

CONGLOMERATE MERGERS AND ACQUISITIONS
VS.
HORIZONTALS AND VERTICALS
DO THE STOCKHOLDERS DISTINGUISH?

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To:
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I. Introduction

Anybody who graduates from business school in this day and age has a pre-programmed answer to the question: what is the chief responsibility of the CEO of a public corporation? Overwhelmingly, the answer is: to maximize the wealth of the present shareholders. We can look around at countless examples of how this maxim of corporate responsibility is violated, especially in the realm of mergers and acquisitions.

You're getting cynical.

This paper focuses on the hypothesis that a merger of the pure conglomerate type, where the customers and technology of the acquired firm differ from those of the buying company, is much less acceptable to the shareholders than a horizontal merger (buying a competitor) or a vertical merger, where a customer or supplier is acquired. The big assumption in this hypothesis is that no overpayment occurs through excess premium, and the comparison boils completely down to logic itself. This assumption is probably THE critical item in the analysis, but we must start somewhere. Stated otherwise, the conglomerate merger makes absolutely no sense to this author, and non-conglomerate ones have the potential to be successful.

Unless management has good reason to believe that a merger transaction can produce a market value higher than the investor could obtain himself by diversifying his own portfolio, the company should not make the acquisition, according to Salter and Weinhold (8). They go on to explain that there are only two ways to create value through an acquisition: 1) by producing an income stream greater than what could be realized from a port-

folio investment in the two companies, and 2) by reducing the variability of the income stream more than what could be accomplished from a portfolio investment in the two businesses.

if the acquirer doesn't overpay for this value

Many investors believe unrelated diversification offers them a superior means of reducing their investment risk; however, since simple portfolio diversification can eliminate unsystematic, firm related, risk, why should a conglomerate offer any advantages? Salter and Weinhold discuss the widespread belief that a strong management team at the acquired company ensures realization of the potential benefits of diversification. They claim that the core skills and resources of the surviving firm are critical to achieving these benefits of diversification, since it made the acquisition, it has to make the acquisition work. Besides, if the acquired firm is well managed, it will be priced accordingly by the capital market; if it is not well managed, it will present a drain on capital and management resources of the acquirer. Thus, acquisition is not a remedy for a floundering acquirer.

Mason and Goudzwaard (6) designed a study, which compared "portfolios" of firms (pure-plays) approximating the asset compositions of 22 actual conglomerates with those conglomerates, with the intent to prove the conglomerates would perform better. Their tests indicated that the portfolios outperformed the conglomerates both in terms of return on assets and accumulated stockholder wealth, over the 1962-1967 period. ✓

Dodd (2) studied the effects of mergers, with no distinction about conglomeration, by looking at the excess residuals at the date of merger announcement for bidder and target firms.

He discovered that, on average, stockholders of target firms earn 13 percent abnormal returns, and stockholders of bidder firms lose over 1 percent abnormal returns on the announcement date of the merger. He subsequently separated the firms into groups of completed and cancelled mergers. Naturally, the target firms earned the most where the mergers were completed. His findings are not that surprising, since one would have expected a target firm to be bid up past its net worth, due to repeated historical proof, and that the excess value must come from, where else, the acquirer. This excess value placed upon target firms has spawned some social controversy regarding the "waste" of unproductive money, which could have been used for the bettering of "society". As Seligman (9) argues, stockholders of the acquired firm will take their gains and reinvest them into the economy--not stuff them under their mattresses. The argument really is whether the bidding stockholders want their value transferred away.

*you mean
past data*

?

Nordhaus' (7) Dumbo Theory provides interesting insight into why managers periodically launch into a frenzy of merger activity. Like politicians, they like to build empires. In addition, there is a well established relation between executive compensation and company size. An acquisition, which does not profit stockholders, will probably enrich corporate officers. His study entails the creation of the Vulture Fund, a mutual fund of an equal share of the ten largest conglomerate mergers, which was observed during the period from January 1, 1981 to March 31, 1982. Using a benchmark value of 100 on December 31, 1980, the Vulture Fund's value decreased to 83.7 (16.3% drop) compared with 96.0 for the DJIA (4% decline) and 91.1 (8.9% decline) for the S&P 500, all over the period described above.

