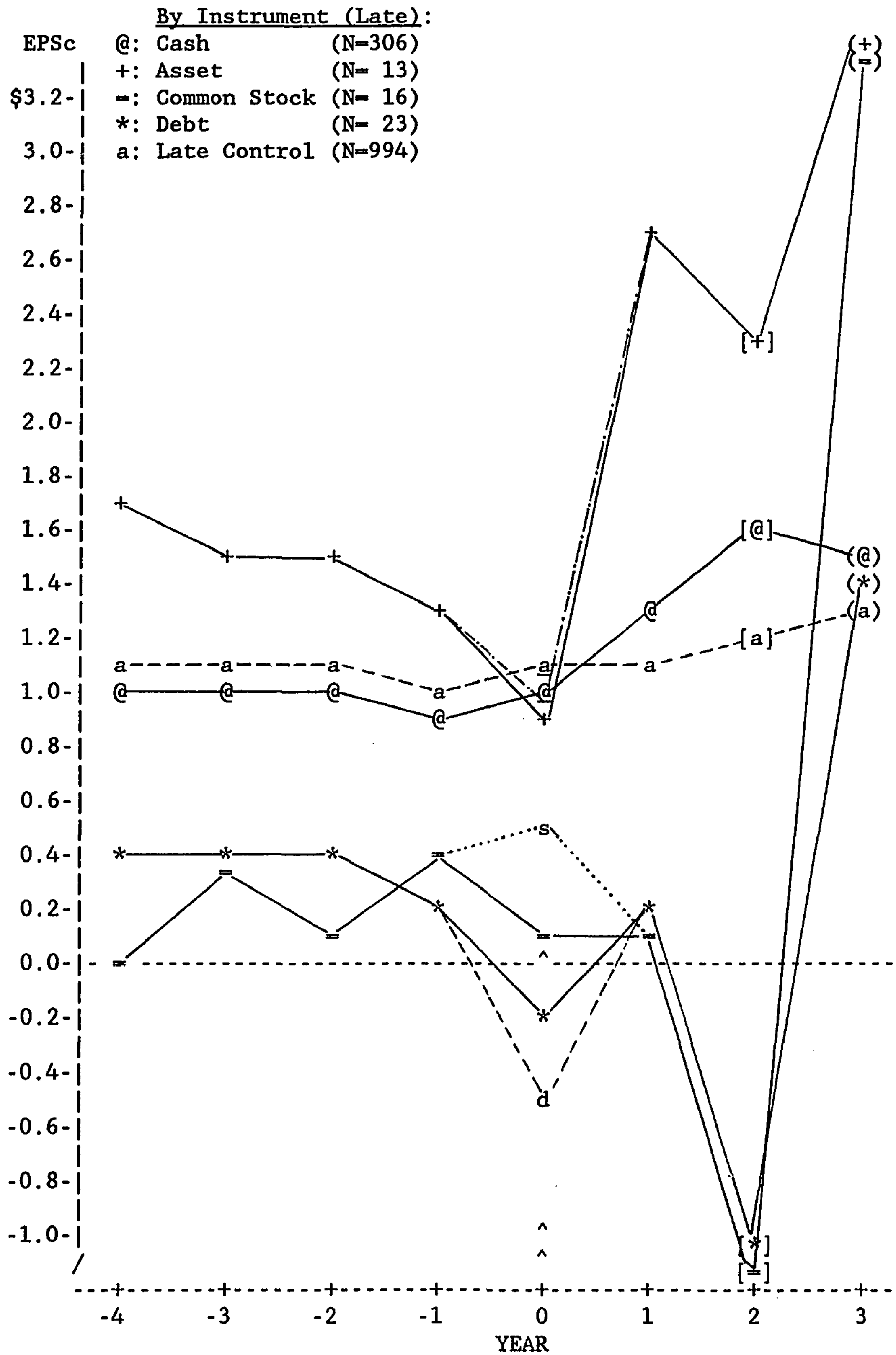


FIGURE 5-7.2
TIME-SERIES PATTERN OF ANNUAL EARNINGS PER SHARE (EPSb)

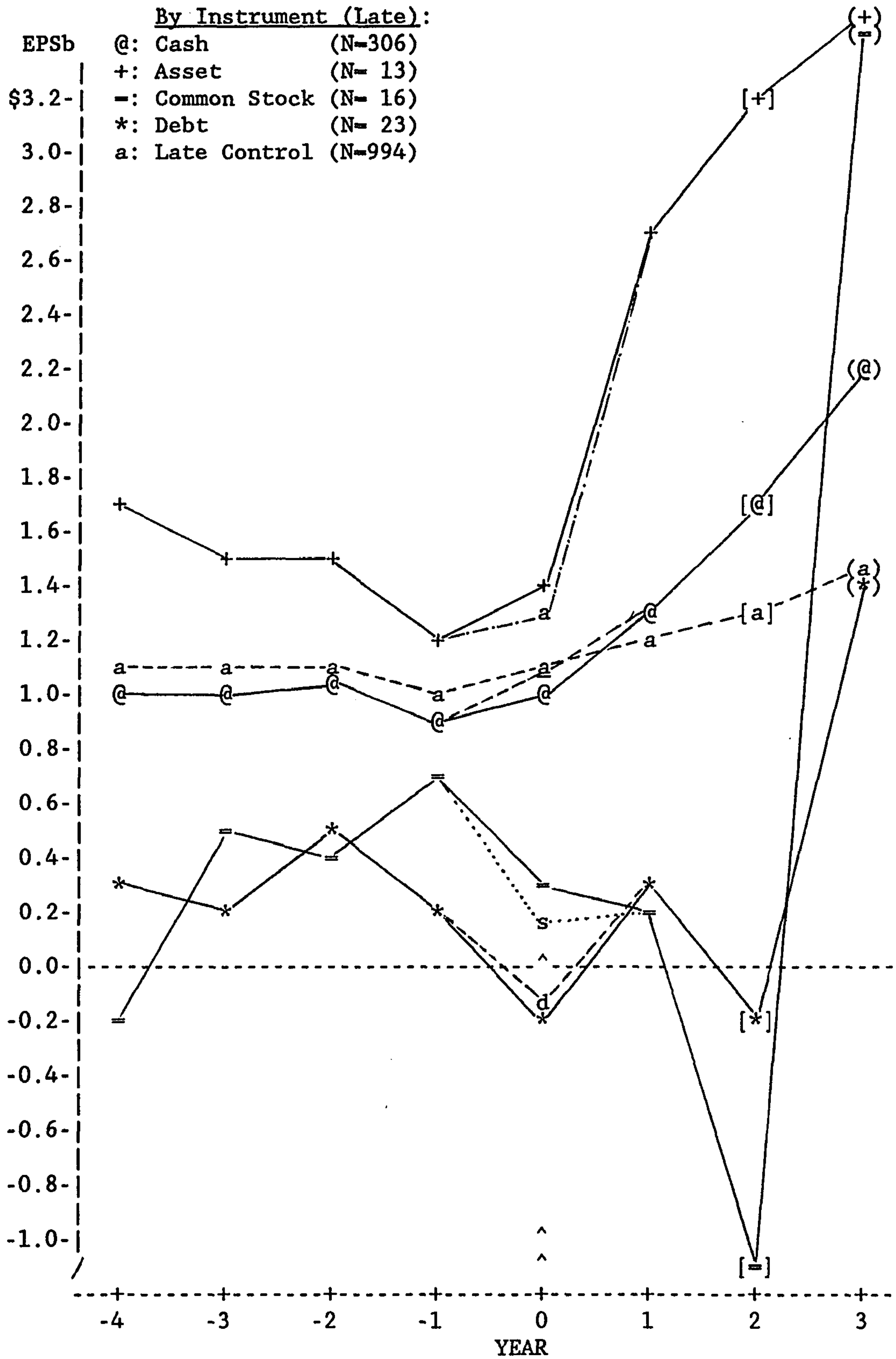


FIGURE 5-7.3
TIME-SERIES PATTERN OF RETURN ON ASSETS (ROAc)

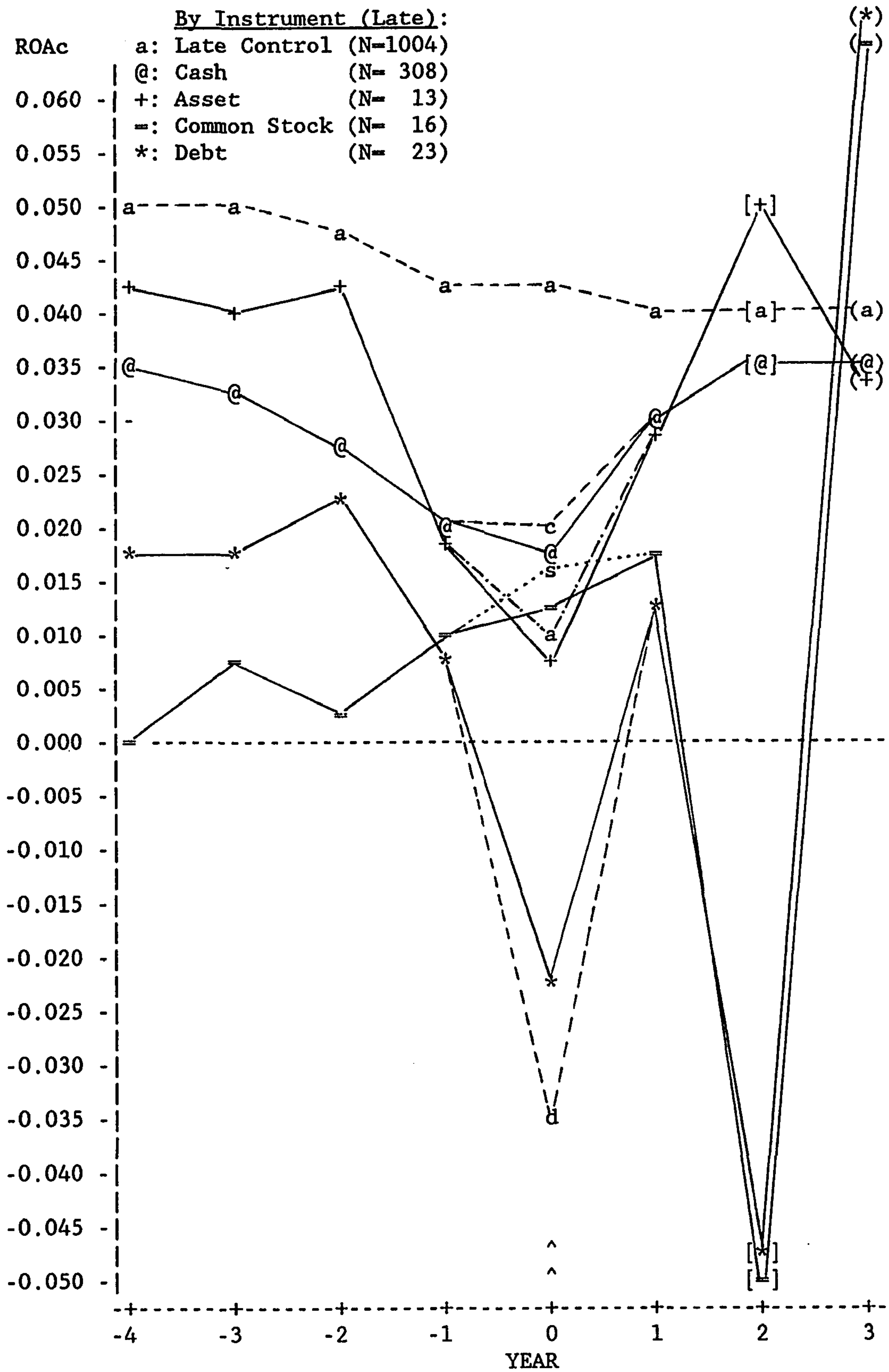


FIGURE 5-7.4
TIME-SERIES PATTERN OF RETURN ON ASSETS (ROAb)

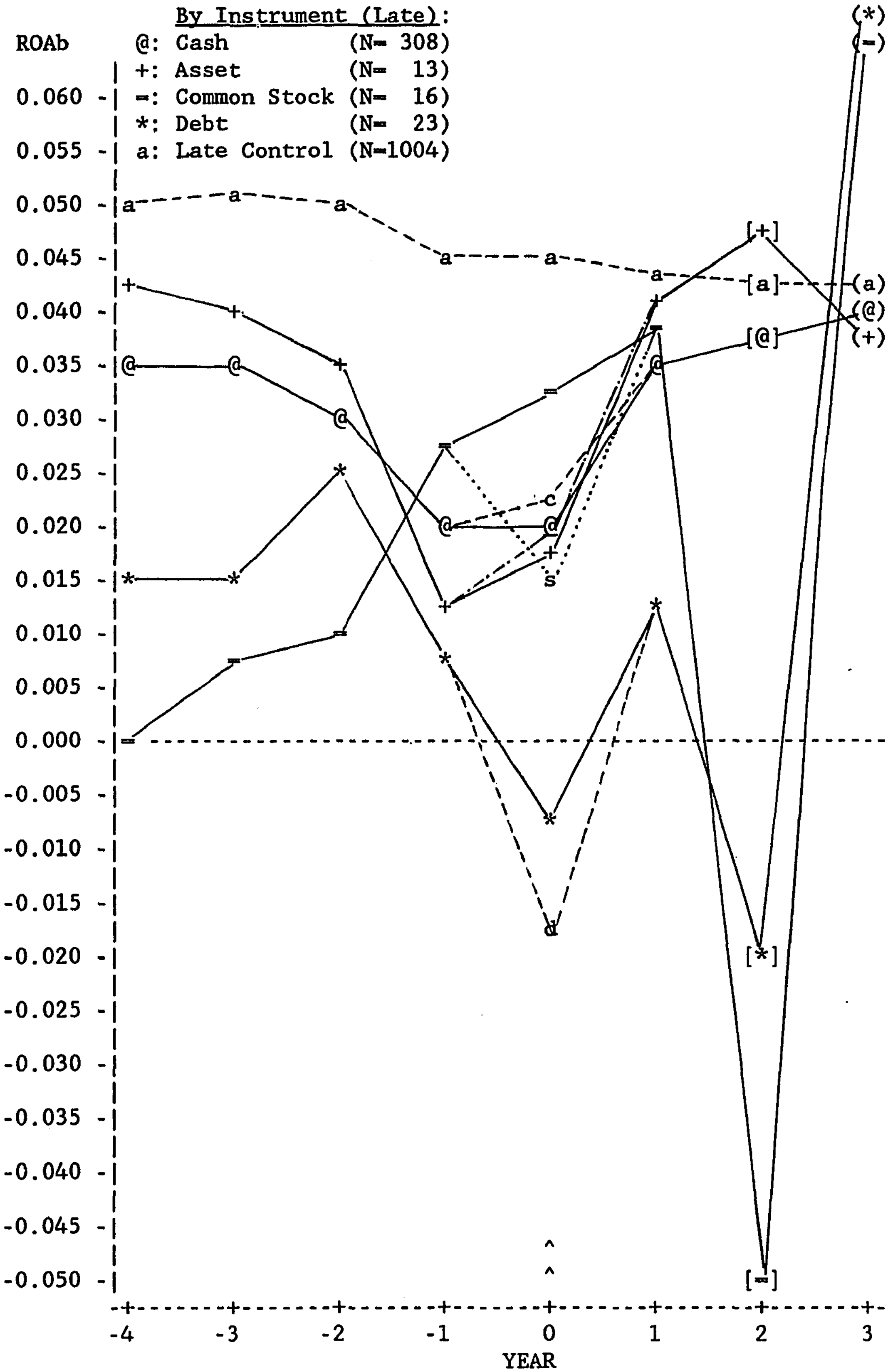


FIGURE 5-7.5
TIME-SERIES PATTERN OF DEBT TO EQUITY RATIO (LTDSE)

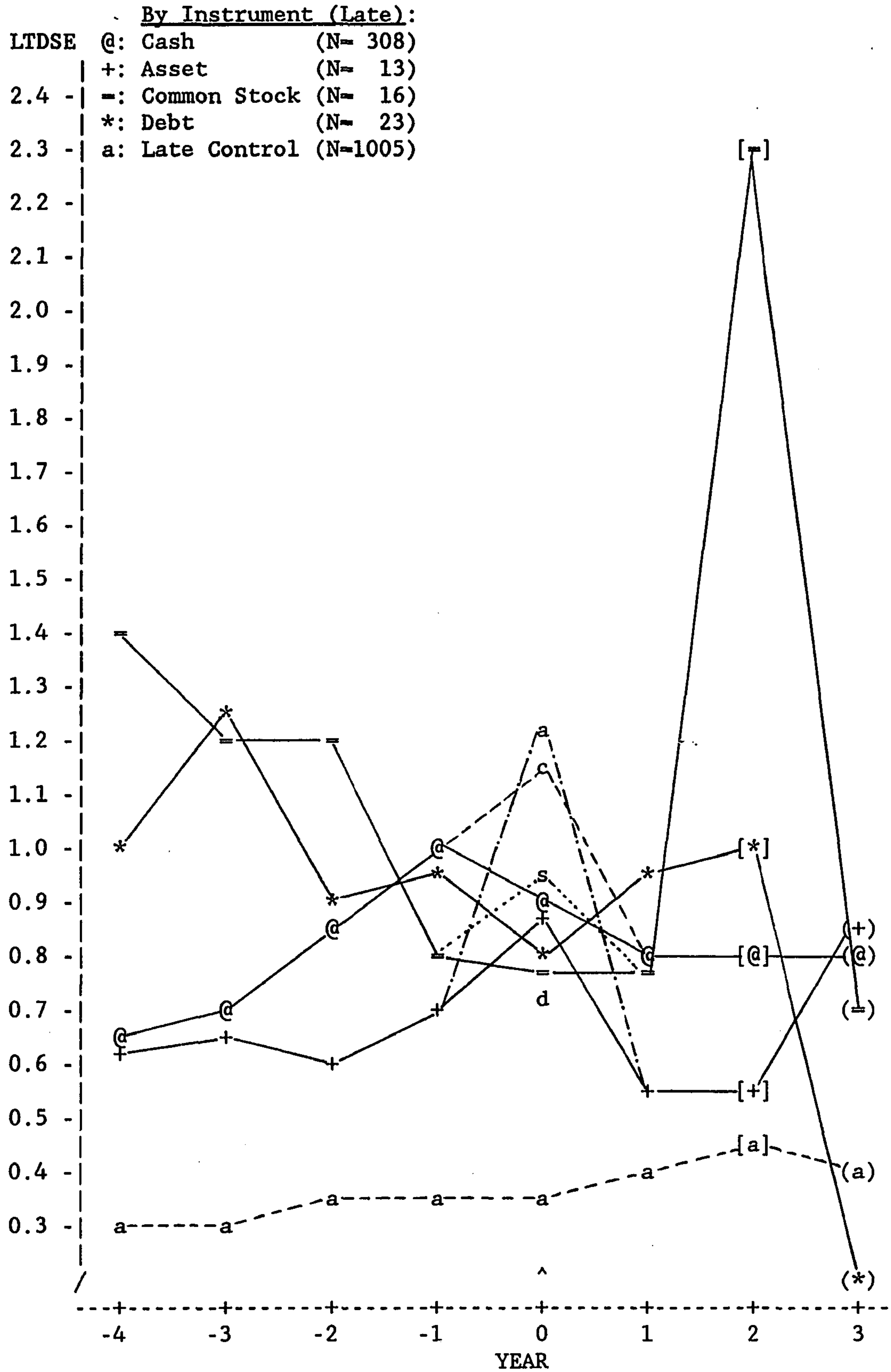


FIGURE 5-7.6

TIME-SERIES PATTERN OF TOTAL DEBT TO TOTAL ASSET RATIO (TDTA)

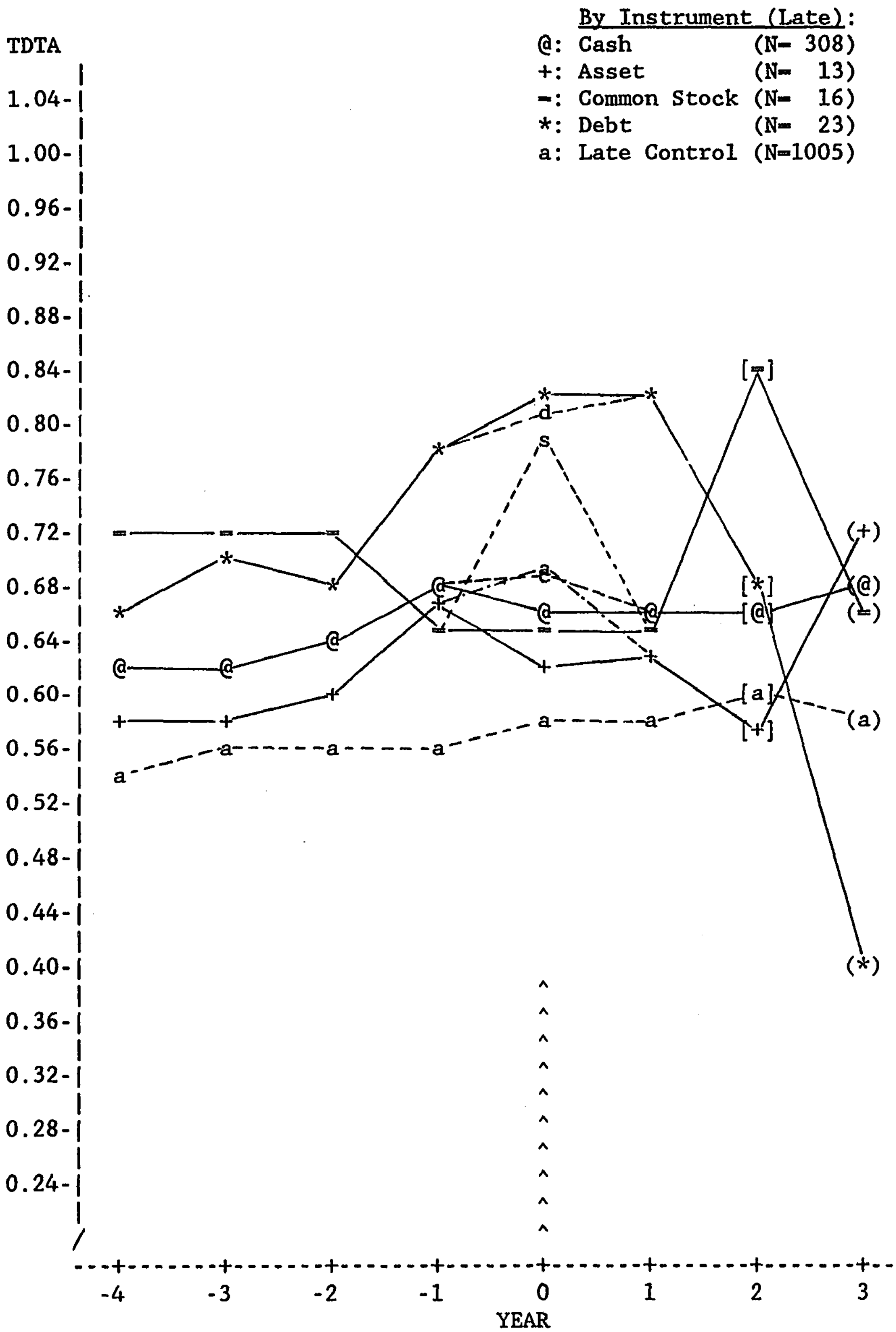


FIGURE 5-7.7
TIME-SERIES PATTERN OF DEBT TO MARKET VALUE RATIO (LTDMV)

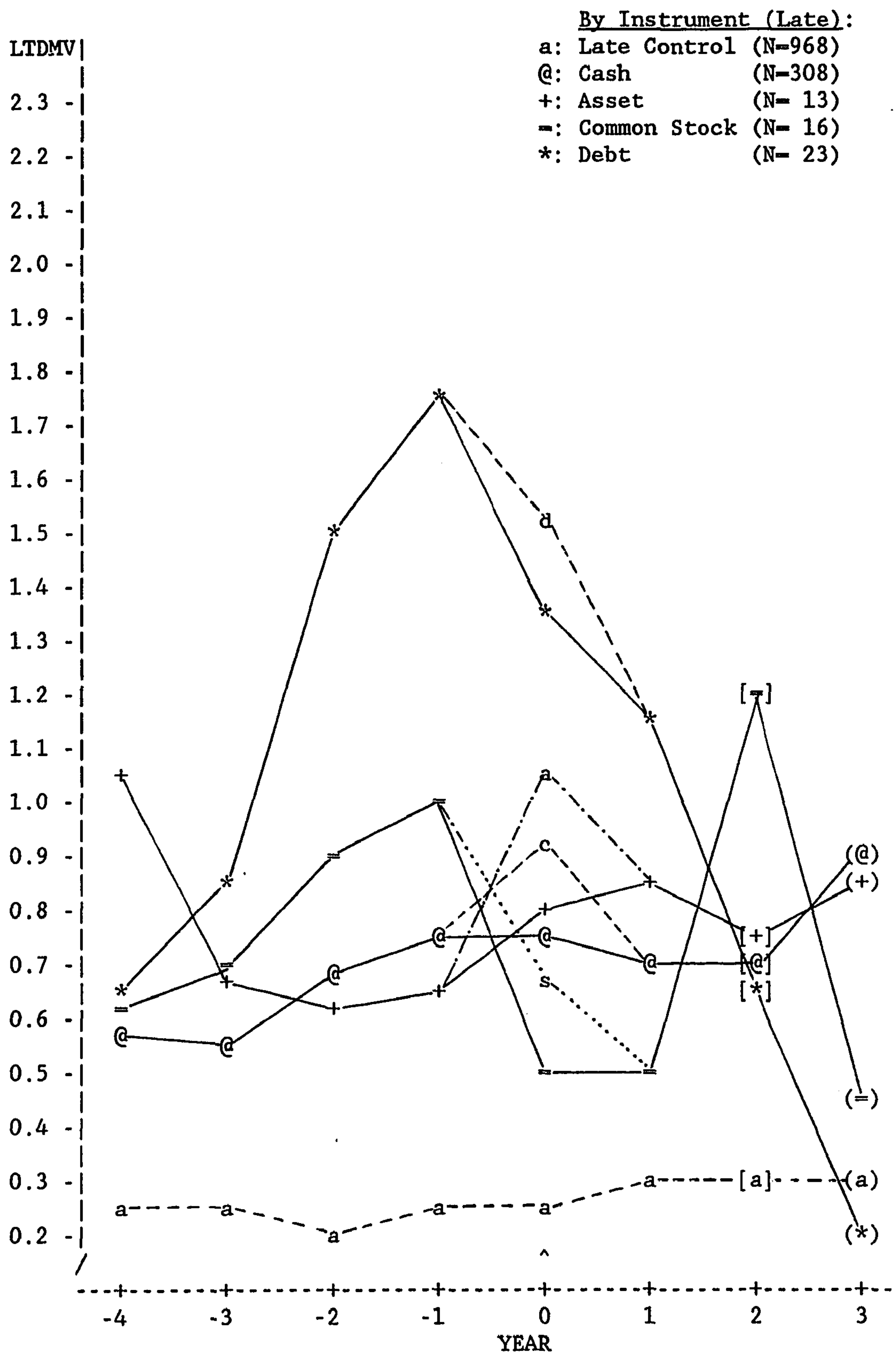


FIGURE 5-7.8

TIME-SERIES PATTERN OF ALTMAN'S Z-SCORE (ZSCORE)

