MANAGEMENT COMPENSATION, RESTRUCTURING, AND VALUE CREATION AT UNION CARBIDE CORPORATION

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Abstract

The paper is a case study of the Union Carbide Corporation during a very tumultuous period. In 1979, the demand for several of UCC's chemical products either was in decline or soon would be which contributed to a severe decline in stock value. During this period, management compensation plans evolved to more closely align management with shareowners. The Bhopal tragedy and a subsequent unsolicited takeover attempt tested management, and the new compensation incentives, ultimately leading to a more focused and more highly valued company.

Keywords: Management compensation; Restructuring; Asset Sales; Bhopal

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I. Introduction

In 1979 *Union Carbide Corporation* (UCC) was a highly diversified, multinational corporation owning manufacturing facilities in over 30 countries around the globe. These facilities were located in all the major countries of continental Europe, South America, Asia, and the southern hemisphere countries of Australia, and New Zealand[5]. The bulk of its sales derived from industrial chemical products. These included petrochemicals like ethylene, propylene, and benzene; thermoplastics like polyethylene, polystyrene, and phenolic resins; industrial gases such as oxygen, nitrogen, and argon; and ferroalloys and graphite both important in the manufacture of steel. The demand for three of UCC's chemical products, carbon black, acetone, and isopropyl alcohol, which were produced in five separate plants, was declining during the sample period (see Caton (2007)). Just two of these five plants remained open at the end of the sample period.

Like any large multinational corporation, UCC was very active over the sample period, carrying out major operational and financial restructurings. These restructurings were much like those completed by *General Dynamics* (GD) five years later and documented by Dial and Murphy (1995). One similarity between the two restructurings is that both were preceded by a change in the compensation of top managers.

In 1991, top managers at GD were offered contracts that included stock options, reserve stock and bonuses. The incentives provided by the first two are obvious, the alignment of the personal interests of managers and owners. The bonus plan, however, was also stock-price dependent paying out cash only if the stock price increased by specific amounts and remained at the higher level. These bonuses were equal to 100% of base salary when the GD stock price climbed $10 from the price on the date the plan began, and an additional 200% if the price climbed another $10. These incentives helped to motivate GD managers to sell-off $3.066 billion worth of assets. These asset sales, together with layoffs, reduced GD employment from 98,150 in 1991 to 26,800 in 1993.

The executive compensation policies of UCC changed more slowly than did those at GD. In 1984, the UCC Board's Executive Compensation Committee restructured its executive compensation practices giving top managers strong incentives to maximize shareholder wealth. These incentives are documented later but include stock options, exercise payments to encourage managers to exercise their options and become owners, and stock appreciation rights. However, cash bonuses were still based on accounting results, individual performance and competitor's practices. In 1987 UCC extended ownership incentives to non-employee board members as well. The 1988 compensation plan tied cash bonuses to UCC's stock price. Although UCC's plan is not as specific as GD's 1991 plan, it preceded the GD plan by three years.

UCC began a modest operational restructuring program following the 1984 changes in compensation. Beginning in late 1984, UCC launched a program to sell assets and shutdown failing plants. These early moves refocused the firm's efforts on those businesses in which it was a leader. Unlike GD, which was prompted to refocus by new CEO William Anders, UCC was forced to get serious about restructuring by

[5] Moody's Industrial Manual, 1977.

two related events. The first came in late 1984 when poisonous gas leaked from a storage container at a subsidiary's chemical plant in Bhopal, India, killing thousands of people. UCC's initial reaction to the disaster was one of compassion. CEO Robert Anderson flew to Bhopal to personally head the relief effort. However, Anders was met with hostility upon his arrival in India, which motivated UCC to become more cautious as its potential liability became evident. The Bhopal disaster, coupled with four years of negative excess stock returns, provoked the second event, a takeover attempt by GAF Corp. Fortunately for stockholders, instead of defending against the takeover attempt directly, UCC managers decided to outbid GAF by making a counter offer to its own shareholders. The counteroffer dwarfed GAF's bid of $68 per share. It included cash and debt valued at $85 per share plus the promise to sell-off the firm's consumer products divisions. GAF was reportedly planning to sell-off those divisions if successful in its takeover attempt. Weakened by the Bhopal disaster and prodded by GAF's takeover attempt, UCC came up with a comprehensive plan to provide value to its own shareholders rather than to those of GAF Corp.