Fortune scrutinized the ten biggest conglomerate acquisitions made during 1971 by firms on that year's list of the 500 largest industrial corporations. The study tried to measure the effect on the EPS of the acquiring companies, and what 1981 EPS would have been had the mergers not taken place, and then compared those figures to the actual results. Using EPS as a yardstick, the results were evenly divided between favorable (to the shareholders) and unfavorable mergers. However, when measuring ROI with the price paid for the acquisition against its estimated 1981 earnings, reality set in. Most of the acquisitions produced ROI figures less than 10%; the median ROE of the Fortune 500 in 1981 was 13.8%.

This study I believe used accounting rate of return.

Another unfortunate example of the conglomerate merger is the U.S. Steel and Marathon Oil entanglement(10). U.S. Steel has been losing \$200 million per quarter on its basic steel business in 1982, and its mills are operating at 40% of capacity. Solution? It took on \$5.9 billion debt to purchase Marathon for \$6.6 billion. Faced with the combined whammy of the depressed oil and steel markets, Steel's only recourse has been to sell many of its prized assets in real estate, natural resource reserves, and barge lines, which have provided economies of scale in steelmaking and distribution. In fact, the firm has run so low on cash that it was forced to make its \$335 million employee pension fund contribution with shares of its own convertible preferred stock. It is no wonder U.S. Steel's shares have dropped from \$32.75 to \$17.65 in the last year--one-third of its \$52 per share book value.

A final example is the obviously prudent move of Xerox Corp. to acquire Crum and Forster, the Nation's 18th largest property and casualty insurer (1). The CEO of this poorly performing firm claimed that this acquisition could be viewed as a diversification of risk, and also a highly aggressive approach to make Xerox a stronger company. Immediately, Moody's lowered its ratings of several debt issues of Xerox, specifically citing the proposed acquisition of C and F. This acquisition came at a time when the property and casualty business was in one of its worst earnings slumps in history, with C&F's earnings down 42% and Xerox's off 16% in the first half of 1982. My hat is off to Xerox!

II. Methodology and Data

The data used in this study consist of a sample of 15 conglomerate and 14 non-conglomerate mergers completed between 1969 and 1979, surviving firms listed on the NYSE, provided by the FTC List of Acquisitions(1948-1979), with the target companies having asset values of at least \$10million. For isolation purposes, I looked for firms which only made one acquisition in the year selected.

The period considered is 6 months prior to and 6 months after the announcement month, as reported by the Wall Street Journal. This is based on Mandelker's (5) argument for the efficient market hypothesis, stating that stock prices adjust instantaneously to any new information, including merger announcements. Therefore I submit that the stockholders "voice" their opinions of any news within a few months of the announcements, and it is not necessary

However, many wall-street say it takes time for the effect of the merger to become visible.

to study the effects way out into the future. We merely study the immediate stock price returns to analyze the reaction.

The basic methodology of the study involves the use of the Capital Asset Pricing Model

$$R_{it} = R_{ft} + B_i (R_{mt} - R_{ft}) + e_{it}$$

where:

R_{it} = rate of return of security i over period t (period t is one month),

R_{mt} = rate of return on a value weighted market index over period t ,

R_{ft} = the risk free rate as determined by 30 day U.S. Treasury Bills over period t ,

B_i = $\text{cov}(R_{it}, R_{mt}) / \text{VAR}(R_{mt})$ for security i in the year the acquisition was announced, as published by Value Line,

e_{it} = residual term of security i at period t , a measure of abnormal returns to stockholders of firm i in period t . Its expected value is zero

R_{it} , R_{mt} , R_{ft} were obtained from CRSP monthly returns tapes.