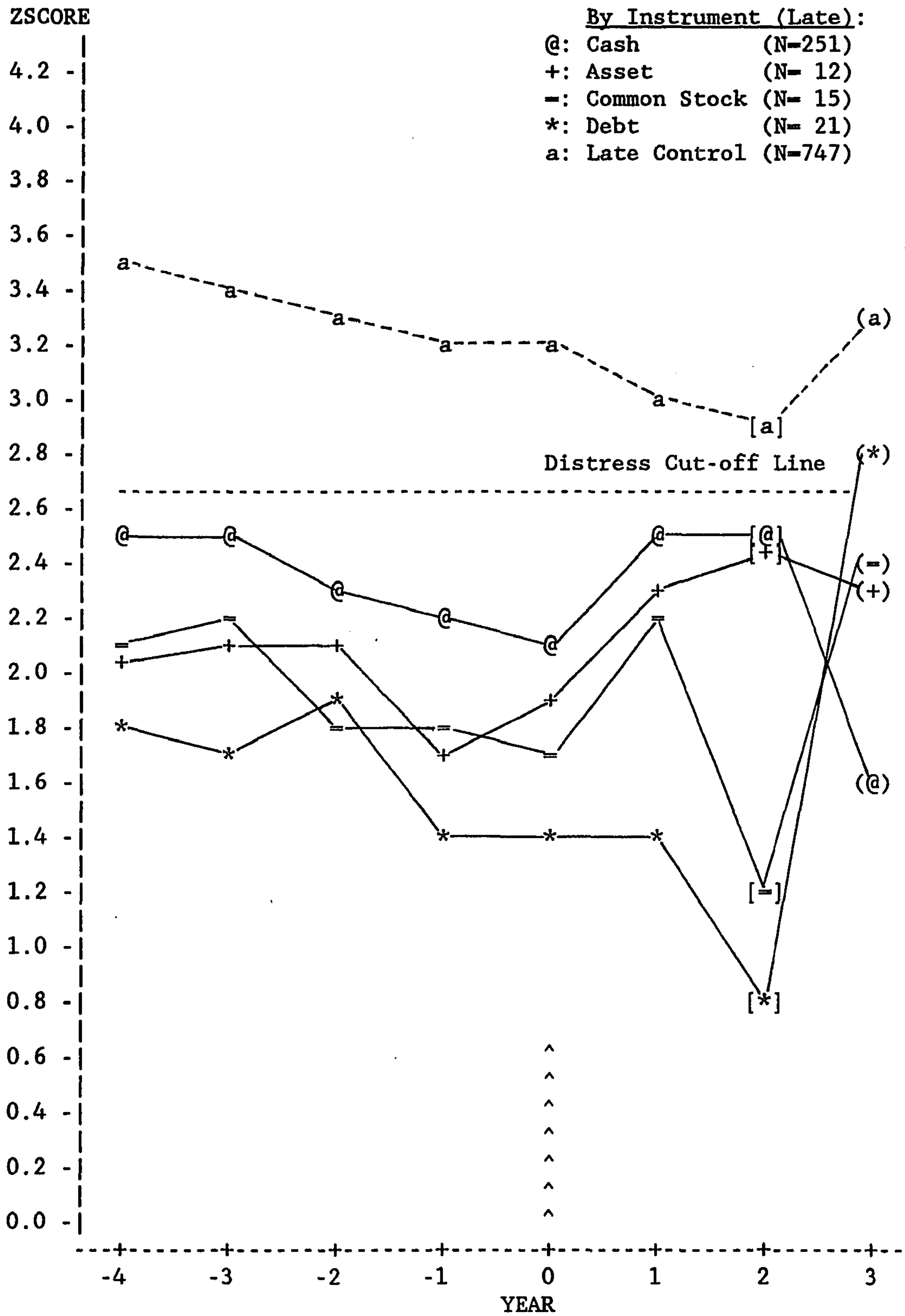


FIGURE 5-7.9
TIME-SERIES PATTERN OF CREDIT-RATING (RATING)

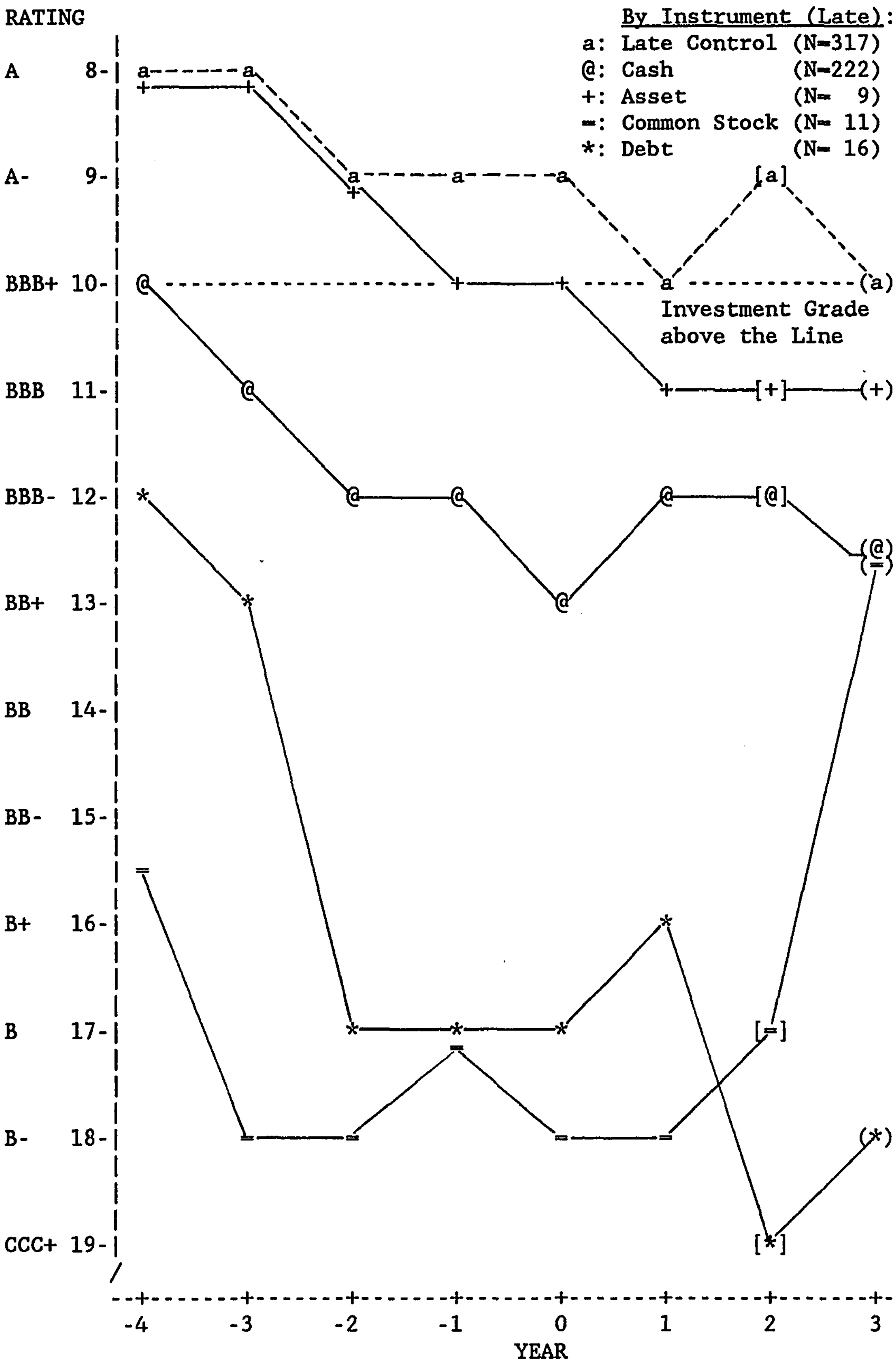
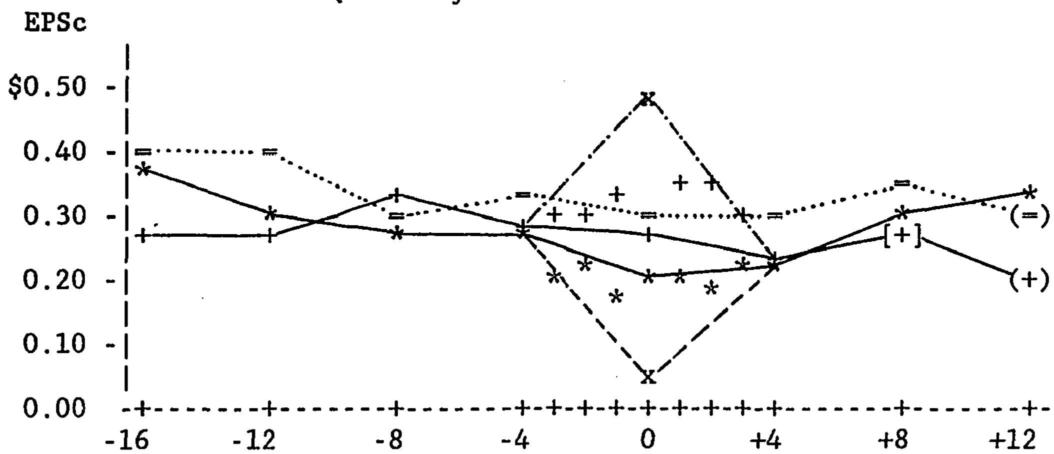


FIGURE 5-8.1

TIME-SERIES PATTERN OF QUARTERLY EARNINGS PER SHARE (EPSc)
<u>By Effect</u>

* : Actual Quarterly EPSc for <u>EDR-Gain</u> [N=489]
\+ : Actual Quarterly EPSc for <u>EDR-Loss</u> [N=295]
= : Actual Quarterly EPSc for <u>Zero-Gain</u> [N= 47]
x: "as-if" Quarterly EPSc

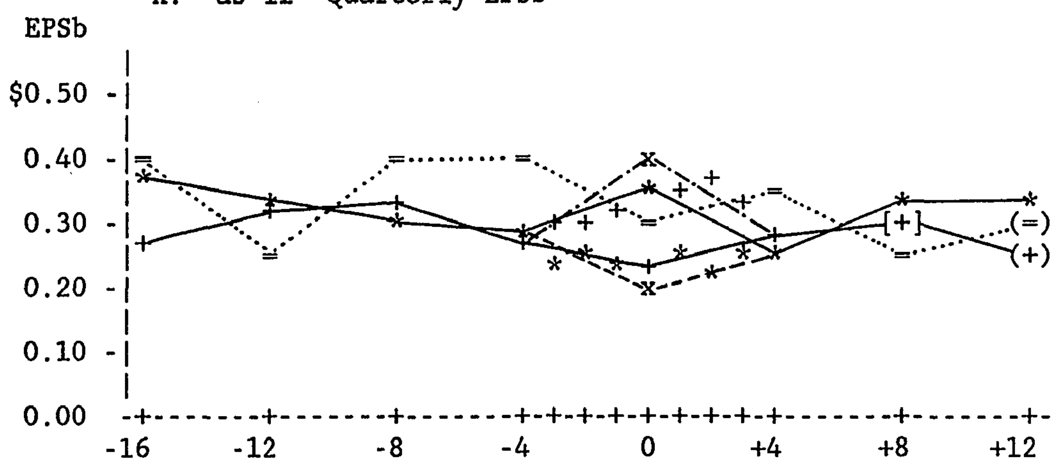


EVENT QUARTER RELATIVE TO THE REDEMPTION QUARTER ("0")

FIGURE 5-8.2

TIME-SERIES PATTERN OF QUARTERLY EARNINGS PER SHARE (EPSb)
<u>By Effect</u>

* : Actual Quarterly EPSb for <u>EDR-Gain</u> [N=489]
\+ : Actual Quarterly EPSb for <u>EDR-Loss</u> [N=295]
= : Actual Quarterly EPSb for <u>Zero-Gain</u> [N= 47]
x: "as-if" Quarterly EPSb

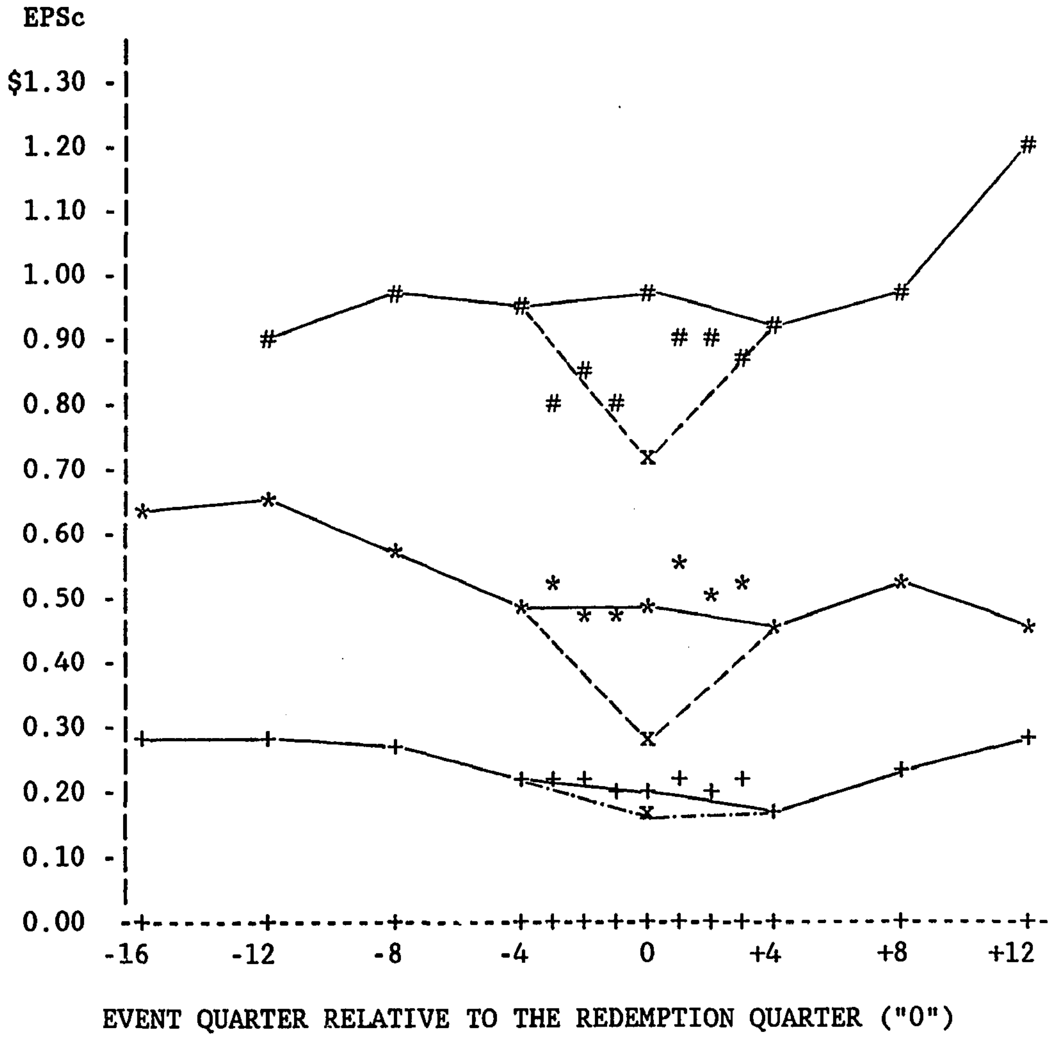


EVENT QUARTER RELATIVE TO THE REDEMPTION QUARTER ("0")

FIGURE 5-8.3

TIME-SERIES PATTERN OF QUARTERLY EARNINGS PER SHARE (EPSc)
By Method

+ : Actual Quarterly EPSc for Equity-for-Debt Swaps [N=138]
* : Actual Quarterly EPSc for All Other Methods [N=693]
[# : Actual Quarterly EPSc for Hand [1989] [N=245]]
x: "as-if" Quarterly EPSc

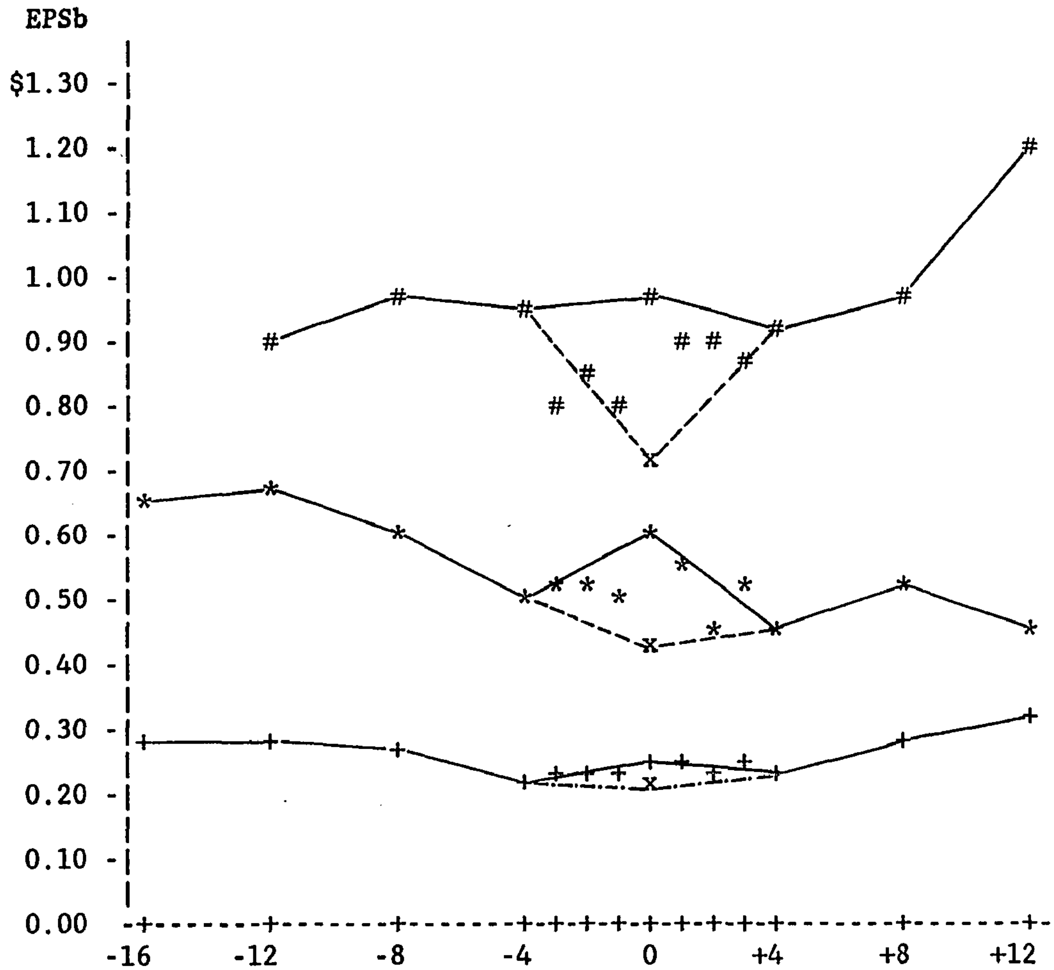


The source of the plot for the equity-for-debt swaps (denoted "#") is: Hand, John R. M., "Did Firms Undertake Debt-Equity Swaps for an Accounting Paper Profit or True Financial Gain?" The Accounting Review (October 1989), p. 598.

FIGURE 5-8.4

TIME-SERIES PATTERN OF QUARTERLY EARNINGS PER SHARE (EPSb)
By Method

+ : Actual Quarterly EPSb for Equity-for-Debt Swaps [N=138]
* : Actual Quarterly EPSb for All Other Methods [N=693]
[# : Actual Quarterly EPSb for Hand [1989] [N=245]]
x: "as-if" Quarterly EPSb



EVENT QUARTER RELATIVE TO THE REDEMPTION QUARTER ("0")

The source of the plot for the equity-for-debt swaps (denoted "#") is: Hand, John R. M., "Did Firms Undertake Debt-Equity Swaps for an Accounting Paper Profit or True Financial Gain?" The Accounting Review (October 1989), p. 598.

APPENDIX A

NAARS Search for Early Debt-Redemption

Design of Text Search:

```
FTNT
 {(Call! or Retir! or Extinguish! or Rede! or Refund! or
   Exchange! or Settle! or Repa! or Prepa! or Defeas! or
   Refinanc! or Swap! or Acquir! or Reacquir! or Purchas! or
   Repurchas! or Tender! or Restructur! or Recapitaliz!)
 w/20
  (Debt! or Bond! or Indebtedness! or Debenture! or Liabilit! or
   Loan! or Borrowing! or Obligation!)
 w/seg
 [(Call! or Retir! or Extinguish! or Rede! or Refund! or
   Exchange! or Settle! or Repa! or Prepa! or Defeas! or
   Refinanc! or Swap! or Acquir! or Reacquir! or Purchas! or
   Repurchas! or Tender! or Restructur! or Recapitaliz!)
 w/20
  (Earl! or Advance or Prior or Gain! or Income! or Credit! or
   Loss! or Charge!)]}
 w/seg
 [(Extraordinary)
  w/20
  (Earl! or Advance or Prior or Gain! or Income! or Credit! or
   Loss! or Charge!)]}
and
 EXCH (NYSE or ASE)
and
 DB/S (AFT February  8, 1979) and DB/S (BEF February 9, 1984)
```

Expanded Search Period:

```
 DB/S (AFT February  8, 1984) and DB/S (BEF February 9, 1989)
```

Search Date: February 2, 1989

TABLE 5-1
Time-Series Pattern of Earnings, Leverage, and Financial Distress: Redeemers versus All Compustat Control Sample Excluding Redeemers
All Sample

All Sample:

Variable / Panel / Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
EPSc								
Panel 5-1.1:								
Redeemers:								
Median	1.215	1.194	1.061	0.904	0.846	0.939	0.932	0.940
Median-if					0.845			
N	699	710	730	745	740	647	483	347
N-if					739			
Mean	1.432	1.473	0.854	0.601	0.540	0.410	-0.437	-1.715
Mean-if					0.496			
Control Sample:								
Median	1.062	1.074	1.086	1.028	1.066	1.078	1.104	1.080
N	2207	2166	2137	2108	2072	1930	1525	1159
Mean	1.495	1.529	1.597	1.428	1.243	1.274	1.189	0.264
EPSb								
Panel 5-1.2:								
Redeemers:								
Median	1.289	1.262	1.167	0.919	0.924	1.098	1.009	1.018
Median-if					0.940			
N	699	710	730	745	740	647	483	347
N-if					739			
Mean	1.403	1.591	0.888	0.661	0.689	0.498	-0.465	-1.728
Mean-if					0.618			
Control Sample:								
Median	1.082	1.113	1.111	1.059	1.096	1.122	1.138	1.121
N	2207	2166	2136	2107	2071	1929	1525	1159
Mean	1.502	1.517	1.600	1.446	1.304	1.304	1.101	0.419
ROAc								
Panel 5-1.3:								
Redeemers:								
Median	0.034	0.033	0.026	0.019	0.018	0.022	0.019	0.021
Median-if					0.016			
N	701	714	733	751	742	647	483	348
N-if					741			
Mean	0.028	0.025	0.018	0.015	0.006	0.006	-0.005	-0.003
Mean-if					0.002			
Control Sample:								
Median	0.050	0.050	0.048	0.045	0.044	0.043	0.041	0.040
N	2220	2182	2153	2125	2091	1958	1545	1176
Mean	0.053	0.050	0.049	0.045	0.044	0.044	0.041	0.036

(TABLE 5-1 - continued)

All Sample:

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
	Time Horizon							
ROAb								
Panel 5-1.4:								
Redeemers:								
Median	0.035	0.034	0.029	0.021	0.021	0.025	0.021	0.021
Median-if					0.021			
N	701	714	733	751	742	647	483	348
N-if					741			
Mean	0.034	0.026	0.019	0.014	0.011	0.004	-0.005	-0.001
Mean-if					0.007			
Control Sample:								
Median	0.051	0.051	0.049	0.046	0.046	0.044	0.042	0.041
N	2220	2182	2152	2124	2090	1957	1545	1176
Mean	0.053	0.051	0.048	0.045	0.046	0.044	0.041	0.035
LTDSE								
Panel 5-1.5:								
Redeemers:								
Median	0.740	0.786	0.865	0.910	0.806	0.730	0.717	0.656
Median-if					0.954			
N	702	715	734	752	742	648	483	348
N-if					741			
Mean	1.181	1.365	1.740	2.705	2.016	1.569	1.295	0.903
Mean-if					0.430			
Control Sample:								
Median	0.339	0.338	0.344	0.341	0.349	0.343	0.357	0.361
N	2228	2185	2151	2126	2089	1964	1552	1185
Mean	0.487	0.507	0.545	0.163	0.797	0.699	0.756	1.629
TDTA								
Panel 5-1.6:								
Redeemers:								
Median	0.629	0.645	0.657	0.672	0.665	0.658	0.660	0.660
Median-if					0.689			
N	702	715	734	752	742	648	483	348
N-if					741			
Mean	0.642	0.656	0.673	0.695	0.688	0.688	0.695	0.712
Mean-if					0.713			
Control Sample:								
Median	0.552	0.559	0.563	0.564	0.573	0.580	0.582	0.585
N	2230	2187	2153	2125	2087	1961	1549	1183
Mean	0.561	0.561	0.568	0.576	0.577	0.587	0.587	0.588

(TABLE 5-1 - continued)

All Sample:

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
LTDMV								
Panel 5-1.7:								
Redeemers:								
Median	0.822	0.879	0.947	0.986	0.862	0.774	0.740	0.681
Median-if					1.055			
N	695	708	723	739	741	648	483	347
N-if					740			
Mean	1.575	1.591	1.645	1.796	1.874	1.719	1.888	1.739
Mean-if					2.120			
Control Sample:								
Median	0.321	0.307	0.280	0.268	0.265	0.266	0.250	0.243
N	2138	2107	2070	2038	2010	1887	1501	1125
Mean	0.721	0.656	0.647	0.637	0.634	0.707	0.644	0.657
ZSCORE								
Panel 5-1.8:								
Redeemers:								
Median	2.531	2.491	2.365	2.196	2.178	2.310	2.243	2.296
N	585	595	605	610	609	524	392	281
Mean	2.731	2.618	2.442	2.256	2.250	2.289	2.178	2.200
Control Sample:								
Median	3.499	3.494	3.427	3.403	3.350	3.315	3.254	3.372
N	1808	1768	1711	1649	1585	1456	1157	866
Mean	4.145	4.200	4.419	4.322	4.166	4.088	4.139	4.074
RATING								
Panel 5-1.9:								
Redeemers:								
Median	9.000	11.000	11.000	12.000	13.000	12.000	12.000	13.000
N	321	363	409	439	460	428	323	233
Mean	10.804	11.339	12.051	12.613	13.057	13.021	13.248	13.670
Control Sample:								
Median	8.000	8.000	8.000	8.000	9.000	9.000	9.000	9.000
N	405	455	510	538	554	553	447	357
Mean	9.015	9.321	9.622	9.831	10.114	10.418	10.239	10.518

TABLE 5-2

Time-Series Pattern of Earnings, Leverage, and Financial Distress: Redeemers versus All Compustat Control Sample Excluding Redeemers By Period: Early 1980's versus Late 1980's

By Period: Early 1980's versus Late 1980's

Variable / Panel / Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
EPSc								
Panel 5-2.1.1: Early 1980's								
Redeemers:								
Median	1.613	1.483	1.170	0.974	0.834	0.692	0.799	0.867
Median-if					0.690			
N	371	378	384	385	381	359	346	315
N-if					380			
Mean	2.110	2.008	0.769	0.490	0.179	-0.371	-1.178	-2.169
Mean-if					-0.014			
Control Sample:								
Median	1.023	1.061	1.087	1.060	1.060	1.033	1.087	1.058
N	1159	1130	1116	1097	1078	1089	1075	1067
Mean	1.674	1.820	1.887	1.683	1.329	1.236	1.060	0.102
Panel 5-2.1.2: Late 1980's								
Redeemers:								
Median	0.874	0.904	0.998	0.817	0.874	1.217	1.249	2.533
Median-if					1.015			
N	328	332	346	360	359	288	137	32
N-if					359			
Mean	0.665	0.864	0.948	0.721	0.924	1.384	1.433	2.747
Mean-if					1.036			
Control Sample:								
Median	1.103	1.092	1.086	0.998	1.075	1.116	1.170	1.457
N	1048	1036	1021	1011	994	841	450	92
Mean	1.297	1.212	1.280	1.151	1.150	1.322	1.498	2.152

(TABLE 5-2 - continued)

By Period: Early 1980's versus Late 1980's

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
EPSb								
Panel 5-2.2.1: Early 1980's								
Redeemers:								
Median	1.686	1.572	1.243	1.012	0.918	0.915	0.792	0.882
Median-if					0.835			
N	371	378	384	385	381	359	346	315
N-if					380			
Mean	2.145	2.068	0.788	0.378	0.217	-0.348	-1.533	-2.304
Mean-if					0.034			
Control Sample:								
Median	1.062	1.115	1.138	1.083	1.074	1.079	1.105	1.089
N	1159	1130	1116	1096	1077	1088	1075	1067
Mean	1.692	1.845	1.916	1.732	1.408	1.278	0.907	0.288
Panel 5-2.2.2: Late 1980's								
Redeemers:								
Median	0.921	0.956	1.083	0.835	0.931	1.288	1.624	2.307
Median-if					1.082			
N	328	332	346	360	359	288	137	32
N-if					359			
Mean	0.564	1.047	0.999	0.964	1.191	1.552	2.235	3.940
Mean-if					1.237			
Control Sample:								
Median	1.120	1.108	1.102	1.013	1.125	1.172	1.294	1.383
N	1048	1036	1020	1011	994	841	450	92
Mean	1.292	1.160	1.253	1.136	1.192	1.338	1.565	1.950

(TABLE 5-2 - continued)

By Period: Early 1980's versus Late 1980's

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
	Time Horizon							
ROAc								
Panel 5-2.3.1: Early 1980's								
Redeemers:								
Median	0.035	0.033	0.026	0.021	0.019	0.015	0.016	0.020
Median-if					0.013			
N	371	379	384	385	381	359	346	316
N-if					380			
Mean	0.034	0.030	0.018	0.023	0.005	0.001	-0.003	-0.008
Mean-if					-0.002			
Control Sample:								
Median	0.051	0.051	0.048	0.047	0.046	0.045	0.042	0.041
N	1162	1135	1120	1099	1087	1101	1091	1083
Mean	0.053	0.054	0.047	0.048	0.046	0.042	0.037	0.035
Panel 5-2.3.2: Late 1980's								
Redeemers:								
Median	0.032	0.032	0.027	0.017	0.018	0.030	0.028	0.037
Median-if					0.018			
N	330	335	349	366	361	288	137	32
N-if					361			
Mean	0.021	0.018	0.019	0.007	0.008	0.011	-0.011	0.043
Mean-if					0.007			
Control Sample:								
Median	0.048	0.049	0.047	0.043	0.043	0.039	0.039	0.039
N	1058	1047	1033	1026	1004	857	454	93
Mean	0.053	0.046	0.051	0.042	0.042	0.047	0.051	0.052

(TABLE 5-2 - continued)