These two events caused UCC to both accelerate and expand the operational restructuring program begun in 1984. This program included selling the consumer products divisions and laying off thousands of employees. UCC management came up with a rather novel use for the proceeds of these sales; distributing them to shareholders. By firing thousands of white-collar workers, UCC eliminated many layers of management cutting overhead expenses, which led to increased margins. The disaster and subsequent takeover attempt, coupled with the changes in compensation, provided management the stimulus and incentive to work toward maximizing shareholder wealth.

These actions led to spectacular stock returns. In the year following the Bhopal disaster, UCC stock returned about 150 percent above the market on a *risk-adjusted basis.* During a period in which takeover defenses typically involved white knights, loading up on debt, offers to buy the bidder, or some combination of these, UCC chose to turn inward and simply raided itself. Why did management choose this course of action? Evidence suggests that executive compensation was a primary factor.

In this case study, I examine in chronological order the changes in management compensation plans, and related management decisions of UCC over the course of twelve years. The strategies selected by UCC in response to the Bhopal disaster and the GAF takeover attempt, were influenced by the specific compensation plans under which its managers worked. I explore the effect these motivators may have had on the actions taken. The next section briefly sets out UCC's industry standing. Section III documents the evolution of the corporation's executive compensation programs. I examine the greatest industrial accident in history in section IV. In section V, I discuss the takeover attempt and UCC's restructuring. Finally, I summarize the paper in section VI.

II.Union Carbide's Industry Position

The sample period begins in 1979 when the production of carbon black begins to decline. Table 1 compares UCC to 37 rival chemical manufacturing firms operating 101 plants in the U.S. As shown in Table1, UCC was more than twice the size of the average of these 37 firms as measured by total assets or sales. In 1979, UCC's debt to assets ratio was less than the sample mean, but had about 65% more liquidity[6]. The cash compensation of William Sneath, the CEO of Union Carbide, was nearly 50% higher than the sample's average CEO salary. However, as an indication of his incentives, he owned less than one-tenth of the company stock holdings of the average CEO. Finally, UCC's q-ratio was over 16% below that of the sample average, suggesting that the stock market did not think highly of Union Carbide in 1979.

In 1981, when demand for acetone and isopropyl alcohol began to decline, UCC had slightly less sales on about 29 percent more assets than the average. Also in 1981, UCC's debt ratio was at the sample mean and its liquidity position had decreased to just 24 percent above average. In two years, the CEO's salary premium declined from 50 percent to 32 percent, while his UCC stockholdings had increased from 10 percent to 14.5 percent of the average. Finally, UCC's q-ratio had declined in relation to its competitor's and was about 18 percent below the average. Thus, while the CEO's salary and stockholdings had increased in relation to the average firm's, operating efficiency had declined from 1979 and this fact showed in the lower q-ratio.

III.Inventive Compensation Plans

Compensation influences all the decisions made by a corporation's management team. Jensen and Meckling (1976) suggest that owners and managers of a corporation may have conflicting motivations with respect to decision-making. These conflicts are eliminated when the manager is also the owner, and can be reduced by giving management a partial ownership stake. Compensation practices can provide ownership incentives through the granting of stock options and reserve stock, and can mimic ownership by providing bonuses based on stock-price gains. However, as Jensen and Murphy (1990) report, most executives have small stockholdings. A measurement of ownership incentive used in many studies is the proportion of common stock owned by the CEO (see Agrawal and Mandelker (1987)).

[6] Liquidity is measured as current assets less current liabilities plus net income and depreciation.