In equilibrium, the expected value of the residual is zero. However, when a large, firm-related economic event occurs, the residual moves positively or negatively, directly related to the direction of the stock price movement, and is a reflection of the abnormal gains or losses to the stockholders due to the event.

I have separated into 2 groups the conglomerates and non-conglomerates and calculated their residuals, averaging them over all the firms in each group, where

$$AR_t = 1/N \sum_{i=1}^N AR_{it}$$

and N is the number of firms in each group, so that for each month relative to the merger (-6,...,0,...,+6), all the firms are aligned to the month of their merger announcements.

In addition, the cumulative average residuals are obtained by summing across the time periods, where

$$CAR = \sum_{t=-6}^{+6} AR_t$$

which explain what, over the entire 12 month period, the stockholders earned or lost in total.

Kitching (3) claims that an acquisition must be given two to seven years to properly analyze its outcome. As stated before, the efficient market will discount all expected future cash flows resulting from a merger, as soon as the market has the pertinent news; this information is readily available within days of the announcement. Moreover, some companies make so many acquisitions that to isolate one from the other becomes impossible unless a short time span is chosen for the study. Therefore, I am taking exception to Mr. Kitching.

Your argument about the number of mergers made by a firm makes it hard to analyze a particular merger, but does not negate Kitching's point. Without taking it, it can't be disproven.

Tables 1 and 2 list the mergers by type, acquiring firm and Beta, target firm, and the announcement date published by the Wall Street Journal. The conglomerate acquisitions are pure conglomerates, and the non-conglomerates are a mixture of pure horizontal and pure verticals, as decided by the Federal Trade Commission.

Table 3 displays both the average and cumulative average residuals for both groups. These are shown graphically in figures 1 and 2. Looking at months (-1,0,+1), we see the residuals of the conglomerates to be -.44%, +.17%, and 2.45%, respectively, and residuals of the non-conglomerates to be +1.06%, -2.13%, and

TABLE 1

CONGLOMERATES

<u>ACQUIRER</u>	<u>BETA</u>	<u>ACQUIRED</u>	<u>DATE OF ANNOUNCEMENT</u>
Gulf and Western	1.35	Kayser-Roth	6/24/75
Kidde	1.30	Victor Comptometer	3/9/77
Northwest Industries	1.30	Microdot	1/27/76
Colt Industries	1.20	Garlock, Inc.	11/19/75
Bendix Corp.	1.10	Amer. For. Prod.	3/13/70
FMC Corp.	1.10	Marine Colloids	7/1/77
RCA Corp.	1.02	Coronet Industries	10/12/70
Greyhound	1.00	Armour/Genl. Host	1/28/69
Esmark	1.00	STP Corp.	3/14/78
Koppers, Inc.	.95	Thiem Corp.	11/28/75
Tenneco, Inc.	.90	Monroe Auto Equip.	12/13/76
Singer Co.	.88	Layne and Bowler	10/3/69
Westinghouse	.87	Longines-Wittnauer	9/30/70
Coca Cola Corp.	.64	Aqua-Chem	1/23/70
Norton Simon, Inc.	.42	Max Factor & Co.	11/9/72

Beta was obtained from Value Line in the year of announcement as close to (prior) the date as possible.

The announcement date is the first publication by Wall Street Journal.

TABLE 2NON-CONGLOMERATES

<u>ACQUIRER</u>	<u>BETA</u>	<u>ACQUIRED</u>	<u>DATE OF ANNOUNCEMENT</u>
Allis-Chalmers	1.30	Amer. Air Filter	7/31/78
Honeywell, Inc.	1.30	Incoterm	10/14/77
Gannett, Inc.	1.20	Speidel Newspapers	12/21/76
Honeywell, Inc.	1.16	GE Computer	5/21/70
St. Joe Minerals	1.10	Tenn. Cons. Coal	1/14/76
Mesa Petroleum	1.06	Pubco Petroleum	11/9/72
St. Regis Paper	1.05	Southland Paper	6/1/77
Eaton Corp.	1.00	Cutler-Hammer	6/27/78
Black and Decker	.98	McCulloch Corp.	7/12/73
Kennecott Corp.	.95	Carborundum	11/16/77
Timken Co.	.85	Iatrobe Steel	1/27/75
Heublein, Inc.	.81	Spring Valley Food	6/20/72
Hershey Foods Corp.	.75	Y & S Candies	9/14/77
National Steel Corp.	.75	Granite City Steel	4/20/71