By Period: Early 1980's versus Late 1980's

Variable / Panel / Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
ROAb								
Panel 5-2.4.1: Early 1980's								
Redeemers:								
Median	0.039	0.035	0.027	0.022	0.023	0.018	0.015	0.019
Median-if					0.020			
N	371	379	384	385	381	359	346	316
N-if					380			
Mean	0.049	0.031	0.018	0.020	0.007	-0.002	-0.005	-0.007
Mean-if					0.001			
Control Sample:								
Median	0.053	0.052	0.049	0.047	0.048	0.046	0.043	0.041
N	1162	1135	1120	1098	1086	1100	1091	1083
Mean	0.054	0.056	0.048	0.049	0.050	0.043	0.036	0.035
Panel 5-2.4.2: Late 1980's								
Redeemers:								
Median	0.032	0.034	0.029	0.018	0.019	0.031	0.038	0.043
Median-if					0.022			
N	330	335	349	366	361	288	137	32
N-if					361			
Mean	0.018	0.020	0.020	0.007	0.015	0.011	-0.004	0.057
Mean-if					0.012			
Control Sample:								
Median	0.049	0.050	0.048	0.044	0.044	0.041	0.040	0.040
N	1058	1047	1032	1026	1004	857	454	93
Mean	0.052	0.046	0.049	0.041	0.042	0.045	0.055	0.040

By Period: Early 1980's versus Late 1980's

Variable / Panel / Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
LTDSE								
Panel 5-2.5.1: Early 1980's								
Redeemers:								
Median	0.757	0.802	0.868	0.823	0.693	0.660	0.685	0.656
Median-if					0.798			
N	372	380	384	386	381	360	346	316
N-if					380			
Mean	1.304	1.447	2.166	2.397	2.326	1.896	1.410	0.948
Mean-if					-0.912			
Control Sample:								
Median	0.370	0.357	0.354	0.328	0.336	0.319	0.322	0.348
N	1167	1138	1121	1099	1084	1102	1100	1091
Mean	0.456	0.508	0.496	-0.489	0.577	0.584	0.751	1.686
Panel 5-2.5.2: Late 1980's								
Redeemers:								
Median	0.694	0.737	0.859	0.963	0.903	0.807	0.862	0.549
Median-if					1.090			
N	330	335	350	366	361	288	137	32
N-if					361			
Mean	1.042	1.272	1.273	3.029	1.689	1.160	1.003	0.465
Mean-if					1.842			
Control Sample:								
Median	0.312	0.314	0.324	0.359	0.376	0.387	0.441	0.426
N	1061	1047	1030	1027	1005	862	452	94
Mean	0.522	0.506	0.599	0.861	1.035	0.846	0.768	0.961

(TABLE 5-2 - continued)

By Period: Early 1980's versus Late 1980's

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
	Time Horizon							
TDTA								
Panel 5-2.6.1: Early 1980's								
Redeemers:								
Median	0.631	0.651	0.664	0.666	0.650	0.651	0.657	0.660
Median-if					0.677			
N	372	380	384	386	381	360	346	316
N-if					380			
Mean	0.652	0.669	0.678	0.686	0.679	0.687	0.694	0.712
Mean-if					0.703			
Control Sample:								
Median	0.560	0.562	0.564	0.565	0.572	0.573	0.577	0.585
N	1168	1139	1121	1098	1082	1100	1098	1090
Mean	0.570	0.570	0.573	0.572	0.577	0.576	0.580	0.587
Panel 5-2.6.2: Late 1980's								
Redeemers:								
Median	0.624	0.644	0.647	0.680	0.673	0.663	0.669	0.672
Median-if					0.704			
N	330	335	350	366	361	288	137	32
N-if					361			
Mean	0.629	0.642	0.667	0.704	0.697	0.690	0.697	0.710
Mean-if					0.724			
Control Sample:								
Median	0.543	0.556	0.562	0.564	0.574	0.584	0.605	0.589
N	1062	1048	1032	1027	1005	861	451	93
Mean	0.551	0.552	0.563	0.580	0.576	0.600	0.602	0.601

(TABLE 5-2 - continued)

By Period: Early 1980's versus Late 1980's

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
LTDMV								
Panel 5-2.7.1: Early 1980's								
Redeemers:								
Median	1.085	1.125	1.181	1.098	1.014	0.839	0.768	0.682
Median-if					1.154			
N	370	377	383	385	380	360	346	315
N-if					379			
Mean	1.978	1.965	1.961	1.888	1.709	1.741	1.884	1.780
Mean-if					1.913			
Control Sample:								
Median	0.407	0.376	0.331	0.303	0.280	0.250	0.233	0.240
N	1120	1097	1081	1059	1042	1051	1053	1034
Mean	0.898	0.809	0.761	0.760	0.663	0.623	0.562	0.639
Panel 5-2.7.2: Late 1980's								
Redeemers:								
Median	0.614	0.610	0.671	0.766	0.769	0.701	0.708	0.650
Median-if					0.947			
N	325	331	340	354	361	288	137	32
N-if					361			
Mean	1.116	1.165	1.290	1.697	2.048	1.691	1.900	1.336
Mean-if					2.338			
Control Sample:								
Median	0.251	0.237	0.226	0.238	0.252	0.297	0.300	0.280
N	1018	1010	989	979	968	836	448	91
Mean	0.525	0.490	0.521	0.503	0.603	0.813	0.836	0.867

(TABLE 5-2 - continued)

By Period: Early 1980's versus Late 1980's

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
ZSCORE								
Panel 5-2.8.1: Early 1980's								
Redeemers:								
Median	2.606	2.552	2.511	2.323	2.305	2.282	2.242	2.297
N	311	315	318	313	310	290	279	252
Mean	2.626	2.552	2.432	2.327	2.303	2.247	2.164	2.208
Control Sample:								
Median	3.480	3.533	3.507	3.591	3.524	3.546	3.403	3.372
N	942	916	889	858	838	835	832	802
Mean	4.037	4.307	4.485	4.305	4.285	4.132	4.111	4.018
Panel 5-2.8.2: Late 1980's								
Redeemers:								
Median	2.387	2.366	2.235	2.044	2.044	2.338	2.376	2.133
N	274	280	287	297	299	234	113	29
Mean	2.851	2.692	2.452	2.181	2.194	2.341	2.213	2.131
Control Sample:								
Median	3.534	3.426	3.341	3.202	3.178	2.969	2.876	3.328
N	866	852	822	791	747	621	325	64
Mean	4.263	4.085	4.348	4.340	4.032	4.028	4.211	4.776
RATING								
Panel 5-2.9.1: Early 1980's								
Redeemers:								
Median	8.500	9.000	11.000	11.000	11.000	12.000	13.000	13.000
N	138	162	182	190	202	205	208	202
Mean	10.217	10.796	11.593	12.026	12.550	12.893	13.337	13.604
Control Sample:								
Median	8.000	8.000	8.000	8.000	8.000	9.000	9.000	9.000
N	155	182	208	218	237	262	295	326
Mean	8.600	8.879	8.726	9.032	9.418	9.802	10.078	10.472
Panel 5-2.9.2: Late 1980's								
Redeemers:								
Median	11.000	11.000	12.000	13.000	14.000	13.000	12.000	13.000
N	183	201	227	249	258	223	115	31
Mean	11.246	11.776	12.419	13.060	13.454	13.139	13.087	14.097
Control Sample:								
Median	8.000	8.000	9.000	9.000	9.000	10.000	9.000	10.000
N	250	273	302	320	317	291	152	31
Mean	9.272	9.615	10.238	10.375	10.634	10.973	10.553	11.000

TABLE 5-3

Time-Series Pattern of Earnings, Leverage, and Financial Distress: Redeemers by Effect: EDR-Gain, EDR-Loss, and Zero-Gain

By Effect: EDR-Gain, EDR-Loss, and Zero-Gain

Variable Panel Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
EPSc								
Panel 5-3.1:								
EDR-Gain:								
Median	1.345	1.276	1.062	0.932	0.652	0.733	0.833	0.955
Median-if					0.428			
N	416	423	438	441	436	382	335	290
N-if					436			
Mean	1.351	1.379	0.755	0.450	0.296	0.269	0.043	0.752
Mean-if					-0.083			
EDR-Loss:								
Median	1.012	1.054	1.024	0.818	1.095	1.217	1.009	0.103
Median-if					1.400			
N	237	240	245	255	254	221	117	36
N-if					253			
Mean	1.553	1.675	1.100	0.848	0.870	0.446	-2.301	-23.519
Mean-if					1.395			
Zero-Gain:								
Median	1.578	1.317	1.411	1.221	1.670	1.480	1.359	1.508
Median-if					1.670			
N	46	47	47	49	50	44	31	21
N-if					50			
Mean	1.540	1.285	0.494	0.676	0.993	1.459	1.413	1.590
Mean-if					0.993			

(TABLE 5-3 - continued)

By Effect: EDR-Gain, EDR-Loss, and Zero-Gain

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
	Time Horizon							
EPSb								
Panel 5-3.2:								
EDR-Gain:								
Median	1.414	1.365	1.158	0.965	0.876	0.859	0.831	0.917
Median-if					0.753			
N	416	423	438	441	436	382	335	290
N-if					436			
Mean	1.329	1.565	0.809	0.630	0.606	0.224	0.026	0.751
Mean-if					0.302			
EDR-Loss:								
Median	1.063	1.098	1.121	0.845	0.963	1.291	1.345	0.062
Median-if					1.185			
N	237	240	245	255	254	221	117	36
N-if					253			
Mean	1.496	1.661	1.083	0.758	0.791	0.754	-2.384	-23.683
Mean-if					1.109			
Zero-Gain:								
Median	1.578	1.504	1.783	1.081	1.362	1.480	1.274	1.534
Median-if					1.362			
N	46	47	47	49	50	44	31	21
N-if					50			
Mean	1.593	1.463	0.601	0.434	0.894	1.588	1.477	1.665
Mean-if					0.894			

(TABLE 5-3 - continued)

By Effect: EDR-Gain, EDR-Loss, and Zero-Gain

Variable Panel Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
ROAc								
Panel 5-3.3:								
EDR-Gain:								
Median	0.034	0.029	0.022	0.017	0.012	0.017	0.016	0.021
Median-if					0.006			
N	417	426	439	442	436	382	335	291
N-if					436			
Mean	0.031	0.024	0.016	0.015	-0.002	-0.001	-0.014	0.011
Mean-if					-0.013			
EDR-Loss:								
Median	0.033	0.036	0.032	0.020	0.027	0.031	0.021	0.004
Median-if					0.032			
N	237	240	246	259	256	221	117	36
N-if					255			
Mean	0.023	0.027	0.023	0.016	0.020	0.013	0.009	-0.144
Mean-if					0.026			
Zero-Gain:								
Median	0.039	0.035	0.040	0.035	0.043	0.036	0.042	0.041
Median-if					0.042			
N	47	48	48	50	50	44	31	21
N-if					50			
Mean	0.031	0.024	0.014	0.015	0.011	0.023	0.036	0.041
Mean-if					0.012			

(TABLE 5-3 - continued)

By Effect: EDR-Gain, EDR-Loss, and Zero-Gain

Variable Panel Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
ROAb								
Panel 5-3.4:								
EDR-Gain:								
Median	0.035	0.030	0.026	0.019	0.019	0.018	0.014	0.020
Median-if					0.014			
N	417	426	439	442	436	382	335	291
N-if					436			
Mean	0.031	0.025	0.017	0.012	0.007	-0.004	-0.017	0.013
Mean-if					-0.002			
EDR-Loss:								
Median	0.034	0.037	0.033	0.019	0.022	0.031	0.030	0.002
Median-if					0.025			
N	237	240	246	259	256	221	117	36
N-if					255			
Mean	0.041	0.026	0.023	0.018	0.016	0.015	0.018	-0.140
Mean-if					0.021			
Zero-Gain:								
Median	0.039	0.042	0.044	0.034	0.042	0.039	0.045	0.041
Median-if					0.042			
N	47	48	48	50	50	44	31	21
N-if					50			
Mean	0.033	0.034	0.017	0.004	0.011	0.021	0.044	0.042
Mean-if					0.011			

(TABLE 5-3 - continued)

By Effect: EDR-Gain, EDR-Loss, and Zero-Gain

Variable Panel Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
LTDSE								
Panel 5-3.5:								
EDR-Gain:								
Median	0.712	0.770	0.812	0.821	0.738	0.657	0.644	0.613
Median-if					0.816			
N	418	427	439	443	436	383	335	291
N-if					436			
Mean	1.143	1.305	1.759	3.436	1.595	1.905	0.986	0.598
Mean-if					2.151			
EDR-Loss:								
Median	0.788	0.802	0.920	1.063	0.989	0.880	1.098	0.895
Median-if					1.231			
N	237	240	246	259	256	221	117	36
N-if					255			
Mean	1.248	1.414	1.954	1.511	1.707	1.689	2.374	2.401
Mean-if					1.731			
Zero-Gain:								
Median	0.813	0.892	0.921	0.756	0.767	0.728	0.696	1.045
Median-if					0.911			
N	47	48	49	50	50	44	31	21
N-if					50			
Mean	1.180	1.657	0.502	2.408	7.272	-1.964	0.560	2.571
Mean-if					-21.221			

(TABLE 5-3 - continued)

By Effect: EDR-Gain, EDR-Loss, and Zero-Gain

Variable / Panel / Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
TDTA								
Panel 5-3.6:								
EDR-Gain:								
Median	0.626	0.648	0.662	0.669	0.652	0.645	0.649	0.651
Median-if					0.675			
N	418	427	439	443	436	383	335	291
N-if					436			
Mean	0.645	0.661	0.676	0.692	0.680	0.678	0.694	0.707
Mean-if					0.705			
EDR-Loss:								
Median	0.641	0.651	0.651	0.686	0.683	0.684	0.704	0.715
Median-if					0.711			
N	237	240	246	259	256	221	117	36
N-if					255			
Mean	0.641	0.652	0.673	0.706	0.708	0.711	0.709	0.781
Mean-if					0.735			
Zero-Gain:								
Median	0.612	0.617	0.616	0.620	0.606	0.618	0.618	0.661
Median-if					0.622			
N	47	48	49	50	50	44	31	21
N-if					50			
Mean	0.611	0.632	0.644	0.664	0.653	0.664	0.646	0.671
Mean-if					0.680			

(TABLE 5-3 - continued)

By Effect: EDR-Gain, EDR-Loss, and Zero-Gain

Variable Panel Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
LTDMV								
Panel 5-3.7:								
EDR-Gain:								
Median	0.971	0.993	1.075	1.120	1.043	0.801	0.743	0.652
Median-if					1.139			
N	416	423	437	442	436	383	335	290
N-if					436			
Mean	1.882	1.814	1.804	1.990	2.031	1.761	1.861	1.657
Mean-if					2.257			
EDR-Loss:								
Median	0.614	0.618	0.701	0.746	0.743	0.720	0.807	0.794
Median-if					0.945			
N	233	238	238	249	256	221	117	36
N-if					255			
Mean	1.072	1.239	1.313	1.475	1.561	1.755	2.249	2.903
Mean-if					1.850			
Zero-Gain:								
Median	1.005	1.157	1.080	0.906	0.632	0.796	0.470	0.706
Median-if					0.883			
N	46	47	48	48	49	44	31	21
N-if					49			
Mean	1.343	1.360	1.852	1.685	2.114	1.167	0.828	0.883
Mean-if					2.307			

(TABLE 5-3 - continued)

By Effect: EDR-Gain, EDR-Loss, and Zero-Gain

Variable Panel Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
ZSCORE								
Panel 5-3.8:								
EDR-Gain:								
Median	2.579	2.538	2.450	2.193	2.166	2.209	2.163	2.259
N	349	351	359	356	352	312	274	235
Mean	2.714	2.581	2.442	2.229	2.187	2.198	2.104	2.195
EDR-Loss:								
Median	2.426	2.452	2.349	2.208	2.155	2.445	2.445	2.480
N	193	200	202	210	213	175	91	27
Mean	2.823	2.752	2.474	2.281	2.291	2.448	2.313	2.044
Zero-Gain:								
Median	2.349	2.186	2.018	2.134	2.436	2.548	2.693	2.499
N	43	44	44	44	44	37	27	19
Mean	2.460	2.303	2.294	2.347	2.549	2.301	2.475	2.493
RATING								
Panel 5-3.9:								
EDR-Gain:								
Median	9.000	10.000	11.000	12.000	13.000	12.000	12.000	13.000
N	163	187	214	228	238	219	203	194
Mean	10.675	11.219	12.159	12.680	13.189	13.215	13.414	13.562
EDR-Loss:								
Median	11.000	11.000	12.000	12.000	13.000	13.000	13.000	16.000
N	137	151	170	183	190	177	94	21
Mean	11.219	11.755	12.241	12.836	13.116	13.068	13.319	15.286
Zero-Gain:								
Median	9.000	9.000	9.000	10.000	11.000	11.500	12.000	12.000
N	21	25	25	28	32	32	26	18
Mean	9.095	9.720	9.840	10.607	11.719	11.438	11.692	12.944

TABLE 5-4

Time-Series Pattern of Earnings, Leverage, and Financial Distress: Redeemers by Method: Equity-for-Debt Swaps versus All Other Methods

By Method: Equity-for-Debt Swaps (D/E Swaps) versus All Other Methods

Variable Panel Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
EPSc								
Panel 5-4.1:								
D/E Swaps:								
Median	2.694	2.789	2.409	2.190	1.770	1.581	1.681	1.681
Median-if					1.651			
N	126	128	129	128	127	120	112	101
N-if					127			
Mean	2.583	2.727	2.442	1.216	1.047	0.654	0.962	0.679
Mean-if					0.780			
All Others:								
Median	0.978	0.904	0.830	0.714	0.737	0.818	0.785	0.821
Median-if					0.705			
N	573	582	601	617	613	527	371	246
N-if					612			
Mean	1.179	1.197	0.513	0.474	0.435	0.355	-0.860	-2.698
Mean-if					0.437			
EPSb								
Panel 5-4.2:								
D/E Swaps:								
Median	2.782	2.789	2.346	2.162	1.904	1.589	1.667	1.461
Median-if					1.706			
N	126	128	129	128	127	120	112	101
N-if					127			
Mean	2.667	2.680	2.396	1.103	1.042	0.465	0.989	0.528
Mean-if					0.777			
All Others:								
Median	1.001	0.972	0.920	0.787	0.827	0.994	0.885	0.903
Median-if					0.835			
N	573	582	601	617	613	527	371	246
N-if					612			
Mean	1.125	1.351	0.564	0.569	0.616	0.505	-0.903	-2.655
Mean-if					0.585			

(TABLE 5-4 - continued)

By Method: Equity-for-Debt Swaps (D/E Swaps) versus All Other Methods

Variable Panel Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
ROAc								
Panel 5-4.3:								
D/E Swaps:								
Median	0.048	0.049	0.042	0.034	0.029	0.031	0.034	0.023
Median-if					0.023			
N	126	129	129	128	127	120	112	102
N-if					127			
Mean	0.049	0.048	0.038	0.019	0.015	0.011	0.009	0.002
Mean-if					0.011			
All Others:								
Median	0.030	0.029	0.022	0.016	0.017	0.020	0.017	0.020
Median-if					0.014			
N	575	585	604	623	615	527	371	246
N-if					614			
Mean	0.024	0.020	0.014	0.015	0.005	0.004	-0.010	-0.005
Mean-if					0.001			
ROAb								
Panel 5-4.4:								
D/E Swaps:								
Median	0.052	0.049	0.042	0.032	0.031	0.032	0.034	0.023
Median-if					0.026			
N	126	129	129	128	127	120	112	102
N-if					127			
Mean	0.052	0.046	0.036	0.015	0.012	0.005	0.006	0.009
Mean-if					0.007			
All Others:								
Median	0.031	0.031	0.025	0.018	0.019	0.022	0.017	0.019
Median-if					0.018			
N	575	585	604	623	615	527	371	246
N-if					614			
Mean	0.030	0.021	0.015	0.013	0.011	0.004	-0.008	-0.005
Mean-if					0.007			

(TABLE 5-4 - continued)

By Method: Equity-for-Debt Swaps (D/E Swaps) versus All Other Methods

Variable Panel Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
LTDSE								
Panel 5-4.5:								
D/E Swaps:								
Median	0.535	0.547	0.539	0.554	0.506	0.496	0.521	0.584
Median-if					0.573			
N	127	129	129	129	127	120	112	102
N-if					127			
Mean	0.785	0.754	0.774	0.871	0.697	1.057	0.794	-0.617
Mean-if					0.714			
All Others:								
Median	0.833	0.881	0.963	0.997	0.910	0.819	0.841	0.715
Median-if					1.096			
N	575	586	605	623	615	528	371	246
N-if					614			
Mean	1.268	1.500	1.947	3.084	2.289	1.685	1.446	1.534
Mean-if					0.371			
TDTA								
Panel 5-4.6:								
D/E Swaps:								
Median	0.560	0.579	0.586	0.590	0.577	0.577	0.581	0.617
Median-if					0.596			
N	127	129	129	129	127	120	112	102
N-if					127			
Mean	0.597	0.608	0.613	0.625	0.618	0.616	0.629	0.660
Mean-if					0.642			
All Others:								
Median	0.648	0.664	0.682	0.694	0.686	0.676	0.683	0.688
Median-if					0.709			
N	575	586	605	623	615	528	371	246
N-if					614			
Mean	0.651	0.667	0.685	0.709	0.702	0.705	0.714	0.734
Mean-if					0.728			

(TABLE 5-4 - continued)

By Method: Equity-for-Debt Swaps (D/E Swaps) versus All Other Methods

Variable / Panel / Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
LTDMV								
Panel 5-4.7:								
D/E Swaps:								
Median	0.686	0.717	0.688	0.697	0.608	0.529	0.508	0.555
Median-if					0.662			
N	127	127	129	129	127	120	112	101
N-if					127			
Mean	1.158	1.071	1.059	1.067	0.927	1.062	1.524	0.860
Mean-if					1.022			
All Others:								
Median	0.870	0.899	0.965	1.054	1.010	0.883	0.854	0.757
Median-if					1.155			
N	568	581	594	610	614	528	371	246
N-if					613			
Mean	1.668	1.704	1.773	1.951	2.070	1.868	1.998	2.100
Mean-if					2.348			
ZSCORE								
Panel 5-4.8:								
D/E Swaps:								
Median	2.828	2.867	2.801	2.634	2.439	2.535	2.469	2.340
N	110	111	113	111	111	104	97	88
Mean	2.850	2.795	2.721	2.508	2.451	2.432	2.303	2.265
All Others:								
Median	2.393	2.370	2.244	2.101	2.085	2.215	2.163	2.259
N	475	484	492	499	498	420	295	193
Mean	2.704	2.577	2.378	2.199	2.205	2.254	2.137	2.171
RATING								
Panel 5-4.9:								
D/E Swaps:								
Median	11.000	12.000	13.000	14.000	15.000	14.000	15.000	16.500
N	245	279	321	349	369	338	237	150
Mean	11.506	12.011	12.695	13.295	13.734	13.630	14.139	15.093
All Others:								
Median	8.000	8.000	8.500	9.000	9.000	9.500	10.000	10.000
N	76	84	88	90	91	90	86	83
Mean	8.540	9.107	9.705	9.967	10.308	10.733	10.791	11.096

TABLE 5-5
Time-Series Pattern of Earnings, Leverage, and Financial Distress: By Instrument Used to Redeem Debt

By Instrument: Cash, Debt, Common Stock, Preferred Stock, and Asset

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
EPSc								
Panel 5-5.1:								
Cash:								
Median	1.005	0.965	0.931	0.821	0.817	0.924	0.844	0.910
Median-if					0.799			
N	453	463	480	496	493	417	280	175
N-if					493			
Mean	1.359	1.346	0.695	0.795	0.707	0.394	-1.272	-4.061
Mean-if					0.811			
Debt:								
Median	0.635	0.432	0.376	0.067	-0.207	0.501	0.271	0.387
Median-if					-0.976			
N	63	63	64	64	63	55	44	36
N-if					63			
Mean	0.762	0.114	0.071	-1.005	-0.973	0.392	0.074	0.555
Mean-if					-1.534			
Common Stock:								
Median	2.089	2.019	1.994	1.852	1.499	1.360	1.500	1.411
Median-if					1.394			
N	137	139	140	139	138	132	120	104
N-if					138			
Mean	2.048	2.230	2.045	1.131	0.818	1.003	0.947	0.472
Mean-if					0.632			
Preferred Stock:								
Median	2.822	3.102	0.701	-0.170	1.081	0.445	0.664	0.439
Median-if					0.707			
N	16	16	16	16	16	15	15	14
N-if					16			
Mean	-0.573	3.310	0.405	-3.078	-1.641	-3.536	-0.889	1.073
Mean-if					-2.205			
Asset:								
Median	1.788	1.867	1.281	1.311	1.072	1.163	1.685	2.285
Median-if					0.987			
N	30	29	30	30	30	28	24	18
N-if					29			
Mean	2.198	1.807	-0.253	0.330	0.863	0.009	1.733	1.746
Mean-if					0.392			

(TABLE 5-5 - continued)

By Instrument: Cash, Debt, Common Stock, Preferred Stock, and Asset

Variable Panel Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
EPSb								
Panel 5-5.2:								
Cash:								
Median	1.063	1.022	1.014	0.901	0.874	1.040	0.886	1.035
Median-if					0.929			
N	453	463	480	496	493	417	280	175
N-if					493			
Mean	1.297	1.536	0.757	1.015	0.868	0.580	-1.523	-3.979
Mean-if					0.917			
Debt:								
Median	0.635	0.432	0.461	0.070	-0.431	0.534	0.181	0.589
Median-if					-0.418			
N	63	63	64	64	63	55	44	36
N-if					63			
Mean	0.729	0.106	0.131	-1.352	-0.568	0.112	0.948	0.517
Mean-if					-1.069			
Common Stock:								
Median	2.154	2.172	1.994	1.774	1.515	1.451	1.501	1.227
Median-if					1.365			
N	137	139	140	139	138	132	120	104
N-if					138			
Mean	2.117	2.187	1.982	0.815	0.897	0.952	1.086	0.304
Mean-if					0.707			
Preferred Stock:								
Median	2.854	3.129	0.935	-0.170	1.600	0.787	1.157	0.648
Median-if					0.974			
N	16	16	16	16	16	15	15	14
N-if					16			
Mean	-0.657	3.423	0.538	-2.865	-2.633	-4.289	-1.334	0.822
Mean-if					-3.177			
Asset:								
Median	1.788	1.867	1.284	1.232	1.340	1.554	2.226	2.299
Median-if					1.317			
N	30	29	30	30	30	28	24	18
N-if					29			
Mean	2.249	1.820	-0.320	0.267	1.216	0.460	2.088	1.937
Mean-if					0.867			

(TABLE 5-5 - continued)

By Instrument: Cash, Debt, Common Stock, Preferred Stock, and Asset

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
ROAc								
Panel 5-5.3:								
Cash:								
Median	0.033	0.030	0.024	0.019	0.018	0.020	0.017	0.016
Median-if					0.017			
N	455	466	482	501	495	417	280	175
N-if					495			
Mean	0.025	0.024	0.017	0.023	0.015	0.007	-0.009	-0.012
Mean-if					0.014			
Debt:								
Median	0.021	0.018	0.021	0.003	-0.015	0.017	0.023	0.022
Median-if					-0.048			
N	63	63	64	64	63	55	44	36
N-if					63			
Mean	0.013	-0.003	-0.001	-0.030	-0.064	-0.028	-0.008	0.015
Mean-if					-0.084			
Common Stock:								
Median	0.045	0.049	0.045	0.036	0.031	0.032	0.034	0.023
Median-if					0.026			
N	137	140	140	139	138	132	120	105
N-if					138			
Mean	0.041	0.037	0.031	0.015	0.012	0.024	0.012	0.007
Mean-if					0.005			
Preferred Stock:								
Median	0.027	0.026	0.008	-0.001	0.003	0.002	0.004	0.015
Median-if					0.002			
N	16	16	16	16	16	15	15	14
N-if					16			
Mean	0.028	0.027	0.010	-0.014	-0.019	-0.069	-0.063	0.017
Mean-if					-0.025			
Asset:								
Median	0.039	0.036	0.027	0.014	0.024	0.016	0.014	0.030
Median-if					0.010			
N	30	29	31	31	30	28	24	18
N-if					29			
Mean	0.046	0.035	0.028	-0.007	0.008	0.005	-0.005	-0.029
Mean-if					0.000			

(TABLE 5-5 - continued)

By Instrument: Cash, Debt, Common Stock, Preferred Stock, and Asset

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
ROAb								
Panel 5-5.4:								
Cash:								
Median	0.033	0.033	0.027	0.021	0.020	0.022	0.016	0.018
Median-if					0.020			
N	455	466	482	501	495	417	280	175
N-if					495			
Mean	0.035	0.026	0.019	0.026	0.018	0.008	-0.009	-0.005
Mean-if					0.017			
Debt:								
Median	0.022	0.016	0.023	0.003	-0.008	0.017	0.021	0.024
Median-if					-0.021			
N	63	63	64	64	63	55	44	36
N-if					63			
Mean	0.014	-0.005	-0.005	-0.046	-0.048	-0.047	-0.001	0.016
Mean-if					-0.065			
Common Stock:								
Median	0.047	0.049	0.044	0.039	0.033	0.038	0.036	0.023
Median-if					0.029			
N	137	140	140	139	138	132	120	105
N-if					138			
Mean	0.041	0.035	0.030	0.004	0.016	0.024	0.012	0.003
Mean-if					0.009			
Preferred Stock:								
Median	0.031	0.026	0.008	-0.001	0.004	0.003	0.005	0.015
Median-if					0.002			
N	16	16	16	16	16	15	15	14
N-if					16			
Mean	0.028	0.028	0.010	-0.017	-0.037	-0.094	-0.082	0.009
Mean-if					-0.044			
Asset:								
Median	0.042	0.036	0.023	0.014	0.025	0.023	0.026	0.034
Median-if					0.022			
N	30	29	31	31	30	28	24	18
N-if					29			
Mean	0.046	0.035	0.025	-0.006	0.013	0.009	-0.001	-0.028
Mean-if					0.007			

(TABLE 5-5 - continued)

By Instrument: Cash, Debt, Common Stock, Preferred Stock, and Asset

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
	Time Horizon							
LTDSE								
Panel 5-5.5:								
Cash:								
Median	0.746	0.816	0.921	1.011	0.890	0.783	0.753	0.604
Median-if					1.082			
N	455	467	483	501	495	418	280	175
N-if					495			
Mean	1.207	1.453	1.976	2.064	1.556	1.367	1.779	1.357
Mean-if					2.081			
Debt:								
Median	1.322	1.326	1.601	1.284	1.585	1.127	1.121	0.884
Median-if					1.525			
N	63	63	64	64	63	55	44	36
N-if					63			
Mean	1.725	2.014	2.004	12.456	1.628	7.106	-0.283	1.090
Mean-if					3.542			
Common Stock:								
Median	0.605	0.595	0.583	0.588	0.516	0.505	0.532	0.613
Median-if					0.575			
N	138	140	140	140	138	132	120	105
N-if					138			
Mean	0.919	0.897	1.030	0.963	3.387	-0.015	0.636	-0.334
Mean-if					-7.767			
Preferred Stock:								
Median	0.892	1.082	1.209	1.263	1.109	1.206	0.902	1.167
Median-if					1.260			
N	16	16	16	16	16	15	15	14
N-if					16			
Mean	1.237	1.274	1.269	1.750	6.290	1.646	2.104	3.522
Mean-if					3.081			
Asset:								
Median	0.695	0.758	0.686	0.821	0.777	0.647	0.806	0.831
Median-if					0.969			
N	30	29	31	31	30	28	24	18
N-if					29			
Mean	0.814	0.844	0.974	1.277	1.844	1.125	1.329	1.302
Mean-if					3.025			

(TABLE 5-5 - continued)

By Instrument: Cash, Debt, Common Stock, Preferred Stock, and Asset

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
TDTA								
Panel 5-5.6:								
Cash:								
Median	0.632	0.652	0.662	0.683	0.672	0.668	0.671	0.681
Median-if					0.692			
N	455	467	483	501	495	418	280	175
N-if					495			
Mean	0.644	0.657	0.674	0.692	0.686	0.694	0.706	0.720
Mean-if					0.706			
Debt:								
Median	0.705	0.710	0.746	0.795	0.811	0.794	0.755	0.743
Median-if					0.828			
N	63	63	64	64	63	55	44	36
N-if					63			
Mean	0.682	0.711	0.744	0.816	0.827	0.823	0.779	0.769
Mean-if					0.857			
Common Stock:								
Median	0.581	0.597	0.613	0.602	0.585	0.577	0.588	0.625
Median-if					0.604			
N	138	140	140	140	138	132	120	105
N-if					138			
Mean	0.611	0.627	0.633	0.648	0.617	0.602	0.624	0.662
Mean-if					0.661			
Preferred Stock:								
Median	0.744	0.766	0.782	0.832	0.893	0.863	0.921	0.893
Median-if					0.919			
N	16	16	16	16	16	15	15	14
N-if					16			
Mean	0.736	0.751	0.770	0.789	0.823	0.850	0.857	0.813
Mean-if					0.847			
Asset:								
Median	0.646	0.644	0.631	0.677	0.651	0.665	0.634	0.657
Median-if					0.676			
N	30	29	31	31	30	28	24	18
N-if					29			
Mean	0.614	0.613	0.638	0.652	0.676	0.664	0.665	0.730
Mean-if					0.695			

(TABLE 5-5 - continued)

By Instrument: Cash, Debt, Common Stock, Preferred Stock, and Asset

Variable Panel Statistics	Time Horizon t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
LTDMV								
Panel 5-5.7:								
Cash:								
Median	0.808	0.816	0.911	0.916	0.918	0.846	0.841	0.771
Median-if					1.112			
N	450	462	474	489	495	418	280	175
N-if					495			
Mean	1.524	1.481	1.580	1.719	1.964	1.883	2.066	2.117
Mean-if					2.230			
Debt:								
Median	1.129	1.368	1.543	2.186	2.284	1.444	1.142	0.789
Median-if					2.497			
N	61	63	63	63	62	55	44	36
N-if					62			
Mean	2.623	3.008	2.945	3.399	3.194	2.355	2.274	2.249
Mean-if					3.560			
Common Stock:								
Median	0.709	0.707	0.706	0.708	0.519	0.461	0.515	0.562
Median-if					0.608			
N	138	138	140	140	138	132	120	104
N-if					138			
Mean	1.213	1.119	1.161	1.133	0.827	0.919	1.445	0.901
Mean-if					0.932			
Preferred Stock:								
Median	1.454	1.698	1.541	1.969	1.596	1.672	1.241	1.055
Median-if					1.874			
N	16	16	16	16	16	15	15	14
N-if					16			
Mean	2.310	3.303	3.055	3.141	3.496	2.687	1.711	1.362
Mean-if					3.782			
Asset:								
Median	1.057	0.899	1.105	1.035	0.886	0.785	0.778	0.680
Median-if					1.137			
N	30	29	30	31	30	28	24	18
N-if					29			
Mean	1.484	1.563	1.457	2.070	1.611	1.263	1.436	2.181
Mean-if					1.899			

(TABLE 5-5 - continued)

By Instrument: Cash, Debt, Common Stock, Preferred Stock, and Asset

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
ZSCORE								
Panel 5-5.8:								
Cash:								
Median	2.465	2.458	2.349	2.230	2.190	2.325	2.380	2.278
N	374	381	388	396	398	328	218	137
Mean	2.781	2.680	2.476	2.321	2.335	2.366	2.257	2.304
Debt:								
Median	2.079	1.868	1.873	1.490	1.378	1.553	1.610	2.071
N	52	55	55	54	53	48	38	30
Mean	2.216	2.002	1.849	1.489	1.252	1.343	1.471	1.752
Common Stock:								
Median	2.828	2.820	2.783	2.602	2.478	2.627	2.499	2.402
N	122	123	126	124	124	117	106	92
Mean	2.831	2.749	2.661	2.456	2.503	2.607	2.446	2.334
Preferred Stock:								
Median	2.302	2.175	1.735	1.716	1.440	1.402	1.230	1.698
N	12	12	11	11	10	9	11	10
Mean	2.134	2.002	1.915	1.809	1.654	1.162	1.106	1.927
Asset:								
Median	2.172	2.209	2.261	1.836	1.887	1.994	1.791	1.966
N	25	24	25	25	24	22	19	12
Mean	2.864	2.682	2.342	2.076	1.976	1.965	1.825	1.343

(TABLE 5-5 - continued)

By Instrument: Cash, Debt, Common Stock, Preferred Stock, and Asset

Variable Panel Statistics	Time Horizon t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
RATING								
Panel 5-5.9:								
Cash:								
Median	10.000	11.000	11.500	12.000	14.000	12.000	13.000	15.000
N	205	235	266	290	307	274	177	100
Mean	11.102	11.583	12.207	12.745	13.254	13.088	13.548	14.900
Debt:								
Median	14.000	13.500	17.000	18.000	19.000	18.000	19.000	18.000
N	21	22	28	29	30	30	26	21
Mean	13.143	13.818	15.536	16.310	16.767	16.867	17.308	16.952
Common Stock:								
Median	8.000	8.500	9.000	10.500	11.000	10.000	10.000	10.000
N	76	86	93	98	99	99	94	90
Mean	9.566	10.372	10.914	11.357	11.576	11.636	11.489	11.567
Preferred Stock:								
Median	9.000	9.500	11.000	11.500	13.000	16.500	17.000	17.000
N	5	6	6	6	7	8	9	9
Mean	8.200	8.667	9.667	11.000	13.143	14.875	15.444	14.889
Asset:								
Median	10.500	10.500	11.500	12.000	10.000	12.000	11.000	13.000
N	14	14	16	16	17	17	17	13
Mean	10.571	10.429	10.875	11.813	11.529	12.353	12.471	12.615

TABLE 5-6
Time-Series Pattern of Earnings, Leverage, and Financial Distress: By Instrument during Early 1980's

By Instrument during Early 1980's

Variable Panel Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
EPSc								
Panel 5-6.1:								
Cash:								
Median	1.063	0.990	0.723	0.714	0.601	0.508	0.605	0.797
Median-if					0.525			
N	177	182	186	189	187	175	169	152
N-if					187			
Mean	2.014	1.846	0.217	0.460	0.019	-1.230	-3.250	-5.047
Mean-if					0.027			
Debt:								
Median	0.765	0.541	0.299	0.013	-0.444	0.577	0.443	0.367
Median-if					-1.109			
N	41	41	41	40	40	35	34	33
N-if					40			
Mean	1.081	0.446	-0.413	-1.489	-0.966	0.714	0.348	0.420
Mean-if					-1.730			
Common Stock:								
Median	2.283	2.274	2.059	2.053	1.677	1.538	1.563	1.362
Median-if					1.451			
N	121	123	124	123	122	118	112	103
N-if					122			
Mean	2.495	2.591	2.297	1.271	0.966	1.096	1.107	0.442
Mean-if					0.760			
Preferred Stock:								
Median	2.995	3.012	0.855	0.627	0.878	-0.141	0.625	0.426
Median-if					0.309			
N	15	15	15	15	15	14	14	13
N-if					15			
Mean	2.234	3.158	1.054	-1.156	-1.836	-3.823	-1.022	0.961
Mean-if					-2.426			
Asset:								
Median	1.871	2.073	0.803	0.879	1.197	0.254	1.284	1.351
Median-if					0.966			
N	17	17	18	18	17	17	17	14
N-if					16			
Mean	2.735	2.268	-1.593	1.232	0.752	-1.101	1.194	0.873
Mean-if					0.163			

(TABLE 5-6 - continued)

By Instrument during Early 1980's

Variable Panel Statistics	Time Horizon t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
EPSb								
Panel 5-6.2:								
Cash:								
Median	1.213	1.047	0.902	0.904	0.702	0.590	0.581	0.891
Median-if					0.657			
N	177	182	186	189	187	175	169	152
N-if					187			
Mean	2.030	1.953	0.304	0.576	0.020	-1.097	-4.001	-5.197
Mean-if					-0.007			
Debt:								
Median	0.812	0.663	0.436	0.042	-0.472	0.707	0.312	0.567
Median-if					-0.549			
N	41	41	41	40	40	35	34	33
N-if					40			
Mean	1.026	0.512	-0.341	-2.024	-0.554	0.463	0.127	0.378
Mean-if					-1.175			
Common Stock:								
Median	2.564	2.409	2.048	2.029	1.717	1.611	1.568	1.175
Median-if					1.626			
N	121	123	124	123	122	118	112	103
N-if					122			
Mean	2.602	2.579	2.202	0.936	1.045	1.054	1.253	0.265
Mean-if					0.842			
Preferred Stock:								
Median	2.995	3.012	1.323	0.627	1.309	1.005	1.006	0.542
Median-if					0.878			
N	15	15	15	15	15	14	14	13
N-if					15			
Mean	2.143	3.256	1.001	-1.368	-2.934	-4.647	-1.541	0.690
Mean-if					-3.508			
Asset:								
Median	1.871	2.073	0.950	0.930	1.306	0.664	1.890	1.518
Median-if					1.257			
N	17	17	18	18	17	17	17	14
N-if					16			
Mean	2.792	2.309	-1.569	1.266	1.023	-0.483	1.334	1.099
Mean-if					0.682			

(TABLE 5-6 - continued)

By Instrument during Early 1980's

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
ROAc								
Panel 5-6.3:								
Cash:								
Median	0.029	0.025	0.017	0.019	0.014	0.009	0.008	0.014
Median-if					0.012			
N	177	182	186	189	187	175	169	152
N-if					187			
Mean	0.025	0.022	0.010	0.041	0.015	-0.003	-0.012	-0.020
Mean-if					0.009			
Debt:								
Median	0.022	0.018	0.013	0.001	-0.012	0.018	0.025	0.022
Median-if					-0.056			
N	41	41	41	40	40	35	34	33
N-if					40			
Mean	0.018	0.012	-0.008	-0.039	-0.076	-0.016	0.009	0.010
Mean-if					-0.102			
Common Stock:								
Median	0.048	0.050	0.048	0.039	0.032	0.033	0.035	0.023
Median-if					0.027			
N	121	124	124	123	122	118	112	104
N-if					122			
Mean	0.051	0.048	0.040	0.024	0.019	0.022	0.019	0.006
Mean-if					0.015			
Preferred Stock:								
Median	0.031	0.026	0.009	0.002	0.003	-0.005	0.004	0.022
Median-if					0.002			
N	15	15	15	15	15	14	14	13
N-if					15			
Mean	0.031	0.028	0.010	-0.014	-0.020	-0.074	-0.068	0.018
Mean-if					-0.027			
Asset:								
Median	0.037	0.036	0.007	0.009	0.026	0.005	0.006	0.027
Median-if					0.011			
N	17	17	18	18	17	17	17	14
N-if					16			
Mean	0.050	0.039	0.021	0.007	0.010	-0.006	-0.026	-0.053
Mean-if					0.003			

(TABLE 5-6 - continued)

By Instrument during Early 1980's

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
	Time Horizon							
ROAb								
Panel 5-6.4:								
Cash:								
Median	0.031	0.029	0.022	0.021	0.019	0.011	0.008	0.016
Median-if					0.017			
N	177	182	186	189	187	175	169	152
N-if					187			
Mean	0.054	0.024	0.012	0.045	0.017	-0.002	-0.014	-0.014
Mean-if					0.013			
Debt:								
Median	0.022	0.017	0.011	0.002	-0.014	0.018	0.021	0.022
Median-if					-0.022			
N	41	41	41	40	40	35	34	33
N-if					40			
Mean	0.020	0.013	-0.010	-0.065	-0.060	-0.042	-0.001	0.011
Mean-if					-0.081			
Common Stock:								
Median	0.052	0.051	0.047	0.040	0.033	0.038	0.037	0.022
Median-if					0.030			
N	121	124	124	123	122	118	112	104
N-if					122			
Mean	0.054	0.046	0.037	0.014	0.019	0.021	0.020	0.002
Mean-if					0.015			
Preferred Stock:								
Median	0.035	0.026	0.009	0.002	0.004	0.003	0.006	0.023
Median-if					0.002			
N	15	15	15	15	15	14	14	13
N-if					15			
Mean	0.031	0.030	0.011	-0.017	-0.040	-0.101	-0.088	0.010
Mean-if					-0.047			
Asset:								
Median	0.043	0.036	0.009	0.012	0.027	0.005	0.006	0.030
Median-if					0.025			
N	17	17	18	18	17	17	17	14
N-if					16			
Mean	0.051	0.040	0.022	0.008	0.012	-0.001	-0.024	-0.051
Mean-if					0.008			

(TABLE 5-6 - continued)

By Instrument during Early 1980's

Variable Panel Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
LTDSE								
Panel 5-6.5:								
Cash:								
Median	0.859	0.958	1.091	1.036	0.784	0.767	0.716	0.593
Median-if					0.965			
N	177	183	186	189	187	176	169	152
N-if					187			
Mean	1.533	1.743	3.095	3.330	1.529	1.730	2.325	1.502
Mean-if					2.435			
Debt:								
Median	1.433	1.326	2.145	1.496	1.965	1.299	1.371	0.988
Median-if					2.252			
N	41	41	41	40	40	35	34	33
N-if					40			
Mean	1.929	2.291	2.665	3.181	2.174	10.168	-0.711	1.174
Mean-if					5.170			
Common Stock:								
Median	0.560	0.572	0.562	0.578	0.503	0.467	0.520	0.599
Median-if					0.560			
N	122	124	124	124	122	118	112	104
N-if					122			
Mean	0.820	0.827	0.863	0.962	3.242	-0.184	0.547	-0.344
Mean-if					-8.824			
Preferred Stock:								
Median	0.905	1.075	1.342	1.269	1.121	1.310	0.907	1.185
Median-if					1.261			
N	15	15	15	15	15	14	14	13
N-if					15			
Mean	1.285	1.286	1.341	1.850	6.640	1.709	2.233	3.772
Mean-if					3.202			
Asset:								
Median	0.742	0.794	0.851	0.824	0.706	0.744	0.898	0.800
Median-if					0.888			
N	17	17	18	18	17	17	17	14
N-if					16			
Mean	0.902	0.900	1.110	1.186	1.079	1.167	1.571	1.360
Mean-if					1.238			

(TABLE 5-6 - continued)

By Instrument during Early 1980's

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
TDTA								
Panel 5-6.6:								
Cash:								
Median	0.662	0.682	0.701	0.690	0.679	0.686	0.683	0.677
Median-if					0.693			
N	177	183	186	189	187	176	169	152
N-if					187			
Mean	0.675	0.695	0.700	0.693	0.681	0.711	0.718	0.723
Mean-if					0.701			
Debt:								
Median	0.725	0.720	0.774	0.795	0.808	0.781	0.782	0.747
Median-if					0.822			
N	41	41	41	40	40	35	34	33
N-if					40			
Mean	0.689	0.715	0.749	0.806	0.840	0.815	0.777	0.772
Mean-if					0.875			
Common Stock:								
Median	0.562	0.579	0.589	0.591	0.576	0.563	0.579	0.624
Median-if					0.592			
N	122	124	124	124	122	118	112	104
N-if					122			
Mean	0.599	0.609	0.613	0.627	0.607	0.596	0.611	0.663
Mean-if					0.635			
Preferred Stock:								
Median	0.726	0.737	0.781	0.807	0.853	0.841	0.914	0.856
Median-if					0.894			
N	15	15	15	15	15	14	14	13
N-if					15			
Mean	0.720	0.736	0.757	0.776	0.814	0.843	0.851	0.803
Mean-if					0.839			
Asset:								
Median	0.648	0.660	0.653	0.672	0.652	0.662	0.676	0.657
Median-if					0.674			
N	17	17	18	18	17	17	17	14
N-if					16			
Mean	0.652	0.653	0.665	0.669	0.675	0.675	0.698	0.744
Mean-if					0.692			

(TABLE 5-6 - continued)

By Instrument during Early 1980's

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
LTDMV								
Panel 5-6.7:								
Cash:								
Median	1.329	1.356	1.322	1.184	1.129	1.041	0.994	0.762
Median-if					1.268			
N	175	182	185	188	187	176	169	152
N-if					187			
Mean	2.194	2.028	2.075	1.891	1.786	2.148	2.581	2.197
Mean-if					2.047			
Debt:								
Median	1.770	1.490	1.901	2.353	2.577	1.585	1.549	1.143
Median-if					3.050			
N	41	41	41	40	39	35	34	33
N-if					39			
Mean	3.385	3.963	3.725	3.938	3.574	2.645	2.312	2.438
Mean-if					3.849			
Common Stock:								
Median	0.718	0.707	0.642	0.698	0.523	0.454	0.501	0.569
Median-if					0.570			
N	122	122	124	124	122	118	112	103
N-if					122			
Mean	1.193	1.084	1.107	1.073	0.790	0.776	0.748	0.906
Mean-if					0.864			
Preferred Stock:								
Median	1.368	1.670	1.546	2.009	1.612	1.802	1.268	1.120
Median-if					1.886			
N	15	15	15	15	15	14	14	13
N-if					15			
Mean	2.355	3.272	3.214	3.309	3.684	2.831	1.800	1.437
Mean-if					3.983			
Asset:								
Median	1.052	0.905	1.430	1.102	0.952	0.779	0.788	0.680
Median-if					1.139			
N	17	17	18	18	17	17	17	14
N-if					16			
Mean	1.678	1.646	1.623	1.730	1.437	1.478	1.641	2.465
Mean-if					1.677			

(TABLE 5-6 - continued)

By Instrument during Early 1980's

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
	Time Horizon							
ZSCORE								
Panel 5-6.8:								
Cash:								
Median	2.468	2.440	2.392	2.359	2.307	2.191	2.208	2.319
N	145	148	148	147	147	135	129	114
Mean	2.493	2.424	2.353	2.366	2.408	2.207	2.106	2.328
Debt:								
Median	2.138	1.949	1.756	1.687	1.341	1.865	1.717	2.039
N	35	35	35	33	32	29	28	27
Mean	2.268	2.210	1.859	1.502	1.160	1.386	1.683	1.771
Common Stock:								
Median	2.963	2.915	2.862	2.682	2.485	2.659	2.557	2.404
N	107	108	111	109	109	105	99	91
Mean	2.925	2.877	2.795	2.606	2.585	2.671	2.560	2.333
Preferred Stock:								
Median	2.302	2.175	1.735	1.716	1.440	1.402	1.230	1.698
N	12	12	11	11	10	9	11	10
Mean	2.134	2.002	1.915	1.809	1.654	1.162	1.106	1.927
Asset:								
Median	2.901	2.282	2.261	2.139	1.964	1.875	1.768	1.966
N	12	12	13	13	12	12	12	10
Mean	3.106	2.752	2.231	2.067	2.045	1.888	1.612	1.158

(TABLE 5-6 - continued)

By Instrument during Early 1980's

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
RATING								
Panel 5-6.9:								
Cash:								
Median	9.500	11.000	11.000	12.000	14.000	15.000	16.000	16.000
N	46	61	73	77	85	82	84	80
Mean	11.022	11.656	12.548	12.870	13.612	13.902	14.786	15.088
Debt:								
Median	14.000	14.000	17.000	18.500	19.000	19.000	19.000	18.000
N	8	9	11	12	14	17	17	16
Mean	13.625	14.333	16.182	16.833	16.929	17.059	17.059	16.875
Common Stock:								
Median	8.000	8.000	9.000	9.000	10.000	10.000	10.000	10.000
N	72	79	84	87	88	90	89	88
Mean	9.264	9.785	10.191	10.552	10.750	10.967	11.112	11.546
Preferred Stock:								
Median	9.000	9.500	11.000	11.500	13.000	16.500	16.000	17.000
N	5	6	6	6	7	8	8	8
Mean	8.200	8.667	9.667	11.000	13.143	14.875	14.625	14.875
Asset:								
Median	13.000	13.000	13.500	14.500	14.500	14.500	14.500	15.000
N	7	7	8	8	8	8	10	10
Mean	12.286	12.000	12.750	13.500	12.875	13.375	13.600	13.600

TABLE 5-7
Time-Series Pattern of Earnings, Leverage, and Financial Distress:
By Instrument during Late 1980's

By Instrument during Late 1980's

Variable / Panel / Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
EPSc								
Panel 5-7.1:								
Cash:								
Median	0.996	0.965	1.023	0.899	0.959	1.323	1.610	1.508
Median-if					1.094			
N	276	281	294	307	306	242	111	23
N-if					306			
Mean	0.938	1.022	0.997	1.002	1.128	1.568	1.739	2.457
Mean-if					1.291			
Debt:								
Median	0.415	0.390	0.400	0.174	-0.183	0.237	-1.367	1.430
Median-if					-0.442			
N	22	22	23	24	23	20	10	3
N-if					23			
Mean	0.166	-0.504	0.932	-0.197	-0.987	-0.173	-0.859	2.043
Mean-if					-1.192			
Common Stock:								
Median	-0.004	0.445	0.126	0.369	0.109	0.136	-1.700	3.549
Median-if					0.428			
N	16	16	16	16	16	14	8	1
N-if					16			
Mean	-1.335	-0.544	0.099	0.052	-0.313	0.220	-1.303	3.549
Mean-if					-0.346			
Asset:								
Median	1.676	1.507	1.462	1.311	0.947	2.658	2.324	4.003
Median-if					1.001			
N	13	12	12	12	13	11	7	4
N-if					13			
Mean	1.495	1.154	1.757	-1.023	1.009	1.724	3.041	4.798
Mean-if					0.674			

(TABLE 5-7 - continued)

By Instrument during Late 1980's

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
EPSb								
Panel 5-7.2:								
Cash:								
Median	1.000	1.021	1.121	0.899	0.995	1.348	1.667	2.156
Median-if					1.113			
N	276	281	294	307	306	242	111	23
N-if					306			
Mean	0.827	1.266	1.043	1.285	1.385	1.792	2.250	4.071
Mean-if					1.482			
Debt:								
Median	0.327	0.222	0.485	0.196	-0.241	0.251	-0.238	1.430
Median-if					-0.147			
N	22	22	23	24	23	20	10	3
N-if					23			
Mean	0.176	-0.650	0.973	-0.231	-0.592	-0.502	3.741	2.043
Mean-if					-0.883			
Common Stock:								
Median	-0.224	0.493	0.384	0.724	0.305	0.211	-1.583	4.288
Median-if					0.170			
N	16	16	16	16	16	14	8	1
N-if					16			
Mean	-1.544	-0.823	0.275	-0.115	-0.231	0.098	-1.240	4.288
Mean-if					-0.322			
Asset:								
Median	1.676	1.507	1.462	1.232	1.418	2.731	3.198	4.363
Median-if					1.396			
N	13	12	12	12	13	11	7	4
N-if					13			
Mean	1.540	1.127	1.554	-1.232	1.469	1.917	3.917	4.871
Mean-if					1.095			

(TABLE 5-7 - continued)

By Instrument during Late 1980's

Variable / Panel / Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
ROAc								
Panel 5-7.3:								
Cash:								
Median	0.034	0.033	0.028	0.019	0.018	0.031	0.035	0.035
Median-if					0.020			
N	278	284	296	312	308	242	111	23
N-if					308			
Mean	0.026	0.025	0.022	0.013	0.015	0.014	-0.004	0.038
Mean-if					0.016			
Debt:								
Median	0.018	0.017	0.022	0.008	-0.021	0.013	-0.059	0.093
Median-if					-0.034			
N	22	22	23	24	23	20	10	3
N-if					23			
Mean	0.002	-0.031	0.010	-0.014	-0.044	-0.048	-0.065	0.070
Mean-if					-0.052			
Common Stock:								
Median	-0.001	0.007	0.004	0.011	0.012	0.018	-0.092	0.067
Median-if					0.017			
N	16	16	16	16	16	14	8	1
N-if					16			
Mean	-0.035	-0.046	-0.036	-0.053	-0.043	0.038	-0.092	0.067
Mean-if					-0.075			
Asset:								
Median	0.041	0.041	0.042	0.021	0.008	0.031	0.049	0.035
Median-if					0.010			
N	13	12	13	13	13	11	7	4
N-if					13			
Mean	0.039	0.030	0.037	-0.025	0.004	0.020	0.046	0.052
Mean-if					-0.003			

(TABLE 5-7 - continued)

By Instrument during Late 1980's

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
ROAb								
Panel 5-7.4:								
Cash:								
Median	0.034	0.035	0.031	0.021	0.020	0.032	0.038	0.039
Median-if					0.023			
N	278	284	296	312	308	242	111	23
N-if					308			
Mean	0.022	0.028	0.023	0.014	0.019	0.015	-0.002	0.057
Mean-if					0.019			
Debt:								
Median	0.015	0.015	0.026	0.007	-0.008	0.014	-0.020	0.093
Median-if					-0.017			
N	22	22	23	24	23	20	10	3
N-if					23			
Mean	0.003	-0.039	0.003	-0.015	-0.026	-0.056	-0.001	0.070
Mean-if					-0.036			
Common Stock:								
Median	-0.001	0.008	0.010	0.027	0.032	0.040	-0.084	0.081
Median-if					0.016			
N	16	16	16	16	16	14	8	1
N-if					16			
Mean	-0.059	-0.050	-0.028	-0.072	-0.007	0.041	-0.090	0.081
Mean-if					-0.042			
Asset:								
Median	0.041	0.041	0.035	0.014	0.018	0.043	0.048	0.039
Median-if					0.019			
N	13	12	13	13	13	11	7	4
N-if					13			
Mean	0.040	0.029	0.029	-0.025	0.014	0.023	0.056	0.053
Mean-if					0.006			

(TABLE 5-7 - continued)

By Instrument during Late 1980's

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
LTDSE								
Panel 5-7.5:								
Cash:								
Median	0.663	0.689	0.870	0.981	0.911	0.797	0.792	0.824
Median-if					1.133			
N	278	284	297	312	308	242	111	23
N-if					308			
Mean	0.999	1.267	1.276	1.298	1.573	1.103	0.947	0.393
Mean-if					1.866			
Debt:								
Median	0.981	1.261	0.881	0.947	0.815	0.948	0.982	0.190
Median-if					0.766			
N	22	22	23	24	23	20	10	3
N-if					23			
Mean	1.345	1.497	0.827	27.915	0.678	1.747	1.172	0.159
Mean-if					0.709			
Common Stock:								
Median	1.403	1.184	1.186	0.781	0.815	0.818	2.278	0.685
Median-if					0.928			
N	16	16	16	16	16	14	8	1
N-if					16			
Mean	1.678	1.442	2.327	0.969	4.494	1.406	1.892	0.685
Mean-if					0.290			
Asset:								
Median	0.647	0.669	0.616	0.715	0.877	0.550	0.562	0.847
Median-if					1.221			
N	13	12	13	13	13	11	7	4
N-if					13			
Mean	0.698	0.764	0.786	1.403	2.844	1.061	0.739	1.099
Mean-if					5.226			