TABLE 3
RESIDUALS

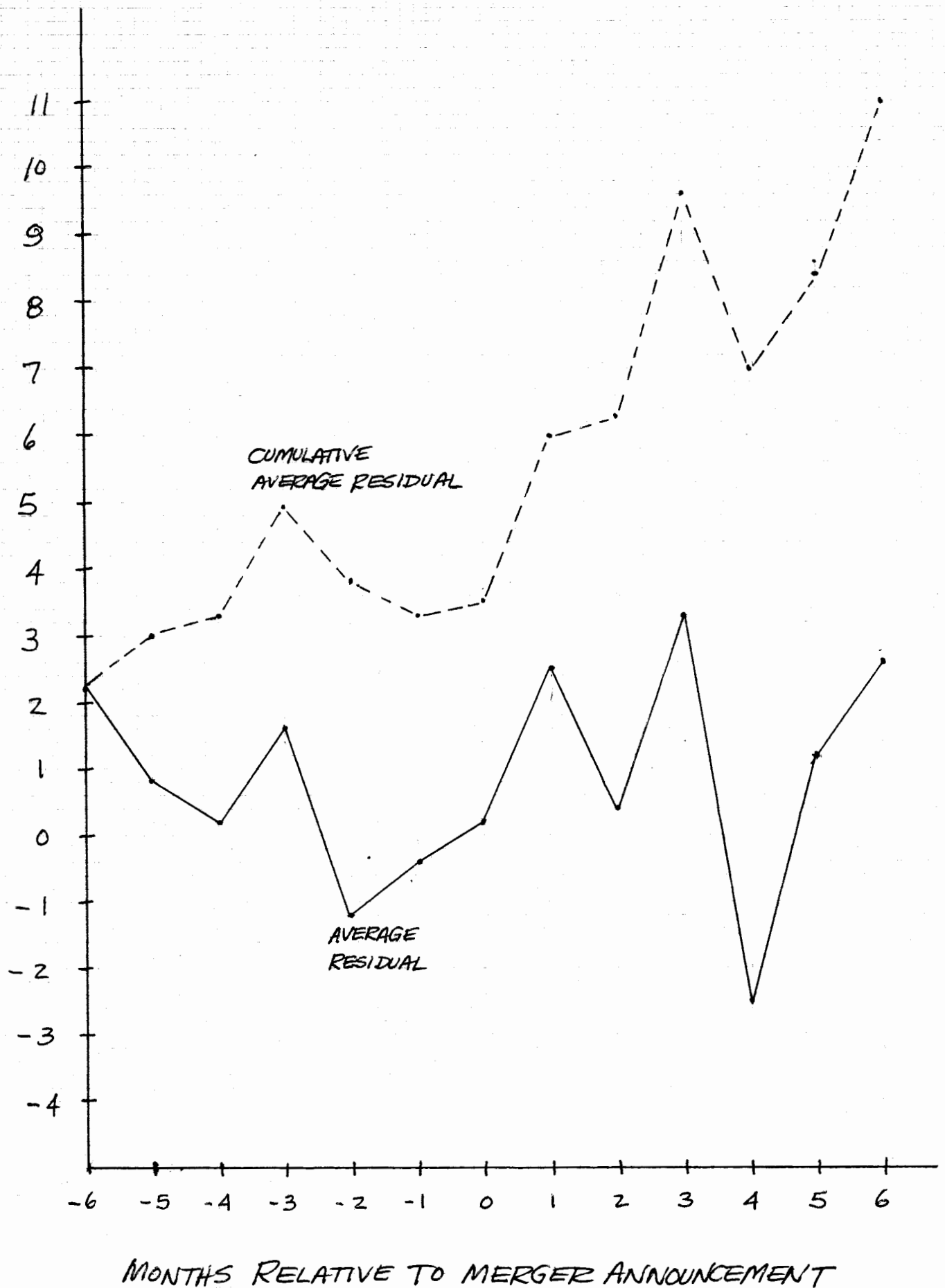
<u>CONGLOMERATES</u>		<u>MONTH</u>	<u>NON-CONGLOMERATES</u>	
<u>AR</u>	<u>CAR</u>		<u>AR</u>	<u>CAR</u>
2.23	2.23	-6	1.10	1.10
.83	3.06	-5	.95	2.05
.23	3.29	-4	3.93	5.98
1.66	4.95	-3	-3.02	2.96
-1.19	3.76	-2	- .63	2.33
- .44	3.32	-1	1.06	3.39
.17	3.49	0	-2.13	1.26
2.45	5.94	+1	-1.24	.02
.35	6.29	+2	1.06	1.08
3.29	9.58	+3	-1.19	- .11
-2.46	7.12	+4	1.63	1.52
1.23	8.35	+5	-3.63	-2.11
2.63	10.98	+6	-1.99	-4.10