(TABLE 5-7 - continued)

By Instrument during Late 1980's

Variable Panel Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
TDTA								
Panel 5-7.6:								
Cash:								
Median	0.621	0.622	0.640	0.679	0.669	0.656	0.661	0.684
Median-if					0.690			
N	278	284	297	312	308	242	111	23
N-if					308			
Mean	0.624	0.632	0.658	0.692	0.689	0.681	0.686	0.704
Mean-if					0.710			
Debt:								
Median	0.668	0.705	0.686	0.781	0.815	0.826	0.687	0.402
Median-if					0.828			
N	22	22	23	24	23	20	10	3
N-if					23			
Mean	0.668	0.702	0.735	0.833	0.805	0.836	0.785	0.745
Mean-if					0.825			
Common Stock:								
Median	0.710	0.725	0.716	0.652	0.657	0.653	0.838	0.651
Median-if					0.779			
N	16	16	16	16	16	14	8	1
N-if					16			
Mean	0.699	0.766	0.781	0.810	0.694	0.656	0.809	0.651
Mean-if					0.858			
Asset:								
Median	0.578	0.586	0.603	0.677	0.650	0.668	0.568	0.721
Median-if					0.687			
N	13	12	13	13	13	11	7	4
N-if					13			
Mean	0.564	0.557	0.601	0.627	0.678	0.648	0.584	0.681
Mean-if					0.699			

(TABLE 5-7 - continued)

By Instrument during Late 1980's

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
LTDMV								
Panel 5-7.7:								
Cash:								
Median	0.596	0.574	0.644	0.734	0.758	0.687	0.698	0.921
Median-if					0.925			
N	275	280	289	301	308	242	111	23
N-if					308			
Mean	1.097	1.125	1.264	1.611	2.073	1.691	1.282	1.594
Mean-if					2.342			
Debt:								
Median	0.633	0.853	1.502	1.756	1.372	1.141	0.646	0.220
Median-if					1.528			
N	20	22	22	23	23	20	10	3
N-if					23			
Mean	1.063	1.229	1.493	2.462	2.549	1.849	2.142	0.176
Mean-if					3.071			
Common Stock:								
Median	0.649	0.698	0.909	1.013	0.501	0.476	1.178	0.430
Median-if					0.675			
N	16	16	16	16	16	14	8	1
N-if					16			
Mean	1.367	1.388	1.578	1.597	1.105	2.129	11.201	0.430
Mean-if					1.447			
Asset:								
Median	1.062	0.700	0.599	0.640	0.785	0.869	0.740	0.862
Median-if					1.054			
N	13	12	12	13	13	11	7	4
N-if					13			
Mean	1.231	1.445	1.208	2.541	1.839	0.932	0.938	1.187
Mean-if					2.173			

(TABLE 5-7 - continued)

By Instrument during Late 1980's

Variable Panel Statistics	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
ZSCORE								
Panel 5-7.8:								
Cash:								
Median	2.463	2.485	2.305	2.188	2.115	2.452	2.499	1.624
N	229	233	240	249	251	193	89	23
Mean	2.963	2.843	2.552	2.294	2.292	2.478	2.474	2.181
Debt:								
Median	1.844	1.717	1.900	1.360	1.378	1.356	0.839	2.803
N	17	20	20	21	21	19	10	3
Mean	2.110	1.639	1.833	1.469	1.393	1.277	0.879	1.577
Common Stock:								
Median	2.115	2.193	1.772	1.802	1.666	2.189	1.159	2.373
N	15	15	15	15	15	12	7	1
Mean	2.159	1.825	1.674	1.366	1.905	2.055	0.822	2.373
Asset:								
Median	2.142	2.118	2.104	1.692	1.887	2.312	2.452	2.268
N	13	12	12	12	12	10	7	2
Mean	2.641	2.612	2.462	2.085	1.907	2.059	2.190	2.268

(TABLE 5-7 - continued)

By Instrument during Late 1980's

Variable Panel Statistics	Time Horizon							
	t-4	t-3	t-2	t-1	t=0	t+1	t+2	t+3
RATING								
Panel 5-7.9:								
Cash:								
Median	10.000	11.000	12.000	12.000	13.000	12.000	12.000	12.500
N	159	174	193	213	222	192	93	20
Mean	11.126	11.558	12.078	12.700	13.117	12.740	12.430	14.150
Debt:								
Median	12.000	13.000	17.000	17.000	17.000	16.000	19.000	18.000
N	13	13	17	17	16	13	9	5
Mean	12.846	13.462	15.118	15.941	16.625	16.615	17.778	17.200
Common Stock:								
Median	15.500	18.000	18.000	17.000	18.000	18.000	17.000	12.500
N	4	7	9	11	11	9	5	2
Mean	15.000	17.000	17.667	17.727	18.182	18.333	18.200	12.500
Asset:								
Median	8.000	8.000	9.000	10.000	10.000	11.000	11.000	11.000
N	7	7	8	8	9	9	7	3
Mean	8.857	8.857	9.000	10.125	10.333	11.444	10.857	9.333

TABLE 5-8

Time-Series Pattern of Quarterly Earnings Per Share

Panel 5-8.1: EPSc: By Effect: EDR-Gain, EDR-Loss, and Zero-Gain

Portfolio	Time Horizon							
	Q-16	Q-12 Q-3	Q-8 Q-2	Q-4 Q-1	Q=0 Q=0if	Q+4 Q+1	Q+8 Q+2	Q+12 Q+3
EDR-Gain:								
Median	0.3702	0.3203	0.2939	0.2405	0.2011	0.2236	0.2942	0.3377
		0.2091	0.2175	0.1845	0.0412	0.2044	0.1866	0.2194
N	514	510	527	530	489	402	361	308
		527	514	503	489	467	431	416
Mean	0.1556	0.3743	0.2601	0.1390	0.0486	-0.0359	0.0922	0.0931
		0.0487	0.1556	0.0541	-0.2252	0.1817	0.0259	0.0707
Q3	0.6015	0.7786	0.7005	0.6108	0.5358	0.5855	0.6735	0.6901
		0.5800	0.6015	0.5542	0.3467	0.5877	0.5943	0.5914
Q1	-0.0920	0.0611	0.0436	-0.0574	-0.0547	-0.1503	-0.1325	0.0273
		-0.0644	-0.0920	-0.0926	-0.3414	-0.0599	-0.1461	-0.0995
EDR-Loss:								
Median	0.2769	0.3170	0.3291	0.2434	0.2623	0.2373	0.2870	0.2001
		0.2945	0.2926	0.3342	0.4844	0.3448	0.3485	0.3029
N	312	305	308	315	295	186	58	29
		318	312	306	295	288	257	230
Mean	0.2942	0.3377	0.3384	0.1724	0.2439	0.1833	0.2988	-0.2879
		0.2883	0.2942	0.3882	0.5573	0.3031	0.2524	0.3368
Q3	0.6208	0.6362	0.6869	0.5869	0.7224	0.5899	0.5739	0.5641
		0.5747	0.6208	0.6588	1.0651	0.7006	0.6907	0.6243
Q1	0.0270	0.1040	0.1021	0.0250	0.0366	0.0300	0.0103	-0.1608
		0.0343	0.0270	0.0645	0.1673	0.0687	0.0970	0.0527
Zero-Gain:								
Median	0.3893	0.3845	0.3089	0.3244	0.2869	0.2915	0.2937	0.3112
		0.3609	0.2998	0.3551	0.2869	0.3530	0.3343	0.3837
N	49	49	49	50	47	39	27	16
		50	49	48	47	46	43	42
Mean	-0.1843	0.3089	0.2257	0.1483	-0.0183	0.5200	0.2988	0.3836
		-0.2799	-0.1843	0.0492	-0.0183	-0.1766	0.1294	0.2760
Q3	0.7024	0.7324	0.7716	0.7893	0.6083	0.6751	0.5079	0.4426
		0.7455	0.7024	0.8106	0.6083	0.6816	0.6559	0.7120
Q1	0.0367	0.1358	0.1297	0.0590	0.0409	0.1394	0.0262	0.1120
		0.0481	0.0367	0.1020	0.0409	0.1010	-0.0668	0.1183

Q=0if: Redemption quarter ("as-if" base).
N : Sample size.
Q3 : Upper (or third) quartile.
Q1 : Lower (or first) quartile.

(TABLE 5-8 - continued)

Time-Series Pattern of Quarterly Earnings Per Share

Panel 5-8.2: **EPSb**: By Effect; EDR-Gain, EDR-Loss, and Zero-Gain

Portfolio	Time Horizon Q-16	 Q-12 Q-3	 Q-8 Q-2	 Q-4 Q-1	 Q=0 Q=0if	 Q+4 Q+1	 Q+8 Q+2	 Q+12 Q+3
EDR-Gain:								
Median	0.3781	0.3372	0.3034	0.2697	0.3642	0.2489	0.3357	0.3489
		0.2328	0.2534	0.2377	0.2094	0.2518	0.2112	0.2529
N	514	510	527	530	489	402	361	308
		527	514	503	489	467	431	416
Mean	0.1351	0.3909	0.2729	0.2730	0.2145	-0.0044	0.0620	0.1476
		0.0584	0.1351	0.0668	-0.0096	0.1697	0.0181	0.0844
Q3	0.6578	0.8116	0.7246	0.6694	0.7607	0.6389	0.6935	0.7756
		0.6345	0.6578	0.6486	0.5402	0.6327	0.6596	0.6552
Q1	-0.0922	0.0700	0.0463	-0.0906	0.0270	-0.1981	-0.1459	0.0300
		-0.0644	-0.0922	-0.0816	-0.1107	-0.0745	-0.1820	-0.0892
EDR-Loss:								
Median	0.2809	0.3150	0.3349	0.2639	0.2296	0.2515	0.2977	0.2593
		0.2968	0.2934	0.3212	0.3372	0.3448	0.3602	0.3243
N	312	305	308	315	295	186	58	29
		318	312	306	295	288	257	230
Mean	0.3275	0.3245	0.3298	0.0478	0.1496	0.1928	0.4922	-0.2132
		0.2785	0.3275	0.3994	0.3471	0.3048	0.2613	0.3521
Q3	0.6322	0.6496	0.7237	0.5861	0.6863	0.6059	0.6238	0.7200
		0.6263	0.6322	0.7079	0.8221	0.6900	0.6816	0.6728
Q1	0.0266	0.1014	0.1123	0.0126	-0.1370	0.0019	-0.0152	-0.2384
		0.0400	0.0266	0.0734	0.0197	0.0693	0.0878	0.0550
Zero-Gain:								
Median	0.3967	0.3188	0.3562	0.3757	0.2768	0.3202	0.3223	0.3587
		0.3664	0.3063	0.3192	0.2768	0.3396	0.2956	0.3845
N	49	49	49	50	47	39	27	16
		50	49	48	47	46	43	42
Mean	-0.2779	0.6318	0.4914	0.3800	-0.1940	0.5999	0.2486	0.4018
		-0.5791	-0.2779	-0.1655	-0.1940	-0.4502	0.0663	0.3502
Q3	0.7722	0.7725	1.0105	0.8563	0.6983	0.6751	0.5176	0.5044
		0.7966	0.7722	0.8947	0.6983	0.7880	0.6017	0.9461
Q1	-0.0301	0.1358	0.1923	0.1249	0.0331	0.0333	0.0034	0.1120
		0.0245	-0.0301	0.0906	0.0331	0.1213	-0.2963	0.0882

Q=0if: Redemption quarter ("as-if" base).
N : Sample size.
Q3 : Upper (or third) quartile.
Q1 : Lower (or first) quartile.

(TABLE 5-8 - continued)

Time-Series Pattern of Quarterly Earnings Per Share

Panel 5-8.3: **EPSc**: By Method: Equity-for-Debt Swaps vs. All Other Method

Portfolio	Time Horizon							
	Q-16	Q-12 Q-3	Q-8 Q-2	Q-4 Q-1	Q=0 Q=0if	Q+4 Q+1	Q+8 Q+2	Q+12 Q+3
Equity-for-Debt Swaps:								
Median	0.6267	0.6653 0.5146	0.5751 0.4800	0.4797 0.4757	0.4741 0.2860	0.4551 0.5552	0.5140 0.4912	0.4415 0.5163
N	137	139 139	142 137	141 137	138 138	128 137	114 137	106 134
Mean	0.3226	0.7321 0.0880	0.6680 0.3226	0.3031 0.2237	0.3399 0.1099	0.0770 0.3958	0.2033 0.3027	0.0659 0.1151
Q3	0.8871	1.0209 0.8978	1.0288 0.8871	0.8592 0.8314	0.7936 0.5546	0.8048 0.8981	0.8478 0.8953	0.8525 0.7492
Q1	0.0506	0.3304 0.0646	0.3107 0.0506	0.0895 0.1276	0.1303 -0.0801	0.0321 0.1371	0.0471 0.0820	0.0363 0.0789
All Other Methods:								
Median	0.2844	0.2805 0.2110	0.2621 0.2176	0.2190 0.2052	0.1918 0.1886	0.1811 0.2176	0.2300 0.2089	0.2901 0.2165
N	738	725 756	742 738	754 720	693 693	499 664	332 594	247 554
Mean	0.1606	0.2859 0.1205	0.2123 0.1606	0.1229 0.1635	0.0692 0.0552	0.0603 0.1654	0.1070 0.0676	0.0789 0.1860
Q3	0.5460	0.6212 0.5200	0.6172 0.5460	0.5448 0.5683	0.5452 0.6047	0.5297 0.5699	0.5611 0.5572	0.5684 0.5618
Q1	-0.0105	0.0624 -0.0106	0.0515 -0.0105	0.0067 -0.0205	-0.0430 -0.1765	-0.0906 -0.0162	-0.1091 -0.0550	0.0339 -0.0440

Q=0if: Redemption quarter ("as-if" base).
N : Sample size.
Q3 : Upper (or third) quartile.
Q1 : Lower (or first) quartile.

(TABLE 5-8 - continued)

Time-Series Pattern of Quarterly Earnings Per Share

Panel 5-8.4: **EPSb**: By Method: Equity-for-Debt Swaps vs. All Other Method

Portfolio	Q-16	Q-12 Q-3	Q-8 Q-2	Q-4 Q-1	Q=0 Q=0if	Q+4 Q+1	Q+8 Q+2	Q+12 Q+3
Equity-for-Debt Swaps:								
Median	0.6496	0.6623 0.5300	0.6079 0.5150	0.5084 0.4945	0.5977 0.4350	0.4462 0.5469	0.5382 0.4467	0.4198 0.5147
N	137	139 139	142 137	141 137	138 138	128 137	114 137	106 134
Mean	0.2680	0.7495 0.0964	0.6757 0.2680	0.2581 0.2277	0.4302 0.1984	0.0715 0.3760	0.2008 0.2859	0.0141 -0.0284
Q3	0.9908	1.0357 0.9979	1.0446 0.9908	0.8592 0.8314	0.9808 0.7407	0.8589 0.9800	0.8600 0.9586	0.8637 0.8048
Q1	0.0293	0.3304 0.0646	0.3224 0.0293	0.0893 0.1392	0.3088 0.0721	0.0329 0.1371	0.0835 0.0791	0.0249 0.1033
All Other Methods:								
Median	0.2970	0.2849 0.2339	0.2824 0.2357	0.2373 0.2360	0.2529 0.2290	0.2231 0.2543	0.2764 0.2394	0.3289 0.2610
N	738	725 756	742 738	754 720	693 693	499 664	332 594	247 554
Mean	0.1644	0.3105 0.1019	0.2339 0.1644	0.1888 0.1620	0.1162 0.0883	0.0968 0.1428	0.1046 0.0651	0.1790 0.2430
Q3	0.5964	0.6405 0.5535	0.6802 0.5964	0.5876 0.6262	0.6486 0.5906	0.5693 0.5993	0.5787 0.5890	0.7071 0.6193
Q1	-0.0286	0.0697 -0.0116	0.0562 -0.0286	-0.0384 -0.0331	-0.0884 -0.0658	-0.1035 -0.0099	-0.1436 -0.0730	0.0288 -0.0330

Q=0if: Redemption quarter ("as-if" base).
N : Sample size.
Q3 : Upper (or third) quartile.
Q1 : Lower (or first) quartile.

TABLE 5-13-1

Two Sample Mean Difference T-Test between Redeemers and Control Sample - By Deleting Extreme Values -

Panel 1: All Sample

*	EPSc	EPSb	ROAc	ROAb	LTDSE	TDTA	LTDMV	LSALES	ZSCORE	RATING
Mr	1.17	1.32	0.01	0.02	1.43	0.68	1.39	6.48	2.40	-12.65
Mc	1.78	1.80	0.04	0.05	0.58	0.56	0.51	5.41	4.21	-9.96
t	-4.54	-3.35	-11.63	-10.41	14.06	14.82	15.14	13.62	-12.47	-8.82
Pr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nr	668	668	668	668	668	668	668	668	560	424
Nc	1996	1996	1996	1996	1996	1992	1940	1995	1549	533

Panel 2-1: By Period: Early 1980's

*	EPSc	EPSb	ROAc	ROAb	LTDSE	TDTA	LTDMV	LSALES	ZSCORE	RATING
Mr	0.90	1.19	0.01	0.01	1.36	0.67	1.44	6.46	2.46	-12.19
Mc	2.07	2.09	0.05	0.05	0.53	0.57	0.52	5.35	4.33	-9.28
t	-5.82	-4.25	-11.00	-9.24	9.84	9.44	11.81	10.09	-8.64	-6.66
Pr	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nr	346	346	346	346	346	346	346	346	285	189
Nc	1055	1055	1055	1055	1055	1053	1023	1055	825	233

Panel 2-2: By Period: Late 1980's

*	EPSc	EPSb	ROAc	ROAb	LTDSE	TDTA	LTDMV	LSALES	ZSCORE	RATING
Mr	1.47	1.46	0.02	0.02	1.52	0.68	1.32	6.51	2.34	-13.03
Mc	1.44	1.48	0.04	0.04	0.65	0.56	0.50	5.48	4.07	-10.49
t	0.16	-0.10	-5.52	-5.44	10.02	11.63	9.62	8.79	-9.22	-6.05
Pr	0.87	0.92	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Nr	322	322	322	322	322	322	322	322	275	235
Nc	941	941	941	941	941	939	917	940	724	300

* Mr: Mean of Redeemers. Nr: Sample Size of Redeemers.
Mc: Mean of Control Sample. Nc: Sample Size of Control Sample.
t : t-value of the Mean Difference. Pr: Significance Level (Two-Tailed).

TABLE 5-14-1

Logit Analysis of Early Debt Redemption
- By <u>Deleting</u> Extreme Values -

The 12 models in the Table 5-14-1 have following specifications:

Model No		Earning	Leverage	Size	Distress	Error
			Independent Variables			
11:	$Y_j = b_0$	$+ b_1 EPSc_j$	$+ b_2 LTDSE_j$	$+ b_3 LSALES_j$		$+ e_j$
12:	$Y_j = b_0$	$+ b_1 EPSc_j$	$+ b_2 LTDSE_j$	$+ b_3 LSALES_j$	$+ b_4 ZSCORE_j$	$+ e_j$
13:	$Y_j = b_0$	$+ b_1 EPSc_j$	$+ b_2 LTDSE_j$	$+ b_3 LSALES_j$	$+ b_4 RATING_j$	$+ e_j$
21:	$Y_j = b_0$	$+ b_1 EPSb_j$	$+ b_2 LTDSE_j$	$+ b_3 LSALES_j$	+	$+ e_j$
22:	$Y_j = b_0$	$+ b_1 EPSb_j$	$+ b_2 LTDSE_j$	$+ b_3 LSALES_j$	$+ b_4 ZSCORE_j$	$+ e_j$
23:	$Y_j = b_0$	$+ b_1 EPSb_j$	$+ b_2 LTDSE_j$	$+ b_3 LSALES_j$	$+ b_4 RATING_j$	$+ e_j$
31:	$Y_j = b_0$	$+ b_1 ROAc_j$	$+ b_2 TDTA_j$	$+ b_3 LSALES_j$		$+ e_j$
32:	$Y_j = b_0$	$+ b_1 ROAc_j$	$+ b_2 TDTA_j$	$+ b_3 LSALES_j$	$+ b_4 ZSCORE_j$	$+ e_j$
33:	$Y_j = b_0$	$+ b_1 ROAc_j$	$+ b_2 TDTA_j$	$+ b_3 LSALES_j$	$+ b_4 RATING_j$	$+ e_j$
41:	$Y_j = b_0$	$+ b_1 ROAb_j$	$+ b_2 TDTA_j$	$+ b_3 LSALES_j$		$+ e_j$
42:	$Y_j = b_0$	$+ b_1 ROAb_j$	$+ b_2 TDTA_j$	$+ b_3 LSALES_j$	$+ b_4 ZSCORE_j$	$+ e_j$
43:	$Y_j = b_0$	$+ b_1 ROAb_j$	$+ b_2 TDTA_j$	$+ b_3 LSALES_j$	$+ b_4 RATING_j$	$+ e_j$

where $Y_j = 1$ if j is a redeemer and $Y_j = 0$ if j is a control firm.

The headings of the Table 5-14-1 stand for as follows:

Model : See above 12 models.
b_0 : Intercept of the model.
Earning : EPSc, EPSb, ROAc, or ROAb (See above 12 models).
Leverage: LTDSE or TDTA (See above 12 models).
Size : LSALES (See above 12 models).
Distress: ZSCORE or RATING (See above 12 models).
Chi-Sq. : Chi-square statistics for the logit model.
p-val. : p-value for the Chi-square statistics.
N : Sample size of the model (N=Nr+Nc).
Nr : Sample size of redeemers.
Nc : Sample size of all-Compustat control sample.

For each model in the Table 5-14-1,

the first line shows coefficient of each independent variable,
the second line shows standard error of the coefficient of each independent variable, and
the third line shows p-value of the coefficient of each independent variable (two-tailed).

(TABLE 5-14-1 - continued)

TABLE 5-14-1
Logit Analysis of Early Debt Redemption
- By Deleting Extreme Values -

Panel 1: All Sample

Model	b_0	Earning	Leverage	Size	Distress	Chi-Sq.	p-val.	N	Nc	Nr
11	-4.117	-0.147	0.761	0.431	-	489.82	0.000	2663	1995	668
	0.203	0.021	0.057	0.031						
	0.000	0.000	0.000	0.000						
12	-3.222	0.129	0.689	0.425	-0.262	417.29	0.000	2108	1548	560
	0.277	0.024	0.077	0.036	0.040					
	0.000	0.000	0.000	0.000	0.000					
13	-4.208	0.075	0.437	0.338	-0.120	135.62	0.000	957	533	424
	0.573	0.027	0.089	0.058	0.021					
	0.000	0.005	0.000	0.000	0.000					
21	-4.064	-0.106	0.776	0.411	-	479.56	0.000	2663	1995	668
	0.201	0.019	0.057	0.030						
	0.000	0.000	0.000	0.000						
22	-3.138	-0.100	0.687	0.410	-0.272	403.45	0.000	2108	1548	560
	0.275	0.022	0.077	0.035	0.040					
	0.000	0.000	0.000	0.000	0.000					
23	-4.322	-0.049	0.434	0.335	-0.128	132.91	0.000	957	533	424
	0.570	0.023	0.088	0.058	0.021					
	0.000	0.034	0.000	0.000	0.000					
31	-3.899	-6.629	1.732	0.320	-	298.96	0.000	2659	1991	668
	0.238	0.816	0.274	0.028						
	0.000	0.000	0.000	0.000						
32	-4.667	-3.915	3.918	0.330	-0.185	350.33	0.000	2108	1548	560
	0.423	1.034	0.477	0.033	0.048					
	0.000	0.000	0.000	0.000	0.000					
33	-3.712	-8.262	-0.355	0.317	-0.156	127.11	0.000	957	533	424
	0.631	1.663	0.473	0.058	0.020					
	0.000	0.000	0.453	0.000	0.000					
41	-3.960	-5.200	1.893	0.308	-	279.25	0.000	2659	1991	668
	0.236	0.753	0.271	0.028						
	0.000	0.000	0.000	0.000						
42	-4.567	-2.566	3.936	0.321	-0.215	336.53	0.000	2108	1548	560
	0.422	0.926	0.477	0.033	0.048					
	0.000	0.006	0.000	0.000	0.000					
43	-3.980	-6.079	0.132	0.316	0.163	120.52	0.000	957	533	424
	0.623	1.443	0.464	0.058	0.020					
	0.000	0.000	0.776	0.000	0.000					

(TABLE 5-14-1 - continued)

Panel 2-1: By Period: Early 1980's

Model	b_0	Earning	Leverage	Size	Distress	Chi-Sq.	p-val.	N	Nc	Nr
11	-4.826	-0.220	0.958	0.555	-	331.14	0.000	1401	1055	346
	0.314	0.031	0.095	0.048						
	0.000	0.000	0.000	0.000						
12	-3.836	-0.209	0.779	0.534	-0.244	261.90	0.000	1110	825	285
	0.448	0.036	0.127	0.055	0.062					
	0.000	0.000	0.000	0.000	0.000					
13	-4.490	-0.169	0.378	0.420	-0.129	79.17	0.000	422	233	189
	0.924	0.043	0.160	0.095	0.035					
	0.000	0.000	0.018	0.000	0.000					
21	-4.752	-0.150	0.998	0.520	-	307.89	0.000	1401	1055	346
	0.308	0.027	0.095	0.046						
	0.000	0.000	0.000	0.000						
22	-3.686	-0.158	0.775	0.508	-0.262	245.40	0.000	1110	825	285
	0.442	0.033	0.125	0.054	0.062					
	0.000	0.000	0.000	0.000	0.000					
23	-4.803	0.095	0.404	0.411	-0.147	71.44	0.000	422	233	189
	0.914	0.035	0.159	0.094	0.035					
	0.000	0.006	0.011	0.000	0.000					
31	-3.704	-10.565	1.036	0.380	-	191.63	0.000	1399	1053	346
	0.348	1.346	0.383	0.041						
	0.000	0.000	0.007	0.000						
32	-4.673	-6.838	3.477	0.398	-0.193	207.32	0.000	1110	825	285
	0.629	1.559	0.685	0.048	0.071					
	0.000	0.001	0.000	0.000	0.007					
33	-2.827	-14.272	-2.510	0.363	-0.193	81.25	0.000	422	233	189
	1.019	3.027	0.804	0.094	0.033					
	0.006	0.000	0.002	0.000	0.000					
41	-3.886	-7.329	1.394	0.360	-	166.49	0.000	1399	1053	346
	0.343	1.156	0.375	0.040						
	0.000	0.000	0.000	0.000						
42	-4.507	-4.009	3.551	0.380	-0.254	191.12	0.000	1110	825	285
	0.629	1.326	0.687	0.047	0.070					
	0.000	0.003	0.000	0.000	0.000					
43	-3.658	-7.735	-1.733	0.365	-0.207	68.50	0.000	422	233	189
	1.001	2.447	0.767	0.093	0.033					
	0.000	0.002	0.024	0.000	0.000					

(TABLE 5-14-1 - continued)

Panel 2-2: By Period: Late 1980's

Model	b_0	Earning	Leverage	Size	Distress	Chi-Sq.	p-val.	N	Nc	Nr
11	-3.555	-0.059	0.643	0.323	-	189.01	0.000	1262	940	322
	0.272	0.031	0.070	0.042						
	0.000	0.055	0.000	0.000						
12	-2.736	-0.042	0.654	0.326	-0.268	171.85	0.000	998	723	275
	0.359	0.034	0.097	0.048	0.054					
	0.000	0.221	0.000	0.000	0.000					
13	-4.216	0.025	0.460	0.278	-0.128	69.43	0.000	535	300	235
	0.741	0.039	0.107	0.074	0.027					
	0.000	0.524	0.000	0.000	0.000					
21	-3.541	0.050	0.642	0.319	-	188.63	0.000	1262	940	322
	0.271	0.028	0.070	0.041						
	0.000	0.075	0.000	0.000						
22	-2.725	-0.039	0.651	0.325	-0.269	171.90	0.000	998	723	275
	0.356	0.031	0.097	0.048	0.054					
	0.000	0.205	0.000	0.000	0.000					
23	-4.121	0.000	0.464	0.282	-0.122	68.93	0.000	535	300	235
	0.734	0.032	0.108	0.074	0.026					
	0.000	0.991	0.000	0.000	0.000					
31	-3.991	-3.681	2.411	0.251	-	122.23	0.000	1260	938	322
	0.332	1.052	0.401	0.039						
	0.000	0.001	0.000	0.000						
32	-4.670	-1.340	4.440	0.258	-0.175	152.13	0.000	998	723	275
	0.577	1.395	0.675	0.046	0.066					
	0.000	0.337	0.000	0.000	0.008					
33	-4.294	-4.813	1.062	0.268	-0.139	59.66	0.000	535	300	235
	0.827	1.977	0.620	0.075	0.025					
	0.000	0.015	0.087	0.000	0.000					
41	-3.998	-3.360	2.445	0.247	-	120.90	0.000	1260	938	322
	0.332	1.014	0.399	0.039						
	0.000	0.001	0.000	0.000						
42	-4.646	-1.130	4.435	0.256	-0.180	150.83	0.000	998	723	275
	0.574	1.298	0.675	0.046	0.065					
	0.000	0.384	0.000	0.000	0.006					
43	-4.311	-4.958	1.023	0.272	-0.142	61.47	0.000	535	300	235
	0.818	1.796	0.616	0.075	0.025					
	0.000	0.006	0.097	0.000	0.000					

TABLE 5-15-1

Pearson Correlation between Independent Variables
- By Deleting Extreme Values -

Panel 1: All Sample

Variable	EPSb	ROAc	ROAb	LTDSE	TDTA	LTDMV	LSALES	ZSCORE	RATING
EPSc	0.917 0.000 2664	0.458 0.000 2664	0.411 0.000 2664	-0.176 0.000 2664	0.057 0.003 2660	-0.159 0.000 2608	0.344 0.000 2663	0.044 0.043 2109	0.474 0.000 957
EPSb		0.408 0.000 2664	0.470 0.000 2664	-0.173 0.000 2664	0.058 0.003 2660	-0.133 0.000 2608	0.336 0.000 2663	0.025 0.243 2109	0.417 0.000 957
ROAc			0.918 0.000 2664	-0.257 0.000 2664	-0.384 0.000 2660	-0.293 0.000 2608	0.021 0.276 2663	0.339 0.000 2109	0.343 0.000 957
ROAb				-0.240 0.000 2664	-0.366 0.000 2660	-0.262 0.000 2608	0.009 0.658 2663	0.300 0.000 2109	0.289 0.000 957
LTDSE					0.495 0.000 2660	0.702 0.000 2608	0.028 0.143 2663	-0.234 0.000 2109	-0.446 0.000 957
TDTA						0.441 0.000 2605	0.264 0.000 2659	-0.469 0.000 2109	-0.214 0.000 957
LTDMV							0.070 0.000 2607	-0.254 0.000 2109	-0.417 0.000 957
LSALES								-0.188 0.000 2108	0.555 0.000 957
ZSCORE									0.318 0.000 791

For each variable,
the first line shows Pearson correlation coefficients,
the second line stands for p-value for the Pearson correlation, and
the last line shows the sample size.

TABLE 5-16-1

T-Test for Industry Median-Adjusted Variables
[Redeemer - (Industry Median Including Redeemers)]

Panel 1: All Sample

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSC	686	-0.554	-3.99	0.00	731	-0.530	-4.36	0.00
EPSb	686	-0.611	-3.86	0.00	731	-0.421	-2.82	0.01
ROAc	692	-0.019	-2.34	0.02	733	-0.027	-7.95	0.00
ROAb	692	-0.021	-2.54	0.01	733	-0.024	-7.07	0.00
LTDSE	693	0.763	15.55	0.00	733	0.736	15.13	0.00
TDTA	693	0.085	13.25	0.00	733	0.078	12.04	0.00
LTDMV	681	0.738	15.99	0.00	732	0.647	14.12	0.00
LSALES	692	0.497	9.41	0.00	733	0.477	9.71	0.00
ZSCORE	564	-0.624	-12.37	0.00	601	-0.581	-11.05	0.00
EPSc-if					731	-0.638	-4.95	0.00
EPSb-if					731	-0.535	-3.52	0.00
ROAc-if					733	-0.031	-8.43	0.00
ROAb-if					733	-0.028	-8.21	0.00
LTDSE-if					733	0.935	18.52	0.00
TDTA-if					733	0.104	15.55	0.00
LTDMV-if					732	0.825	16.88	0.00

N : Sample size.
Mean : Mean of the difference [Redeemer - (Industry Median)].
t-value : t-value for the Mean.
Pr>|t| : p-value of t-value (two-tailed significance level).

EPSc-if : EPSc without redemption effects ("as-if" EPSc).
EPSb-if : EPSb without redemption effects ("as-if" EPSb).
ROAc-if : ROAc without redemption effects ("as-if" ROAc).
ROAb-if : ROAb without redemption effects ("as-if" ROAb).
LTDSE-if : LTDSE without redemption effects ("as-if" LTDSE).
TDTA-if : TDTA without redemption effects ("as-if" TDTA).
LTDMV-if : LTDMV without redemption effects ("as-if" LTDMV).

For the definition of the variables, see Table 4-4.

(TABLE 5-16-1 - continued)
T-Test for Industry Median-Adjusted Variables

Panel 2-1: By Period: Early 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	379	-0.658	-3.00	0.00	379	-0.798	-4.02	0.00
EPSb	379	-0.751	-3.04	0.00	379	-0.753	-3.23	0.00
ROAc	379	-0.011	-0.75	0.46	379	-0.028	-5.27	0.00
ROAb	379	-0.016	-1.09	0.28	379	-0.028	-4.92	0.00
LTDSE	380	0.684	10.69	0.00	379	0.685	10.16	0.00
TDTA	380	0.078	9.29	0.00	379	0.072	7.77	0.00
LTDMV	379	0.794	11.97	0.00	378	0.716	11.83	0.00
LSALES	379	0.599	8.31	0.00	379	0.534	7.68	0.00
ZSCORE	307	-0.583	-10.47	0.00	308	-0.582	-9.16	0.00
EPSc-if					379	-1.131	-5.64	0.00
EPSb-if					379	-1.027	-4.38	0.00
ROAc-if					379	-0.035	-6.49	0.00
ROAb-if					379	-0.033	-5.97	0.00
LTDSE-if					379	0.864	12.28	0.00
TDTA-if					379	0.096	10.20	0.00
LTDMV-if					378	0.874	13.58	0.00

Panel 2-2: By Period: Late 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	307	-0.427	-2.80	0.01	352	-0.241	-1.82	0.07
EPSb	307	-0.438	-2.44	0.02	352	-0.064	-0.35	0.72
ROAc	313	-0.029	-6.42	0.00	354	-0.025	-6.35	0.00
ROAb	313	-0.027	-5.72	0.00	354	-0.021	-5.43	0.00
LTDSE	313	0.858	11.35	0.00	354	0.790	11.26	0.00
TDTA	313	0.094	9.46	0.00	354	0.085	9.34	0.00
LTDMV	302	0.667	10.70	0.00	354	0.574	8.29	0.00
LSALES	313	0.375	4.85	0.00	354	0.417	6.00	0.00
ZSCORE	257	-0.673	-7.60	0.00	293	-0.580	-6.84	0.00
EPSc-if					352	-0.106	-0.69	0.49
EPSb-if					352	-0.005	-0.03	0.98
ROAc-if					354	-0.026	-5.39	0.00
ROAb-if					354	-0.023	-5.89	0.00
LTDSE-if					354	1.011	13.97	0.00
TDTA-if					354	0.112	11.87	0.00
LTDMV-if					354	0.772	10.43	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16-1 - continued)
T-Test for Industry Median-Adjusted Variables

Panel 3-1: By Effect: EDR-Gain

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	414	-0.759	-3.72	0.00	429	-0.894	-5.00	0.00
EPSb	414	-0.748	-3.24	0.00	429	-0.661	-2.93	0.00
ROAc	415	-0.019	-1.41	0.16	429	-0.034	-6.68	0.00
ROAb	415	-0.022	-1.61	0.11	429	-0.027	-5.30	0.00
LTDSE	416	0.698	11.63	0.00	429	0.691	10.99	0.00
TDTA	416	0.084	9.72	0.00	429	0.072	8.51	0.00
LTDMV	415	0.809	13.07	0.00	429	0.707	11.50	0.00
LSALES	415	0.523	7.63	0.00	429	0.460	7.01	0.00
ZSCORE	336	-0.680	-11.29	0.00	346	-0.680	-10.17	0.00
EPSc-if					429	-1.318	-7.07	0.00
EPSb-if					429	-1.006	-4.41	0.00
ROAc-if					429	-0.045	-7.91	0.00
ROAb-if					429	-0.037	-7.03	0.00
LTDSE-if					429	0.863	13.04	0.00
TDTA-if					429	0.097	10.67	0.00
LTDMV-if					429	0.858	13.22	0.00

Panel 3-2: By Effect: EDR-Loss

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	218	-0.193	-1.12	0.26	244	-0.011	-0.07	0.95
EPSb	218	-0.299	-1.52	0.13	244	-0.067	-0.36	0.72
ROAc	222	-0.020	-4.50	0.00	246	-0.017	-4.74	0.00
ROAb	222	-0.018	-3.81	0.00	246	-0.022	-5.12	0.00
LTDSE	222	0.952	9.97	0.00	246	0.885	10.24	0.00
TDTA	222	0.096	9.00	0.00	246	0.099	8.93	0.00
LTDMV	213	0.662	8.79	0.00	246	0.614	8.44	0.00
LSALES	222	0.429	4.57	0.00	246	0.477	5.73	0.00
ZSCORE	179	-0.599	-5.82	0.00	204	-0.526	-5.77	0.00
EPSc-if					244	0.413	2.48	0.01
EPSb-if					244	0.199	1.05	0.29
ROAc-if					246	-0.010	-3.15	0.00
ROAb-if					246	-0.017	-4.42	0.00
LTDSE-if					246	1.139	12.96	0.00
TDTA-if					246	0.126	11.89	0.00
LTDMV-if					246	0.840	10.51	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16-1 - continued)

T-Test for Industry Median-Adjusted Variables

Panel 3-3: By Effect: Zero-Gain

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	54	-0.448	-1.05	0.30	58	-0.026	-0.08	0.94
EPSb	54	-0.819	-1.57	0.12	58	-0.141	-0.39	0.70
ROAc	55	-0.018	-1.79	0.08	58	-0.014	-1.19	0.24
ROAb	55	-0.029	-1.94	0.06	58	-0.015	-1.26	0.21
LTDSE	55	0.483	3.18	0.00	58	0.434	2.79	0.01
TDTA	55	0.056	2.52	0.01	58	0.037	1.53	0.13
LTDMV	53	0.488	3.15	0.00	57	0.340	1.88	0.07
LSALES	55	0.582	3.22	0.00	58	0.604	3.73	0.00
ZSCORE	49	-0.333	-2.12	0.04	51	-0.123	-0.61	0.54
EPSc-if					58	-0.026	-0.08	0.94
EPSb-if					58	-0.141	-0.39	0.70
ROAc-if					58	-0.014	-1.23	0.22
ROAb-if					58	-0.015	-1.34	0.18
LTDSE-if					58	0.602	3.89	0.00
TDTA-if					58	0.062	2.66	0.01
LTDMV-if					57	0.504	2.69	0.01

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16-1 - continued)
T-Test for Industry Median-Adjusted Variables

Panel 4-1: By Method: Equity-for-Debt Swaps

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	125	-0.142	-0.31	0.76	127	-0.413	-1.19	0.24
EPSb	125	-0.196	-0.43	0.67	127	-0.490	-1.25	0.21
ROAc	125	-0.018	-3.40	0.00	127	-0.018	-3.32	0.00
ROAb	125	-0.021	-3.79	0.00	127	-0.022	-3.03	0.00
LTDSE	126	0.287	4.19	0.00	127	0.267	3.55	0.00
TDTA	126	0.043	4.33	0.00	127	0.033	2.75	0.01
LTDMV	126	0.393	5.66	0.00	127	0.299	4.61	0.00
LSALES	125	1.161	10.29	0.00	127	1.061	9.17	0.00
ZSCORE	108	-0.421	-4.72	0.00	111	-0.460	-4.85	0.00
EPSc-if					127	-0.745	-2.12	0.04
EPSb-if					127	-0.821	-2.05	0.04
ROAc-if					127	-0.023	-4.04	0.00
ROAb-if					127	-0.027	-3.58	0.00
LTDSE-if					127	0.380	4.80	0.00
TDTA-if					127	0.057	4.44	0.00
LTDMV-if					127	0.392	5.13	0.00

Panel 4-2: By Method: All Others Except Equity-for-Debt Swaps

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	561	-0.646	-4.76	0.00	604	-0.555	-4.35	0.00
EPSb	561	-0.704	-4.27	0.00	604	-0.407	-2.52	0.01
ROAc	567	-0.019	-1.95	0.05	606	-0.029	-7.32	0.00
ROAb	567	-0.021	-2.11	0.04	606	-0.025	-6.40	0.00
LTDSE	567	0.868	15.22	0.00	606	0.834	14.93	0.00
TDTA	567	0.095	12.64	0.00	606	0.088	11.87	0.00
LTDMV	555	0.816	15.15	0.00	605	0.721	13.51	0.00
LSALES	567	0.351	6.07	0.00	606	0.355	6.69	0.00
ZSCORE	456	-0.672	-11.48	0.00	490	-0.608	-10.01	0.00
EPSc-if					604	-0.615	-4.47	0.00
EPSb-if					604	-0.475	-2.90	0.00
ROAc-if					606	-0.032	-7.63	0.00
ROAb-if					606	-0.029	-7.41	0.00
LTDSE-if					606	1.052	18.22	0.00
TDTA-if					606	0.113	15.04	0.00
LTDMV-if					605	0.915	16.29	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16-1 - continued)
T-Test for Industry Median-Adjusted Variables

Panel 5-1: By Instrument: Cash

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	448	-0.434	-3.48	0.00	487	-0.366	-3.12	0.00
EPSb	448	-0.415	-2.91	0.00	487	-0.226	-1.47	0.14
ROAc	453	-0.011	-0.91	0.36	489	-0.020	-5.94	0.00
ROAb	453	-0.010	-0.83	0.41	489	-0.018	-5.14	0.00
LTDSE	453	0.770	12.89	0.00	489	0.694	12.47	0.00
TDTA	453	0.076	10.74	0.00	489	0.071	9.52	0.00
LTDMV	442	0.674	12.74	0.00	489	0.612	10.86	0.00
LSALES	453	0.346	5.15	0.00	489	0.389	6.45	0.00
ZSCORE	359	-0.577	-8.94	0.00	392	-0.500	-7.88	0.00
EPSc-if					487	-0.335	-2.67	0.01
EPSb-if					487	-0.220	-1.41	0.16
ROAc-if					489	-0.021	-6.59	0.00
ROAb-if					489	-0.019	-6.07	0.00
LTDSE-if					489	0.899	15.40	0.00
TDTA-if					489	0.091	12.79	0.00
LTDMV-if					489	0.809	13.38	0.00

Panel 5-2: By Instrument: Debt

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	60	-2.005	-2.74	0.01	63	-1.765	-4.01	0.00
EPSb	60	-2.323	-2.42	0.02	63	-1.358	-2.96	0.00
ROAc	60	-0.064	-5.47	0.00	63	-0.086	-3.75	0.00
ROAb	60	-0.083	-4.59	0.00	63	-0.071	-3.25	0.00
LTDSE	60	1.490	6.40	0.00	63	1.870	8.03	0.00
TDTA	60	0.221	6.24	0.00	63	0.234	7.30	0.00
LTDMV	59	1.557	6.70	0.00	62	1.532	8.11	0.00
LSALES	60	0.271	1.94	0.06	63	0.093	0.62	0.54
ZSCORE	51	-1.196	-7.70	0.00	53	-1.358	-6.95	0.00
EPSc-if					63	-2.406	-4.65	0.00
EPSb-if					63	-1.917	-4.01	0.00
ROAc-if					63	-0.105	-4.28	0.00
ROAb-if					63	-0.088	-3.87	0.00
LTDSE-if					63	2.064	8.91	0.00
TDTA-if					63	0.264	7.95	0.00
LTDMV-if					62	1.729	8.86	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16-1 - continued)
T-Test for Industry Median-Adjusted Variables

Panel 5-3: By Instrument: Common Stock

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	135	0.116	0.29	0.78	136	-0.319	-0.97	0.33
EPSb	135	-0.113	-0.26	0.80	136	-0.184	-0.55	0.58
ROAc	135	-0.022	-3.35	0.00	136	-0.025	-3.39	0.00
ROAb	135	-0.027	-2.96	0.00	136	-0.023	-2.91	0.00
LTDSE	136	0.464	5.67	0.00	136	0.287	4.04	0.00
TDTA	136	0.065	5.13	0.00	136	0.034	2.93	0.00
LTDMV	136	0.498	6.61	0.00	136	0.253	4.38	0.00
LSALES	135	1.021	9.60	0.00	136	0.938	8.47	0.00
ZSCORE	120	-0.560	-5.30	0.00	122	-0.524	-4.52	0.00
EPSc-if					136	-0.561	-1.67	0.10
EPSb-if					136	-0.427	-1.26	0.21
ROAc-if					136	-0.031	-3.14	0.00
ROAb-if					136	-0.029	-3.40	0.00
LTDSE-if					136	0.476	5.99	0.00
TDTA-if					136	0.077	4.99	0.00
LTDMV-if					136	0.356	5.42	0.00

Panel 5-4: By Instrument: Preferred Stock

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	15	-3.339	-2.52	0.02	16	-3.283	-1.37	0.19
EPSb	15	-2.874	-3.15	0.01	16	-5.599	-1.69	0.11
ROAc	15	-0.034	-2.60	0.02	16	-0.050	-2.16	0.05
ROAb	15	-0.037	-2.21	0.04	16	-0.070	-2.29	0.04
LTDSE	15	0.850	2.51	0.02	16	1.495	3.22	0.01
TDTA	15	0.104	2.71	0.02	16	0.142	3.39	0.00
LTDMV	15	1.361	2.98	0.01	16	1.626	3.72	0.00
LSALES	15	1.074	2.95	0.01	16	0.821	2.34	0.03
ZSCORE	10	-0.769	-2.63	0.03	10	-0.927	-3.23	0.01
EPSc-if					16	-3.834	-1.60	0.13
EPSb-if					16	-6.137	-1.84	0.09
ROAc-if					16	-0.056	-2.42	0.03
ROAb-if					16	-0.077	-2.48	0.03
LTDSE-if					16	1.726	3.63	0.00
TDTA-if					16	0.166	3.80	0.00
LTDMV-if					16	1.746	4.04	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16-1 - continued)

T-Test for Industry Median-Adjusted Variables

Panel 5-5: By Instrument: Asset

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	28	-1.115	-1.48	0.15	29	-0.077	-0.14	0.89
EPSb	28	-1.268	-1.59	0.12	29	0.070	0.11	0.91
ROAc	29	-0.030	-2.01	0.05	29	-0.017	-1.56	0.13
ROAb	29	-0.030	-2.03	0.05	29	-0.015	-1.37	0.18
LTDSE	29	0.500	2.31	0.03	29	0.663	2.56	0.02
TDTA	29	0.038	1.28	0.21	29	0.046	1.44	0.16
LTDMV	29	0.841	3.31	0.00	29	0.662	2.99	0.01
LSALES	29	0.599	2.24	0.03	29	0.448	1.93	0.06
ZSCORE	24	-0.378	-1.76	0.09	24	-0.321	-1.39	0.18
EPSc-if					29	-0.487	-0.82	0.42
EPSb-if					29	-0.244	-0.41	0.69
ROAc-if					29	-0.023	-2.13	0.04
ROAb-if					29	-0.021	-2.07	0.05
LTDSE-if					29	0.807	3.10	0.00
TDTA-if					29	0.063	2.00	0.06
LTDMV-if					29	0.849	3.72	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16-1 - continued)
T-Test for Industry Median-Adjusted Variables

Panel 6-1: By Period and Instrument: Cash during Early 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	187	-0.745	-3.42	0.00	187	-0.817	-3.85	0.00
EPSb	187	-0.689	-3.03	0.00	187	-0.700	-2.93	0.00
ROAc	187	0.007	0.26	0.80	187	-0.020	-3.13	0.00
ROAb	187	0.009	0.32	0.75	187	-0.019	-2.80	0.01
LTDSE	187	0.718	8.25	0.00	187	0.678	7.04	0.00
TDTA	187	0.071	6.49	0.00	187	0.065	5.05	0.00
LTDMV	186	0.754	8.76	0.00	187	0.731	9.01	0.00
LSALES	187	0.254	2.37	0.02	187	0.252	2.54	0.01
ZSCORE	144	-0.528	-7.74	0.00	146	-0.490	-6.51	0.00
EPSc-if					187	-1.042	-4.95	0.00
EPSb-if					187	-0.864	-3.69	0.00
ROAc-if					187	-0.025	-4.43	0.00
ROAb-if					187	-0.022	-3.78	0.00
LTDSE-if					187	0.870	8.74	0.00
TDTA-if					187	0.085	6.88	0.00
LTDMV-if					187	0.933	10.53	0.00

Panel 6-2: By Period and Instrument: Debt during Early 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	40	-2.244	-2.18	0.04	40	-1.840	-3.31	0.00
EPSb	40	-2.704	-1.94	0.06	40	-1.492	-2.36	0.02
ROAc	40	-0.071	-4.55	0.00	40	-0.103	-3.02	0.00
ROAb	40	-0.099	-3.85	0.00	40	-0.090	-2.74	0.01
LTDSE	40	1.398	4.53	0.00	40	1.878	7.38	0.00
TDTA	40	0.194	4.80	0.00	40	0.230	5.82	0.00
LTDMV	40	1.660	5.21	0.00	39	1.767	7.07	0.00
LSALES	40	0.311	1.75	0.09	40	0.112	0.53	0.60
ZSCORE	33	-1.305	-5.89	0.00	32	-1.510	-5.24	0.00
EPSc-if					40	-2.727	-4.78	0.00
EPSb-if					40	-2.204	-3.51	0.00
ROAc-if					40	-0.128	-3.57	0.00
ROAb-if					40	-0.110	-3.25	0.00
LTDSE-if					40	2.093	8.08	0.00
TDTA-if					40	0.266	6.28	0.00
LTDMV-if					39	1.986	7.98	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16-1 - continued)
T-Test for Industry Median-Adjusted Variables

Panel 6-3: By Period and Instrument: Common Stock - Early 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	121	0.164	0.37	0.72	121	-0.188	-0.53	0.60
EPSb	121	-0.107	-0.22	0.83	121	-0.036	-0.10	0.92
ROAc	121	-0.016	-3.21	0.00	121	-0.016	-2.74	0.01
ROAb	121	-0.026	-3.33	0.00	121	-0.017	-2.27	0.02
LTDSE	122	0.412	4.87	0.00	121	0.235	3.39	0.00
TDTA	122	0.057	4.74	0.00	121	0.028	2.38	0.02
LTDMV	122	0.481	6.01	0.00	121	0.263	4.12	0.00
LSALES	121	1.149	10.76	0.00	121	1.058	9.57	0.00
ZSCORE	107	-0.469	-4.96	0.00	108	-0.450	-4.43	0.00
EPSc-if					121	-0.456	-1.26	0.21
EPSb-if					121	-0.298	-0.82	0.41
ROAc-if					121	-0.019	-3.26	0.00
ROAb-if					121	-0.021	-2.69	0.01
LTDSE-if					121	0.385	4.86	0.00
TDTA-if					121	0.056	4.38	0.00
LTDMV-if					121	0.336	4.85	0.00

Panel 6-4: By Period and Instrument: Preferred Stock - Early 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	14	-2.721	-2.16	0.05	15	-3.283	-1.28	0.22
EPSb	14	-2.340	-2.95	0.01	15	-5.763	-1.63	0.13
ROAc	14	-0.034	-2.48	0.03	15	-0.053	-2.16	0.05
ROAb	14	-0.038	-2.13	0.05	15	-0.075	-2.30	0.04
LTDSE	14	0.915	2.57	0.02	15	1.548	3.14	0.01
TDTA	14	0.109	2.66	0.02	15	0.150	3.42	0.00
LTDMV	14	1.440	2.98	0.01	15	1.709	3.72	0.00
LSALES	14	1.188	3.20	0.01	15	0.925	2.59	0.02
ZSCORE	10	-0.769	-2.63	0.03	10	-0.927	-3.23	0.01
EPSc-if					15	-3.869	-1.51	0.15
EPSb-if					15	-6.336	-1.78	0.10
ROAc-if					15	-0.060	-2.43	0.03
ROAb-if					15	-0.082	-2.50	0.03
LTDSE-if					15	1.779	3.52	0.00
TDTA-if					15	0.175	3.86	0.00
LTDMV-if					15	1.831	4.05	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16-1 - continued)

T-Test for Industry Median-Adjusted Variables

Panel 6-5: By Period and Instrument: Asset during Early 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	17	-0.120	-0.18	0.86	16	-0.262	-0.30	0.77
EPSb	17	-0.126	-0.19	0.85	16	-0.263	-0.27	0.79
ROAc	17	-0.009	-0.65	0.52	16	-0.012	-0.93	0.37
ROAb	17	-0.008	-0.60	0.56	16	-0.013	-1.05	0.31
LTDSE	17	0.391	1.56	0.14	16	0.365	1.60	0.13
TDTA	17	0.012	0.32	0.75	16	0.019	0.54	0.60
LTDMV	17	0.903	2.68	0.02	16	0.480	1.99	0.06
LSALES	17	0.660	1.80	0.09	16	0.558	1.81	0.09
ZSCORE	13	-0.149	-0.52	0.61	12	-0.128	-0.35	0.73
EPSc-if					16	-0.734	-0.85	0.41
EPSb-if					16	-0.526	-0.55	0.59
ROAc-if					16	-0.018	-1.39	0.18
ROAb-if					16	-0.017	-1.36	0.19
LTDSE-if					16	0.500	2.10	0.05
TDTA-if					16	0.033	0.92	0.37
LTDMV-if					16	0.642	2.67	0.02

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16-1 - continued)
T-Test for Industry Median-Adjusted Variables

Panel 7-1: By Period and Instrument: Cash during Late 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	261	-0.211	-1.45	0.15	300	-0.085	-0.63	0.53
EPSb	261	-0.219	-1.21	0.23	300	0.070	0.35	0.72
ROAc	266	-0.024	-5.42	0.00	302	-0.019	-5.36	0.00
ROAb	266	-0.023	-5.34	0.00	302	-0.017	-4.56	0.00
LTDSE	266	0.806	9.92	0.00	302	0.703	10.39	0.00
TDTA	266	0.079	8.56	0.00	302	0.074	8.25	0.00
LTDMV	256	0.617	9.26	0.00	302	0.538	7.09	0.00
LSALES	266	0.410	4.78	0.00	302	0.474	6.26	0.00
ZSCORE	215	-0.609	-6.25	0.00	246	-0.507	-5.58	0.00
EPSc-if					300	0.106	0.71	0.48
EPSb-if					300	0.182	0.90	0.37
ROAc-if					302	-0.018	-4.88	0.00
ROAb-if					302	-0.017	-4.81	0.00
LTDSE-if					302	0.917	12.77	0.00
TDTA-if					302	0.095	11.00	0.00
LTDMV-if					302	0.732	9.05	0.00

Panel 7-2: By Period and Instrument: Debt during Late 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	20	-1.525	-1.93	0.07	23	-1.635	-2.22	0.04
EPSb	20	-1.562	-1.98	0.06	23	-1.124	-1.81	0.08
ROAc	20	-0.051	-3.08	0.01	23	-0.056	-2.82	0.01
ROAb	20	-0.052	-3.14	0.01	23	-0.038	-2.29	0.03
LTDSE	20	1.675	5.03	0.00	23	1.856	3.97	0.00
TDTA	20	0.274	3.99	0.00	23	0.240	4.33	0.00
LTDMV	19	1.340	4.99	0.00	23	1.133	4.22	0.00
LSALES	20	0.193	0.85	0.41	23	0.059	0.31	0.76
ZSCORE	18	-0.996	-5.94	0.00	21	-1.127	-5.07	0.00
EPSc-if					23	-1.848	-1.81	0.08
EPSb-if					23	-1.418	-1.94	0.06
ROAc-if					23	-0.065	-2.75	0.01
ROAb-if					23	-0.049	-2.74	0.01
LTDSE-if					23	2.012	4.43	0.00
TDTA-if					23	0.261	4.76	0.00
LTDMV-if					23	1.294	4.32	0.00

For the description of the table headings, see bottom of Panel 1.

(TABLE 5-16-1 - continued)

T-Test for Industry Median-Adjusted Variables

Panel 7-3: By Period and Instrument: Common Stock - Late 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	14	-0.299	-0.74	0.47	15	-1.379	-1.78	0.10
EPSb	14	-0.163	-0.42	0.68	15	-1.376	-1.68	0.12
ROAc	14	-0.070	-1.57	0.14	15	-0.097	-2.20	0.05
ROAb	14	-0.035	-0.60	0.56	15	-0.070	-1.90	0.08
LTDSE	14	0.919	3.27	0.01	15	0.706	2.27	0.04
TDTA	14	0.138	2.14	0.05	15	0.083	1.85	0.09
LTDMV	14	0.638	2.89	0.01	15	0.169	1.78	0.10
LSALES	14	-0.088	-0.26	0.80	15	-0.025	-0.06	0.95
ZSCORE	13	-1.307	-2.31	0.04	14	-1.092	-1.71	0.11
EPSc-if					15	-1.407	-1.61	0.13
EPSb-if					15	-1.463	-1.75	0.10
ROAc-if					15	-0.124	-1.69	0.11
ROAb-if					15	-0.099	-2.19	0.05
LTDSE-if					15	1.214	4.41	0.00
TDTA-if					15	0.244	2.89	0.01
LTDMV-if					15	0.512	2.50	0.03

Panel 7-4: By Period and Instrument: Asset during Late 1980's

Variable	One Year before Redemption				In the Year of Redemption			
	N	Mean	t-value	Pr>|t|	N	Mean	t-value	Pr>|t|
EPSc	11	-2.653	-1.72	0.12	13	0.151	0.24	0.82
EPSb	11	-3.034	-1.84	0.10	13	0.480	0.68	0.51
ROAc	12	-0.060	-2.07	0.06	13	-0.023	-1.23	0.24
ROAb	12	-0.062	-2.15	0.05	13	-0.017	-0.88	0.40
LTDSE	12	0.654	1.65	0.13	13	1.029	2.07	0.06
TDTA	12	0.074	1.54	0.15	13	0.078	1.41	0.19
LTDMV	12	0.753	1.87	0.09	13	0.887	2.23	0.05
LSALES	12	0.513	1.27	0.23	13	0.314	0.86	0.41
ZSCORE	11	-0.648	-2.01	0.07	12	-0.515	-1.79	0.10
EPSc-if					13	-0.184	-0.23	0.82
EPSb-if					13	0.103	0.16	0.88
ROAc-if					13	-0.030	-1.58	0.14
ROAb-if					13	-0.026	-1.51	0.16
LTDSE-if					13	1.186	2.40	0.03
TDTA-if					13	0.099	1.83	0.09
LTDMV-if					13	1.104	2.65	0.02

For the description of the table headings, see bottom of Panel 1.