ALL RESIDUALS ARE IN PERCENT TERMS

very interesting

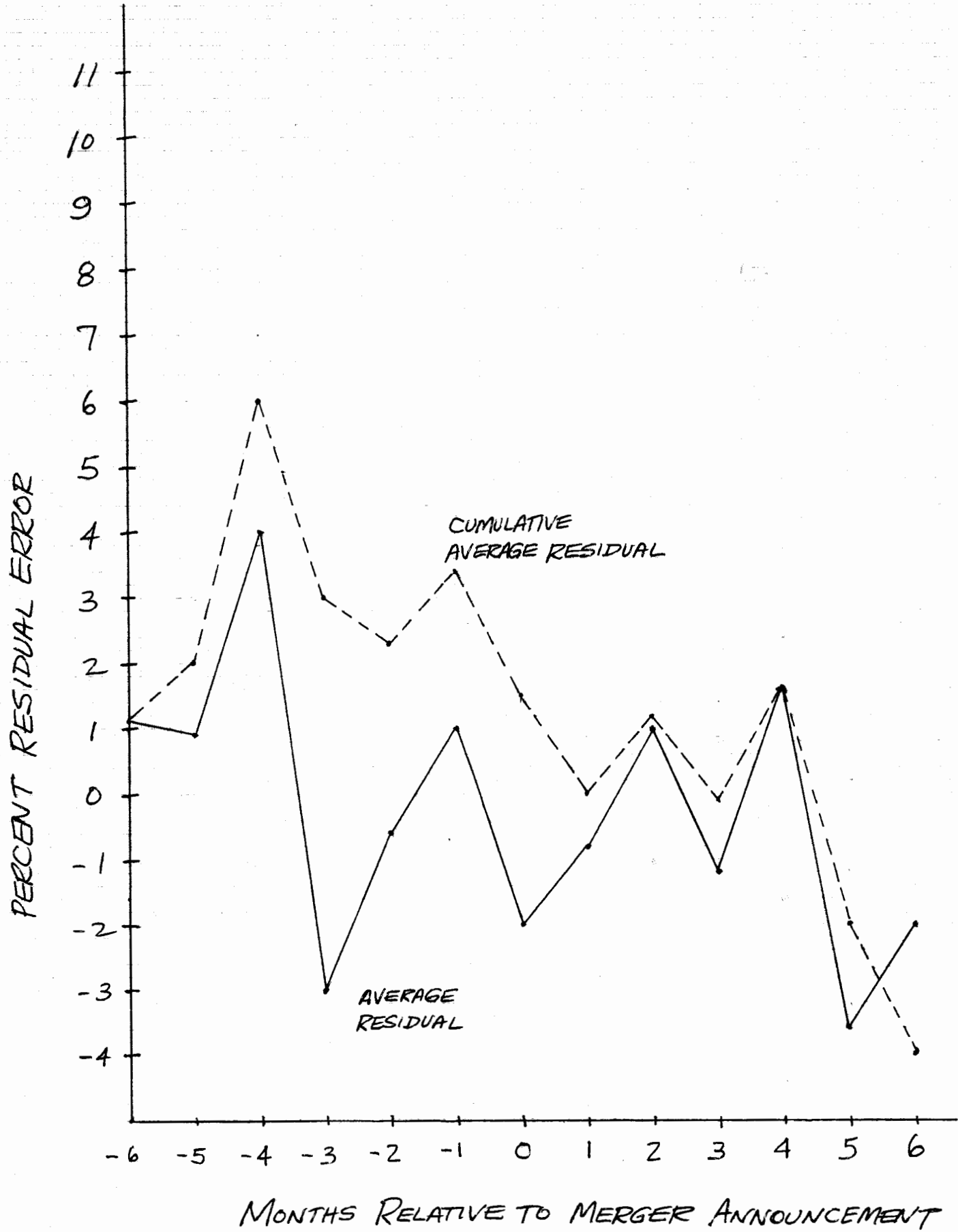
CONGLOMERATES

FIGURE 1



NON-CONGLOMERATES

FIGURE 2



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-1.24%, respectively. Using a t-statistic = + or- 2 as a minimum benchmark of significance, none of the above figures quite meet the test. This does not, however, detract from any of the overall significance of what is happening graphically.

*Too high?
- what do you mean?*

Perhaps by not using daily data, as Dodd (2) did, I did not capture the large glitch around the announcement DAY, but the results do present the antithesis of my hypothesis. The graphs in figures 1 and 2 seem to illustrate a rejection of non-conglomerate mergers and a general optimism for conglomerate ones. The CARs drop 5% over the 12 month period for the nons and rise 9% for the conglomerates. The AR curves are very similar in shape, except for their relative positions to both the zero month and the zero residual error points. This is very unlike what I expected.

III. Conclusion

I am uncertain of my results from conglomerate mergers. Salter and Weinhold (8) show that acquisitive diversifiers have had low P/E ratios. In fact, on December 31, 1977, the average P/E ratio of 36 such diversifiers was 30% below that of the New York Stock Exchange stocks as a whole. This implies great uncertainty about the size and variability of future cash flows, which inherently implies that investors and stock analysts view them as less valuable than reliable and predictable earnings streams (i.e. pure plays).

Many of the firms in my two groups behaved as I expected; however when averaged in with other firms, I obtained the results shown in figures 1 and 2.