FIGURE 6-1

CUMULATIVE ABNORMAL RETURN BEHAVIOR AROUND THE EDR ANNOUNCEMENT

All Sample (N=214)

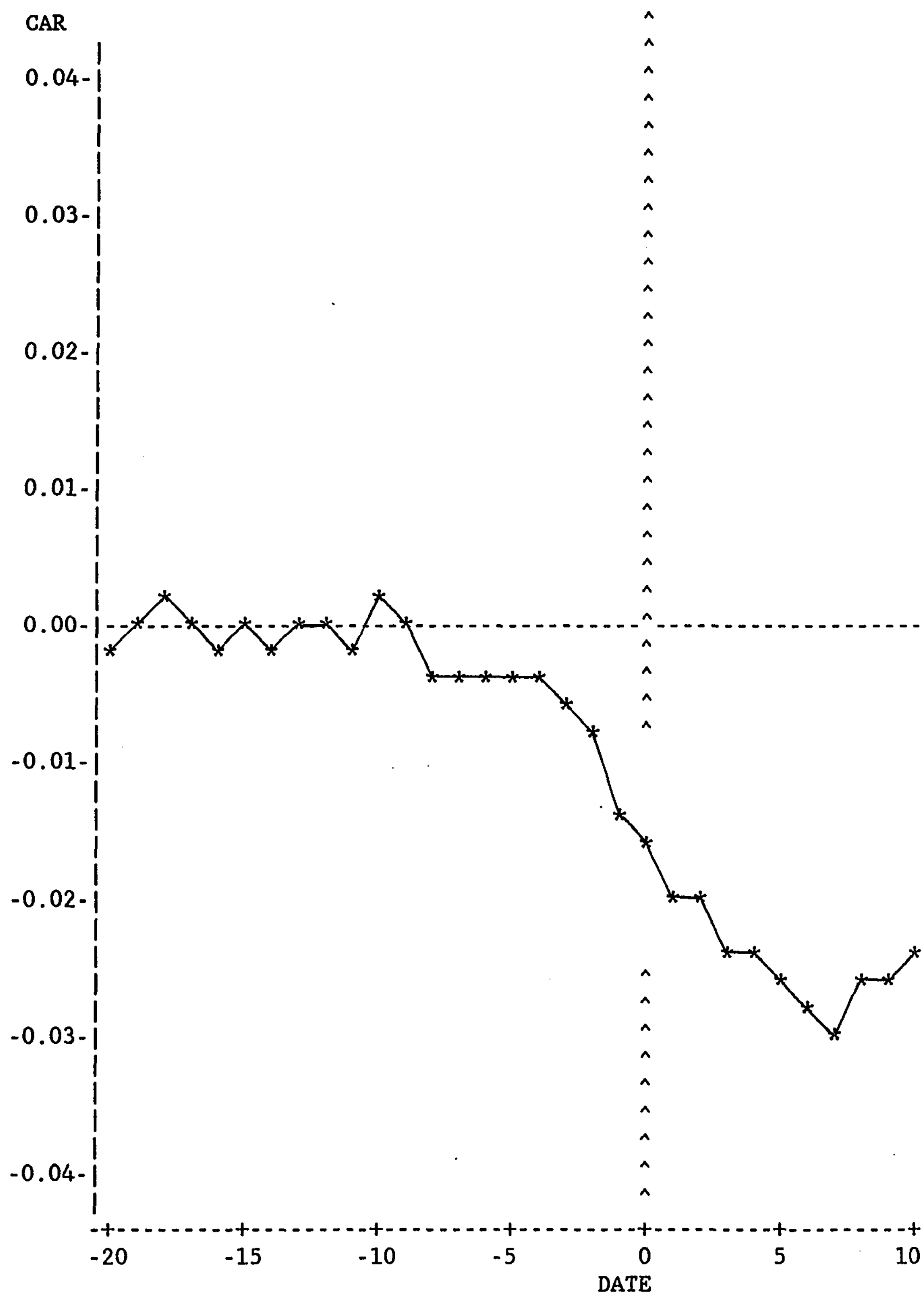


FIGURE 6-2

CUMULATIVE ABNORMAL RETURN BEHAVIOR AROUND THE EDR ANNOUNCEMENT

By Period: Early 1980'S versus Late 1980'S

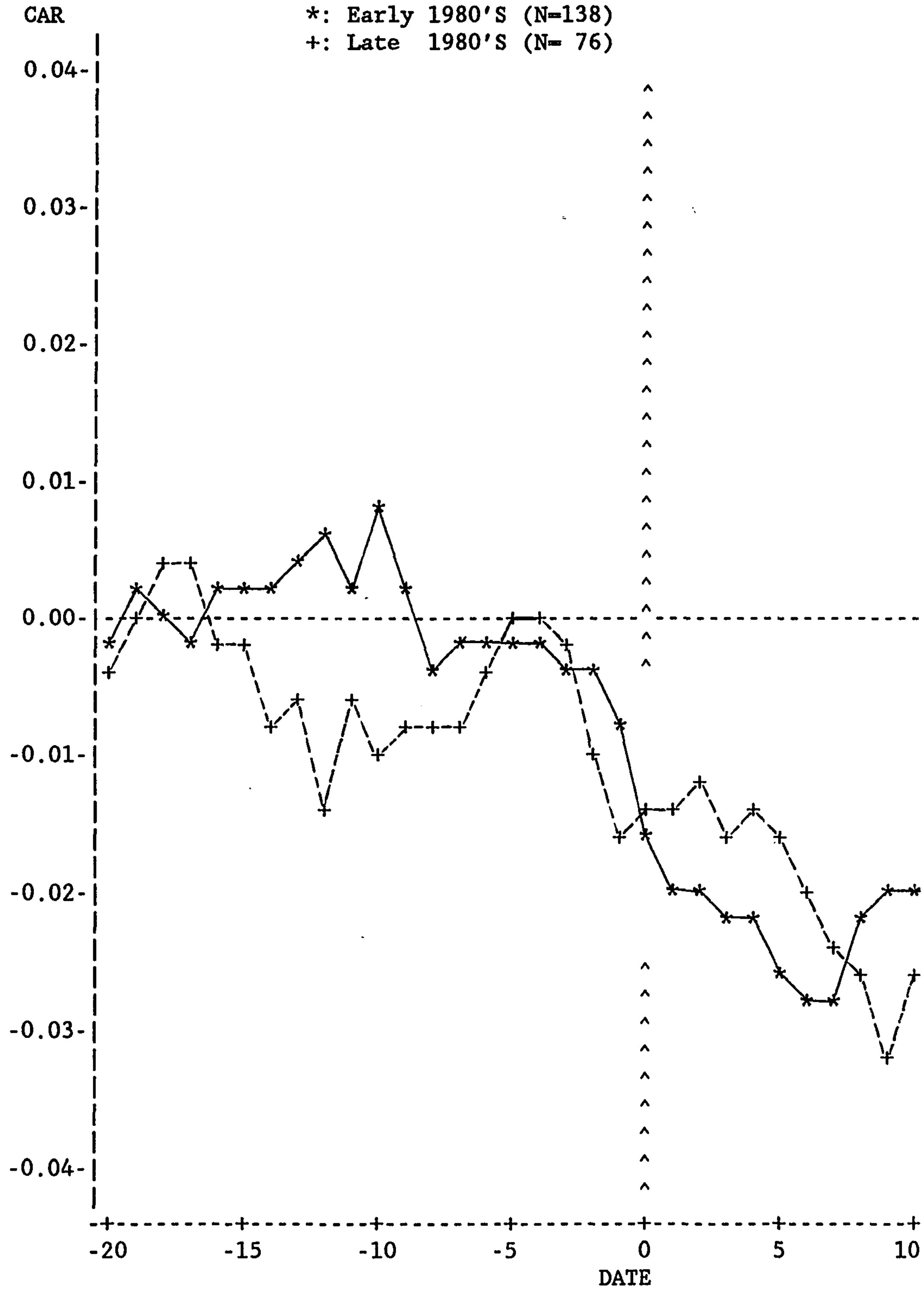


FIGURE 6-3

CUMULATIVE ABNORMAL RETURN BEHAVIOR AROUND THE EDR ANNOUNCEMENT

By Effect: EDR-Gain, EDR-Loss, and Zero-Gain

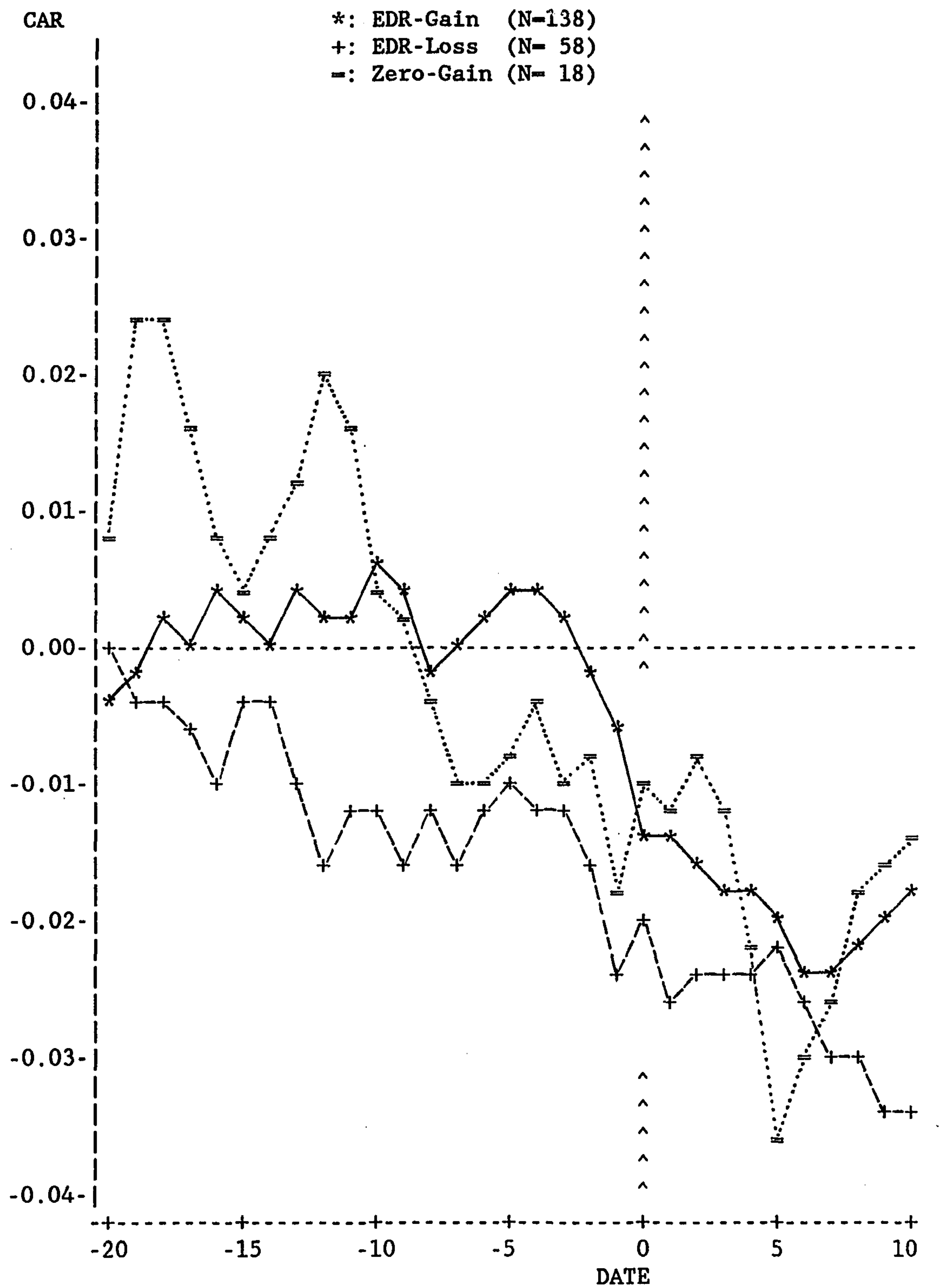


FIGURE 6-4

CUMULATIVE ABNORMAL RETURN BEHAVIOR AROUND THE EDR ANNOUNCEMENT

By Method: Equity-for-Debt Swaps versus All Other Methods

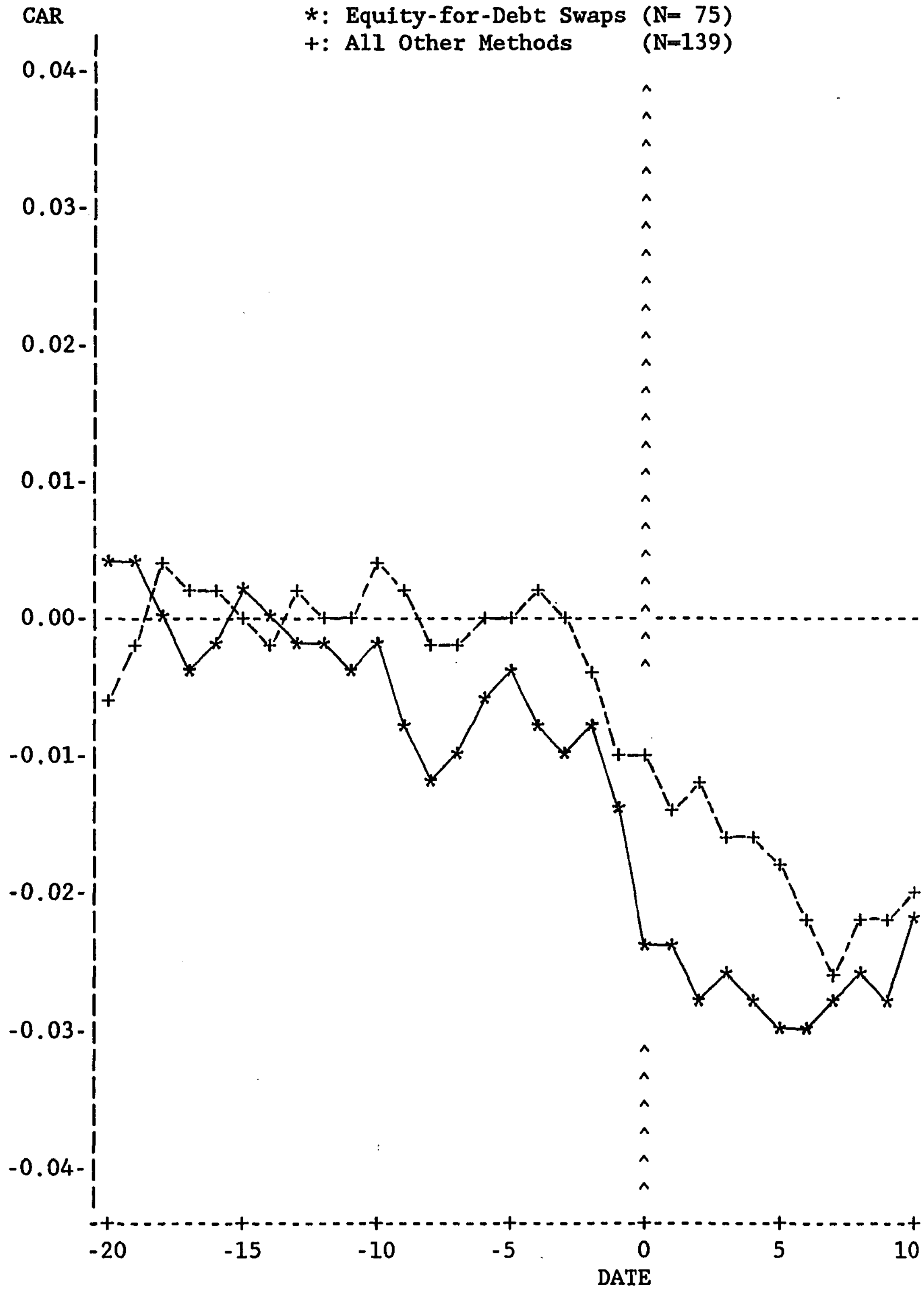


FIGURE 6-5.1

CUMULATIVE ABNORMAL RETURN BEHAVIOR AROUND THE EDR ANNOUNCEMENT

By Instrument: Cash, Debt, and Common Stock

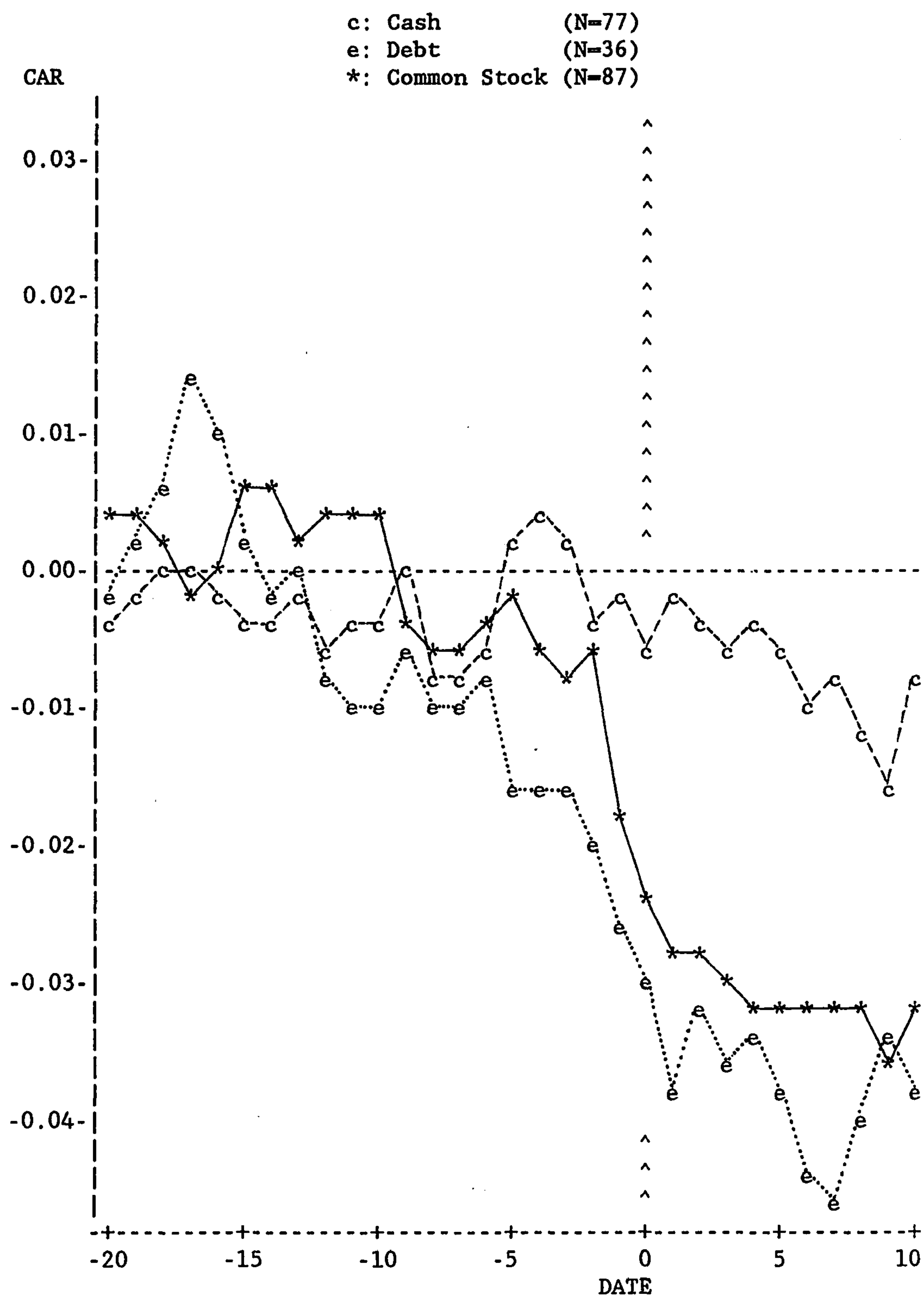


FIGURE 6-5.2

CUMULATIVE ABNORMAL RETURN BEHAVIOR AROUND THE EDR ANNOUNCEMENT

By Instrument: Preferred versus Asset

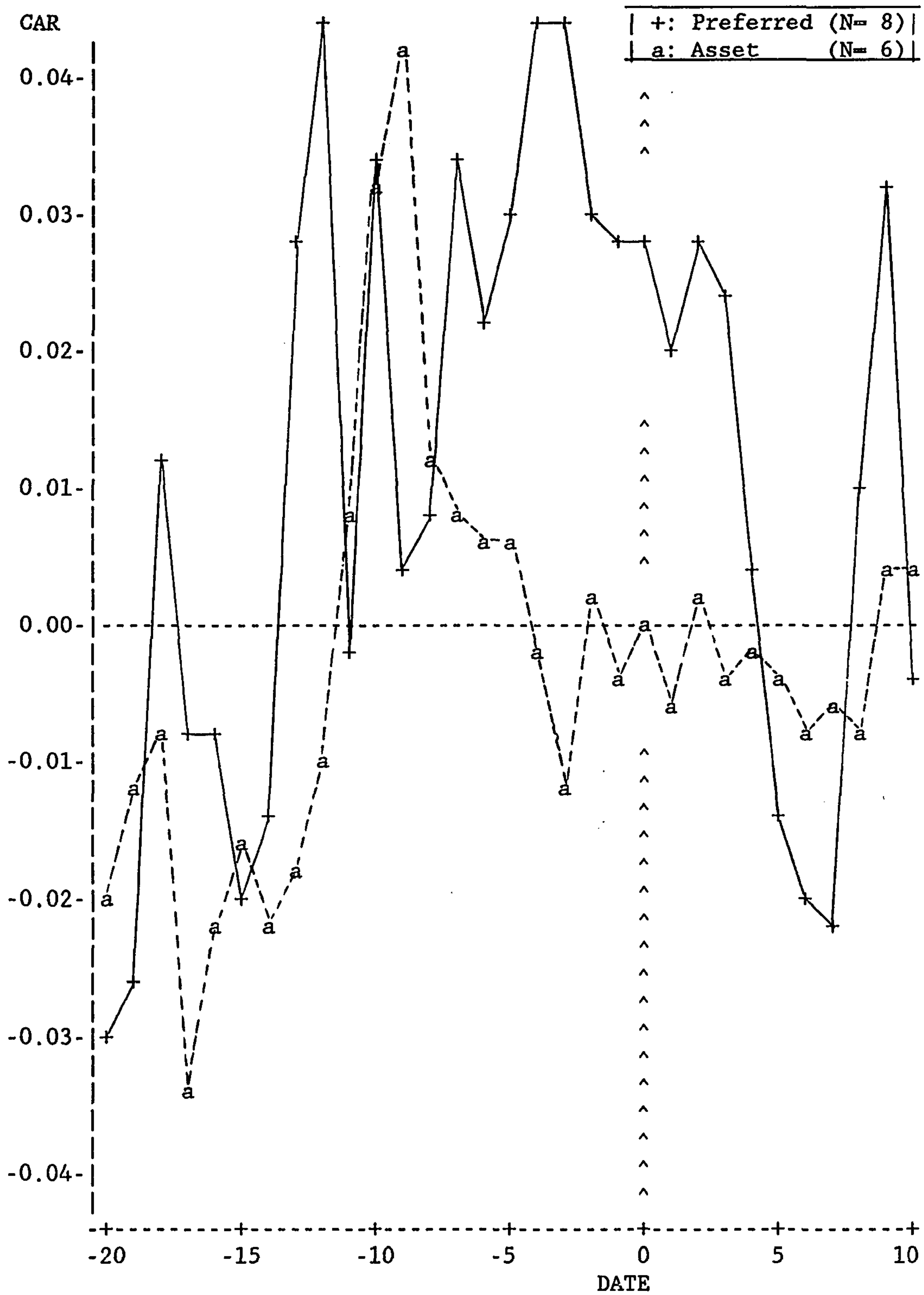


FIGURE 6-6

CUMULATIVE ABNORMAL RETURN BEHAVIOR AROUND THE EDR ANNOUNCEMENT

By Instrument during Early 1980'S: Cash, Debt, and Common Stock

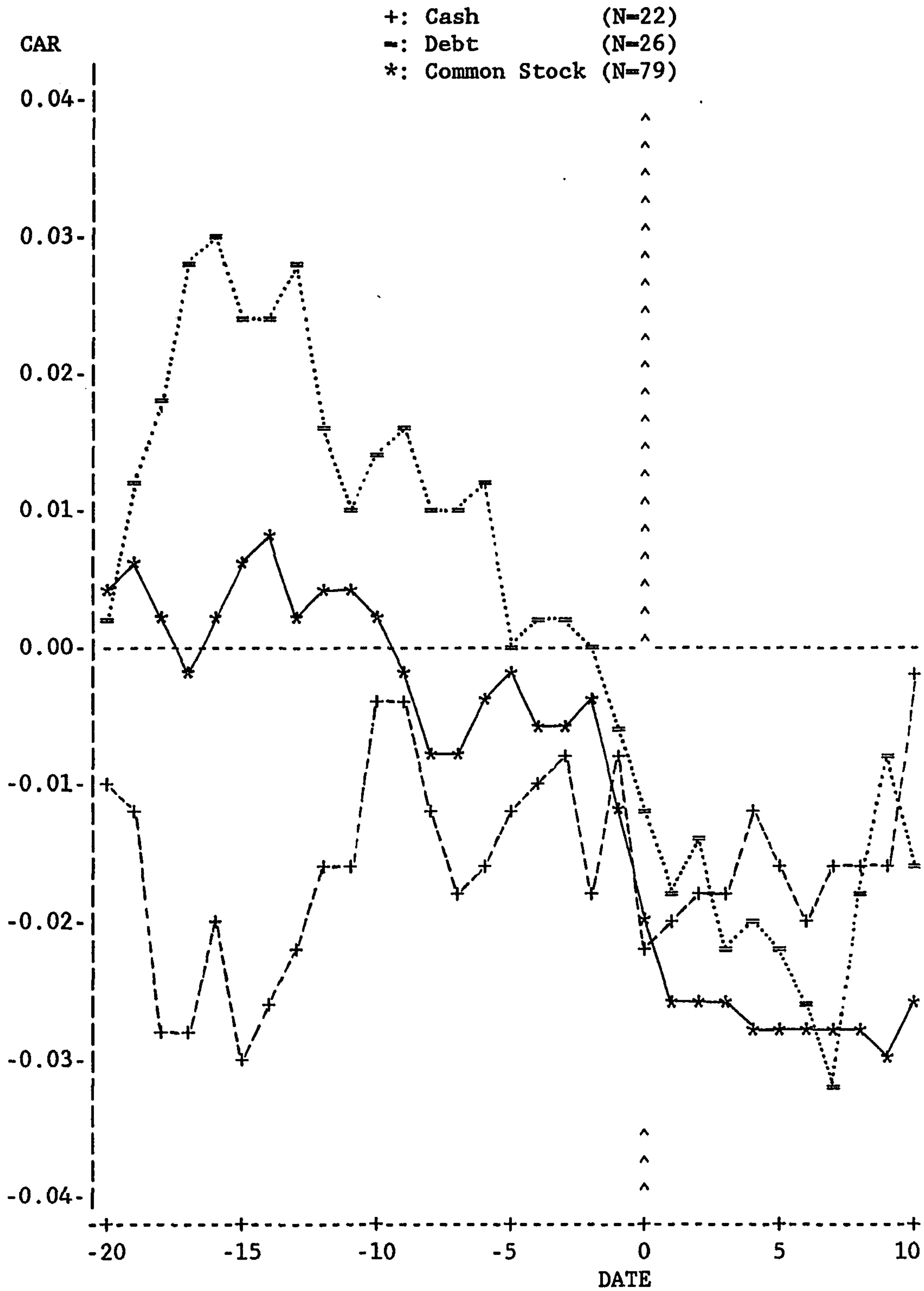


FIGURE 6-7

CUMULATIVE ABNORMAL RETURN BEHAVIOR AROUND THE EDR ANNOUNCEMENT

By Instrument during Late 1980'S: Cash, Debt, and Common Stock

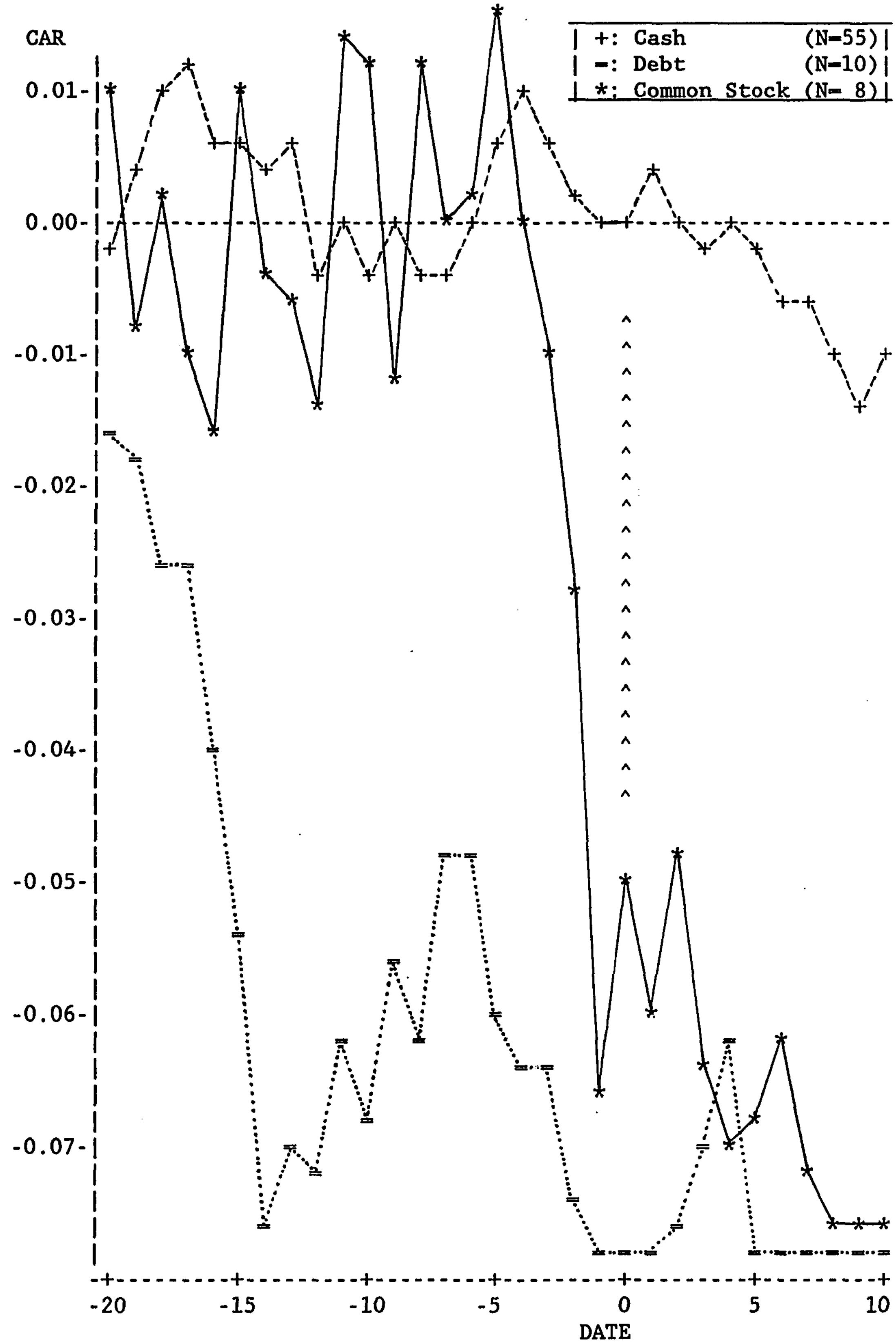


FIGURE 6-8
CUMULATIVE ABNORMAL RETURN BEHAVIOR AROUND THE EDR ANNOUNCEMENT
<u>By Period within Common Stock</u>

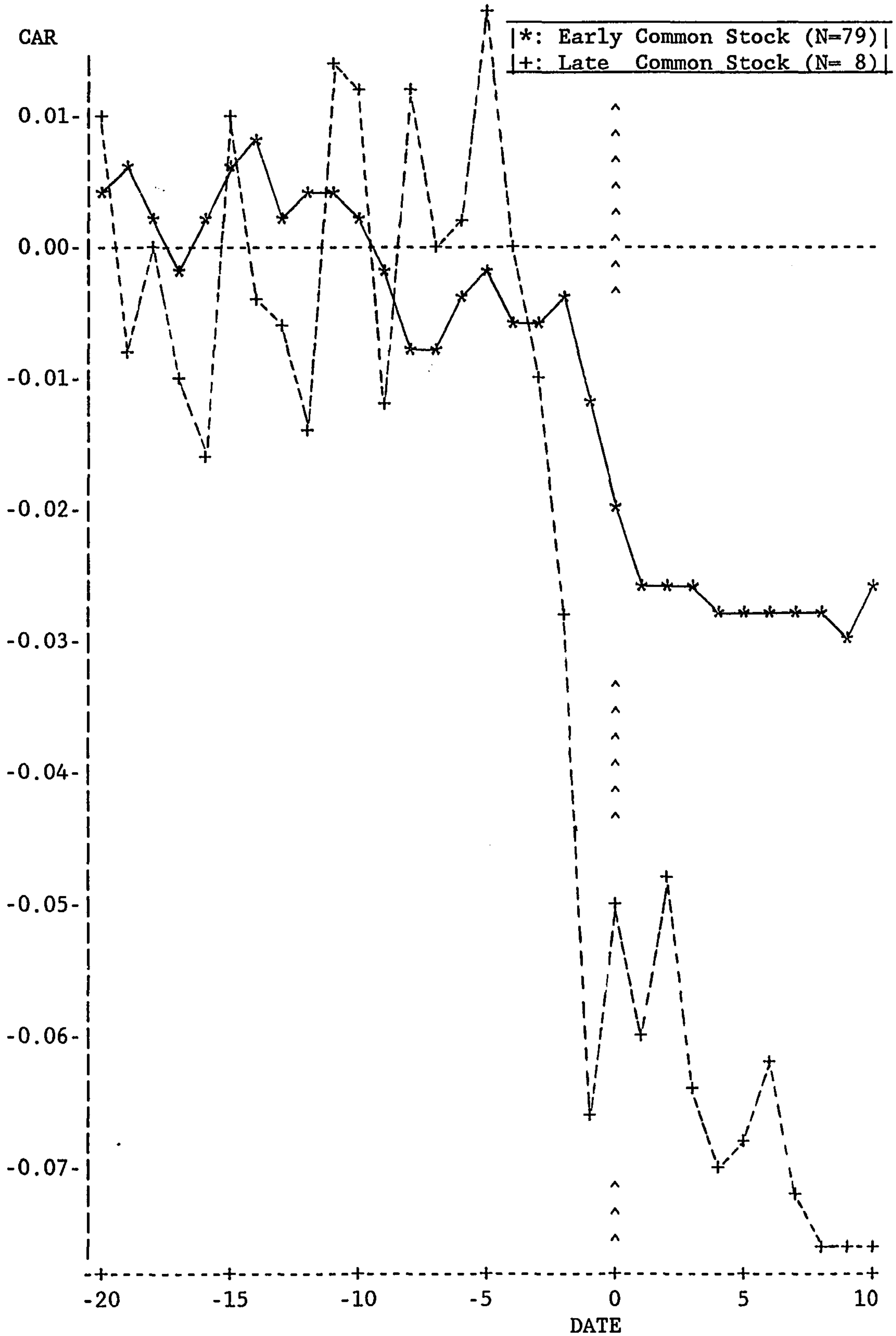


FIGURE 6-9

CUMULATIVE ABNORMAL RETURN BEHAVIOR AROUND THE EDR ANNOUNCEMENT
<u>By Period within Cash</u>

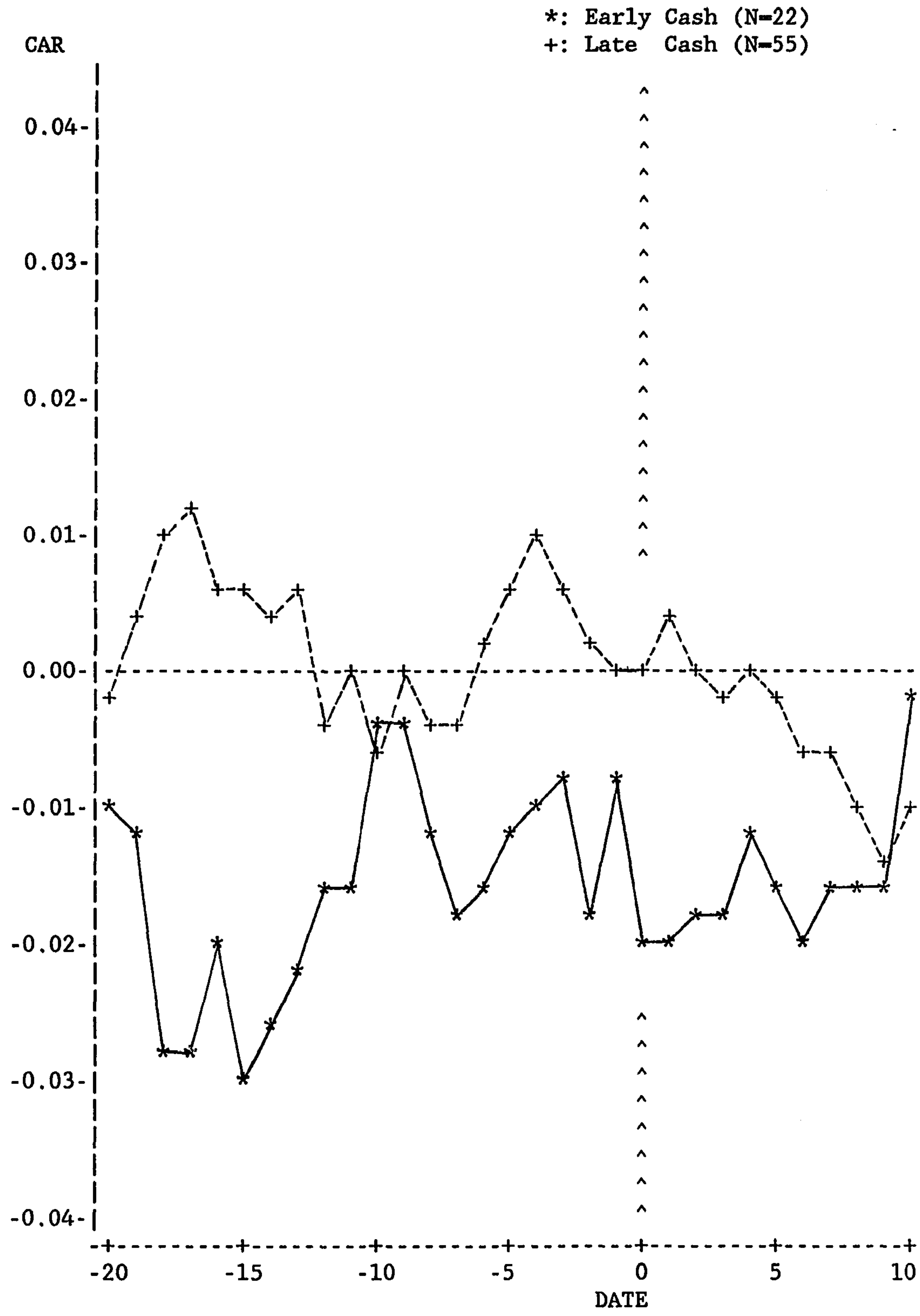
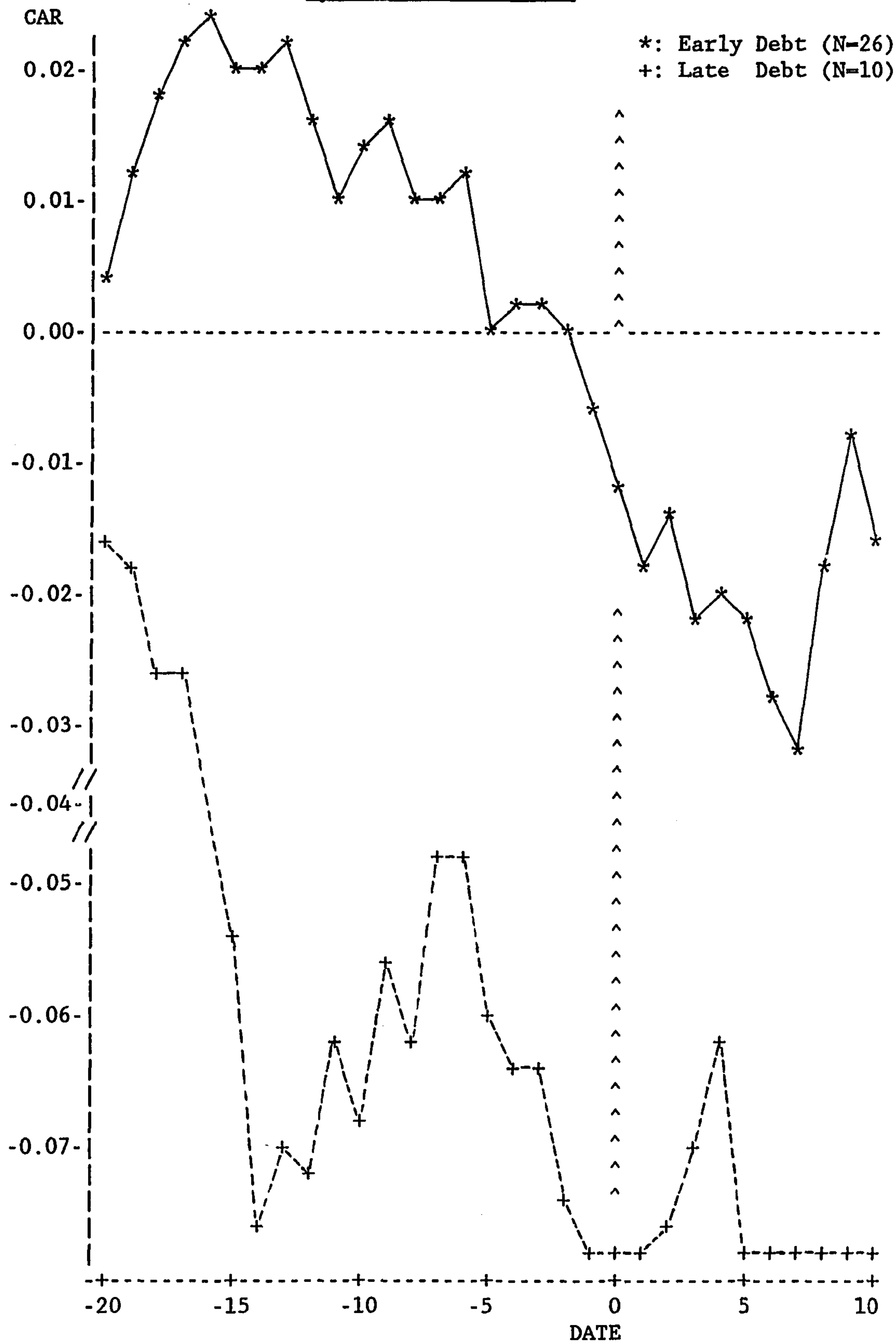


FIGURE 6-10
CUMULATIVE ABNORMAL RETURN BEHAVIOR AROUND THE EDR ANNOUNCEMENT
By Period within Debt



BIBLIOGRAPHY

Abdel-khalik, A. R. and Jung, Kooyul (1985), "Incentives for Debt-for-Equity Swaps and the Effects of Frozen Discount Rates," Working Paper, University of Florida, 1985.

AICPA, "Accounting for Convertible Debt Debt Issued with Stock Purchase Warrants," <u>APB Opinion No. 14</u> (March 1969).

AICPA, "Early Extinguishment of Debt," <u>APB Opinion No. 26</u> (October 1972).

AICPA, "Reporting the Results of Operations," <u>APB Opinion No. 30</u> (March 1969).

Altman, E. I. (1968), "Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy," <u>The Journal of Finance</u> (September 1968), pp. 589-609.

Backer, Morton and Gosman, Martin L. (1985), "Management's Perspective on Bond Downgrades," <u>Financial Analysts Journal</u>, Vol. 41, No. 4 (July/August 1985), pp. 77-79.

Begley, Joy (1990), "Debt Covenants and Accounting Choice," <u>Journal of Accounting and Economics</u> (January 1990), pp. 125-139.

Benis, Martin and Johnson, Robert T. (1975), "The Premature Retirement of Debt," <u>Management Accounting</u> (January 1975), pp. 43-47.

Brennan, Michael J., Schwartz, Eduardo S., and Emanuel, David (1984), "Optimal Financial Policy and Firm Valuation/Discussion," <u>The Journal of Finance</u>, Vol. 39, No. 3 (July 1984), pp. 593-609.

Bulow, J. and Shoven, J. (1978), "The Bankruptcy Decision," <u>The Bell Journal of Economics and Management Science</u> (Autumn 1978), pp. 437-456.

Collins, D., Rozeff, M. and Dhaliwal, D. (1981), "The Economic Determinants of the Market Reaction to Proposed Mandatory Accounting Changes in the Oil and Gas Industry: A Cross Sectional Analysis," <u>Journal of Accounting and Economics</u> (March 1981), pp. 37-71.

Cornett, Marcia M. and Travlos, Nickolaos G. (1989), "Information Effects Associated with Debt-for-Equity and Equity-for-Debt Exchange Offers," <u>The Journal of Finance</u>, Vol. 44, No. 2 (June 1989), pp. 451-468.

DeAngelo, H. and Masulis, R. W. (1980), "Optimal Capital Structure under Corporate and Personal Taxation," <u>Journal of Financial Economics</u> 8 (March 1980), pp. 3-30.

Defeo, Victor J., Lambert, Richard A., and Larcker, David F. (1989), "The Executive Compensation Effects of Equity-for-Debt Swaps," The Accounting Review, Vol. 64, No. 2 (April 1989), pp. 201-227.

Dietrich, J. Richard (1984a), "Effects of Early Bond Refundings: An Empirical Investigation of Security Returns," Journal of Accounting & Economics, Vol. 6, No. 1 (April 1984), pp. 67-96.

Dietrich, J. Richard (1984b), "Discussion of Methodological Issues Related to the Estimation of Financial Distress Prediction Models," Journal of Accounting Research (Supplement 1984), pp. 83-86.

Dodd, P. and Warner, B. (1983), "On Corporate Governance: A Study of Proxy Contests," Journal of Financial Economics (April 1983), pp. 401-438.

Duke, Joanne C. and Hunt, Herbert G., III (1990), "An Empirical Examination of Debt Covenant Restrictions and Accounting-Related Debt Proxies," Journal of Accounting and Economics (January 1990), pp. 45-63.

Dyl, E. A. and Spahr, R. W. (1983), "Taxes and the Refunding of Discount Bonds," Journal of Financial Research, Vol. 6 (Winter 1983), pp. 265-273.

Eckbo, B. E. (1986), "Valuation Effects of Corporate Debt Offerings," Journal of Financial Economics 15 (February 1986), pp. 119-152.

El-Gazzar, Samir and Pastena, Victor (1990) "Negotiated Accounting Rules in Private Financial Contracts," Journal of Accounting and Economics (March 1990), pp. 381-396.

El-Gazzar, Samir and Pastena, Victor (1989) "Negotiated Accounting Rules in Private Debt Agreements," Working Paper, Baruch College, 1989.

Elliott, John A. and Shaw, Wayne H. (1988), "Write-Offs as Accounting Procedures to Manage Perceptions," Journal of Accounting Research, Vol. 26 (Supplement 1988), pp. 91-119.

Fama, E. and Miller, M. (1972), The Theory of Finance (N.Y.: Holt, Reinhart and Winston, 1972).

FASB, "Reporting Gains and Losses from Extinguishment of Debt," Statement of Financial Accounting Standards, No. 4, (March 1975).

FASB, "Accounting by Debtors and Creditors for Troubled Debt Restructurings," Statement of Financial Accounting Standards, No. 15, (June 1977).

FASB, "Extinguishment of Debt Made to Satisfy Sinking-Fund Requirements," Statement of Financial Accounting Standards, No. 64, (September 1982).

FASB, "Extinguishment of Debt," Statement of Financial Accounting Standards, No. 76, (November 1983).

Finnerty, John D. (1985), "Stock-for-Debt Swaps and Shareholder Returns," Financial Management, Vol. 14, No. 3 (Autumn 1985), pp. 5-17.

Fischer, Edwin O., Heinkel, Robert, and Zechner, Josef (1989), "Dynamic Capital Structure Choice: Theory and Tests," The Journal of Finance, Forthcoming in 1989.

Fisher, I. (1930), The Theory of Interest (New York: MacMillan, 1930), (New York: Augustus M. Kelley, Publishers, 1965 (Reprinted from the 1930 Edition)).

Foster, George (1977), "Quarterly Accounting Data: Time-Series Properties and Predictive Ability Results," The Accounting Review (January 1977), pp. 1-21.

Galai, D. and Masulis, R. W. (1976), "The Option Pricing Model and the Risk Factor of Stock," Journal of Financial Economics, Vol. 3 (1976), pp 53-81.

Greene, R. (1982), "Games Companies Play," Forbes (August 30, 1982), p. 43.

Hand, John R. M. (1989), "Did Firms Undertake Debt-Equity Swaps for an Accounting Paper Profit or True Financial Gain?" The Accounting Review (October 1989), pp. 587-623.

Hand, John R. M. (1987), "Debt-Equity Swaps," Unpublished Dissertation, University of Chicago (August 1987).

Haw, In-Mu, Pastena, Victor, and Lilien, Steven (1990), "Market Manifestation of Nonpublic Information Prior to Mergers: The Effect of Ownership Structure," The Accounting Review (April 1990), pp. 432-451.

Haw, In-Mu and Lustgarten, Steven (1988), "Evidence on Income Measurement Properties of ASR No. 190 and SFAS No. 33 Data," Journal of Accounting Research, Vol. 26, No. 2 (Autumn 1988), pp. 331-352.

Heinkel, R. (1982), "A Theory of Capital Structure Relevance under Imperfect Information," The Journal of Finance, Vol. 37 (1982), pp. 1141-1150.

Jensen, M. and Meckling, W. (1976), "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure," Journal of Financial Economics 3 (Spring, 1976), pp. 92-121.

Kalay, A. and Shimrat, A. (1986), "Firm Value and Seasoned Equity Issues: Price Pressure, Wealth Redistribution or Negative Information," Working Paper (New York University, 1986).

Kane, Alex, Marcus, Alan J., McDonald, Robert L., and Masulis, Ronald W., (1984), "How Big Is the Tax Advantage to Debt?/Discussion," The Journal of Finance, Vol. 39, No. 3 (July 1984), pp. 841-855.

Kim, H. (1978), "A Mean Variance Theory of Optimal Capital Structure and Corporate Debt Capacity," The Journal of Finance, Vol. 33 (1978), pp. 45-63.

Kraus, A. and Litzenberger, R. (1973), "A State Preference Model of Optimal Financial Leverage," The Journal of Finance 28 (September 1973), pp. 911-921.

Leftwich, R. (1983), "Accounting Information in Private Markets: Evidence from Private Lending Agreements," The Accounting Review (January 1983), pp. 23-42.

Leland, H. and Pyle, D. (1977), "Information Asymmetries, Financial Structure and Financial Intermediaries," The Journal of Finance, Vol. 32 (1977), pp. 371-387.

Lilien, S. and Pastena, V. (1982), "Determinants of Intramethod Choice in the Oil and Gas Industry," Journal of Accounting and Economics 4 (1982), pp. 145-170.

Lys, Thomas and Sivaramakrishnan, Konduru (1988), "Earnings Expectations and Capital Restructuring: The Case of Equity-for-Debt Swaps," Journal of Accounting Research, Vol. 26, No. 2 (Autumn 1988), pp. 273-299.

Maddala, G. S. (1983), Limited Dependent and Qualitative Variables in Econometrics (Cambrdge, England: Cambridge University Press, 1983).

Masulis, R. W. (1980), "The Effects of Capital Structure Change of Security Prices: A Study of Exchange Offers," Journal of Financial Economics 8 (1980), pp. 139-178.

Masulis, R. W. (1983), "The Impact of Capital Structure Change on Firm Value: Some Estimates," The Journal of Finance 38 (1983), pp. 107-126.

McCarthy, Joseph E. and Melicher, Ronald W. (1988), "Analysis of Bond Rating Changes in a Portfolio Context," Quarterly Journal of Business and Economics, Vol. 27, No. 4 (Autumn 1988), pp. 69-86.

Mikkelson, W. H. and Parch, M. M. (1986), "Valuation Effects of Security Offerings and the Issuance Process," Journal of Financial Economics 15 (February 1986), pp. 31-60

Miller, M. (1977), "Debt and Taxes: Presidential Address of Annual Meeting of American Finance Association," The Journal of Finance 32 (May 1977), pp. 261-275.

Miller, Merton H. and Rock, Kevin (1985), "Dividend Policy Under Asymmetric Information," The Journal of Finance, Vol. 40, No. 4 (September 1985), pp. 1031-1051.

Modigliani, F. and Miller, M. (1958), "The Cost of Capital, Corporate Finance and the Theory of Investment," The American Economic Review 48 (June 1958), pp. 261-297.

Modigliani, F. and Miller, M. (1963), "Corporate Income Taxes and the Cost of Capital: A Correction," The American Economic Review 53 (June 1963), pp. 433-443.

Myers, Stewart C. (1984), "The Capital Structure Puzzle," The Journal of Finance, Vol. 39, No. 3 (July 1984), pp. 575-592.

Myers, Stewart C. and Majluf, Nicholas S. (1984), "Corporate Financing and Investment Decisions When Firms Have Information That Investors Do Not Have," Journal of Financial Economics, Vol. 13, No. 2 (June 1984), pp. 187-221.

Palepu, Krishna G. (1986), "Predicting Takeover Targets: A Methodological and Empirical Analysis," Journal of Accounting and Economics (June 1986), pp. 3-35.

Peavy, John W., III and Scott, Jonathan A. (1985a), "A Closer Look at Stock-for-Debt Swaps," Financial Analysts Journal, Vol. 41, No. 3 (May/June 1985), pp. 44-50.

Peavy, John W., III and Scott, Jonathan A. (1985b), "The Effect of Stock for Debt Swaps on Security Returns," Financial Review, Vol. 20, No. 4 (November 1985), pp. 303-327.

Robichek, A. and Myers, S. (1966), "Problems in the Theory of Optimal Capital Structure," Journal of Financial and Quantitative Analysis 1 (1966), pp. 1-35.

Rogers, Ronald C. and Owers, James E. (1985), "Equity for Debt Exchanges and Stockholder Wealth," Financial Management, Vol. 14, No. 3 (Autumn 1985), pp. 18-26.

Ross, S. A. (1977), "The Determinant of Financial Structure: The Incentive-Signaling Approach," The Bell Journal of Economics and Social Science 8 (1977), pp. 23-40.

Sanger, G. and McConnell, J. (1986), "Stock Exchange Listings, Firm Value, and Security Market Efficiency: The Impact of NASDAQ," Journal of Financial Quantitative Analysis (March 1986), pp. 1-25.

Scholes, M. S. and Williams, J. (1977), Estimating Betas from Non-Synchronous Trading," Journal of Financial Economics, Vol. 5 (December 1977), pp. 309-327.

Scott, J. (1976), "A Theory of Optimal Capital Structure," The Bell Journal of Economics and Management Science (Spring 1976), pp. 33-54.

Scott, Jonathan A., Hempel, George H., and Peavy, John W., III (1985), "The Effect of Stock-for-Debt Swaps on Bank Holding Companies," Journal of Banking & Finance (Netherlands), Vol. 9, No. 2 (June 1985), pp. 233-251.

SEC, Accounting Series Release No. 138 (January 12, 1973).

Smith, C. W., Jr. (1986), "Investment Banking and the Capital Acquisition Process," Journal of Financial Economics 15 (February 1986), pp. 3-29.

Smith, C. W. and Warner, J. B. (1979), "On Financial Contracting: An Analysis of Bond Covenants," Journal of Financial Economics, Vol. 7 (June 1979), pp. 117-161.

Travlos, N. (1987), "Corporate Takeovers Bids, Methods of Payment and Bidding Firm Stock Return," The Journal of Finance (October 1987), pp. 943-963.

Vu, Joseph D. (1986), "An Empirical Investigation of Calls of Non-Convertible Bonds," Journal of Financial Economics, Vol. 16, No. 2 (June 1986), pp. 235-265.

Watts, R. J. and Zimmerman, J. L. (1986), Positive Accounting Theory (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1986), Ch. 3-6, 8-10.

Willens, R. and Mirsky, B. M. (1984), "The Corporate Tax Provisions of the Deficit Reduction Act of 1984," The Tax Advisor (October 1984), pp. 578-592.

Zaima, Janis K. and McCarthy, Joseph E. (1988), "The Impact of Bond Rating Changes on Common Stocks and Bonds: Tests of the Wealth Redistribution Hypothesis," Financial Review, Vol. 23, No. 4 (November 1988), pp. 483-498.

Zmijewski, M. E. (1984), "Methodological Issues Related to the Estimation of Financial Distress Prediction Models," Journal of Accounting Research (Supplement 1984), pp. 59-82.