I suppose I can interpret the results in two ways. First, I may assume that my data, which translated into figure 1 is incorrect, and I should, perhaps, re-evaluate all of the data. The second approach assumes the graph is correct, in spite of what all the research in part I indicates, and think about the "logic" of stockholders.

If everybody "knew" he could do better with his own diversified portfolio than by investing in a conglomerate, then not one conglomerate today would be a public company. Who would be dumb enough to invest unwisely? As I stated, all my research indicates conglomeration to be all but useful and wise and profitable. Yet many exist, "prosper", continue to diversify, and continue to attract new investors. Either the investment community is ignorant of the facts, or disbelieves them.

Interesting paradox

Most investors I know personally use their brokers exclusively for investment advice. Most of them believe diversification to be a wonderful risk reduction scheme. I admit that this sampling not to be statistically sound, but I'm sure it's not too far from the mentality of the entire community. Kitching (3) showed that even though 42% of failed mergers were conglomerates, they constituted 45% of all mergers. That is one hell of a lot of mergers. Knowing how brokers make their money, why should they not recommend anything that will create sales.

If my data is incorrect, I can accept that. If my data is correct, then the theory of a totally illogical market has been corroborated.

Maybe market is logical and we're not.

Interesting system well worth A.

Results could well be affected by changing B at time studied, caused by merger. This might severely affect residuals.

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