Compensation practices provide the framework within which UCC management acted. Early plans included cash bonuses and stock option grants based on achieving earnings goals. Awards under the most recent compensation plan, however, depend on the market price of Union Carbide common stock and come in many forms; common stock ownership, stock options, stock appreciation rights, incentive stock options, payment of dividends on stock options held, and cash. This section describes how the management compensation plans evolved and what effect these changing incentives may have had on the actions taken by those covered by the respective plans.[7] [8]

a. Incentive Compensation Plan of 1974

The incentive Compensation Program of 1974 included a "Long-Term Plan" and an "Annual Plan"[9]. The Long-Term Plan consisted of a combination of cash payments and stock options grants. It provided up to 250,000 optionable shares, of which no one person could receive more than 25,000 over the entire five-year period. Under the plan, exercise prices were set at 100% of the common stock price on the day the option was granted, and became exercisable five years after its granting. Any unexercised options expired when seven years had passed from the date of their issuance. Thus, there was a mere two-year window during which the executive could exercise his options before they expired.

Cash awards under the Long-Term Plan could be added to the option awards, were limited to no more than two and a half times the aggregate option value, and were payable when the options first became exercisable. Both awards under the Long-Term Plan were contingent on UCC attaining earnings goals set each year by the compensation committee.

Under the 1974 Annual Plan, cash awards were based on achievement of corporate goals and on individual performance. Payments under the Annual Plan amounted to nearly $4.4 million for the 1977 calendar year.

Both the Long-term and Annual Plans were based, at least in part, on accounting earnings. Healy (1985) shows that executive bonus plans based on accounting earnings provide incentive to manipulate those earnings to maximize bonus payments. Specifically he finds that (1) accrual policies chosen are related to provisions in executive bonus plans, and (2) changes in accounting procedures are related to changes in executive bonus plans. Actions to manipulate earnings are not value maximizing, thus compensation plans such as these are probably sub-optimal.

b. Incentive Compensation Plan of 1979

The 1979 Incentive Compensation Plan is the first for which the proxy statement explaining the full plan is available. The first paragraph states the importance of providing proper incentives for management: ". . . the corporation's success depends on its ability to attract, retain, and motivate key employees of superior competence. . . . The Board believes that in order for the Corporation's compensation programs to be competitive and motivational, a significant part of the total compensation of key employees should be incentive compensation related to the performance of the employees"[10].

This quotation indicates that, while the Board of Directors was aware of the need to provide top management with incentives, the main thrust of the package was to provide compensation comparable to that offered by competitors. The 1979 Plan does not indicate how the grants of stock options and cash awards will be determined. Instead, it uses the generalized phrase: corporate and individual *performance*[11].

The 1979 Plan provides for separate cash bonuses and grants of stock options. The bonuses are paid out of a reserve derived from holding up to 15% of all earnings in excess of those required to provide investors with a seven percent return on invested capital. The stock option plan was changed significantly from the previous plan. First, it provides up to 1.5 million shares over the five-year period of which not more than 25,000 can be awarded to any one person in any given year. Second, the option exercise period was extended. Under the 1979 Plan options become exercisable after only two years, rather than five, and do not expire until 10 years have passed from the date of their granting. Finally, the Plan provides for grants of *stock appreciation rights* (SAR) as well as stock options. In order to realize a gain from holding an incentive stock option, the holder must exercise the option by purchasing the underlying stock. SAR allow the holder to participate in any appreciation in the price of the underlying stock without actually having to purchase it. SAR are inseparable from its option and if the SAR are exercised its respective option is terminated. SAR may be exercised for cash or restricted stock at the discretion of the Board.

With the introduction of a longer and sooner exercise window for its incentive options, the Board is making granted options more valuable, which provides a stronger performance incentive. This, and the introduction of SAR, more closely aligns the personal interests of senior management with the

[7] Union Carbide typically uses a five-year planning horizon for its management compensation schemes.

[8] I gathered the information presented here from corporate proxy statements.

[9] Information on the 1974 plan is gathered from the firm's 1978 proxy statement.

[10] Union Carbide Corp. 1978 Proxy Statement, page 18.

[11] The 1974 Plan specifically mentions that cash and stock option awards depend on corporate earnings.

interests of the stockholders through the stock price. However, given that the plan does not explicitly state what incentive payments are based upon, it continues to provide ambiguous incentives at least in terms of the information provided in the proxy materials.

c.The 1984 Union Carbide Stock Option Plan

The proposal for the 1984 Stock Option Plan is the first to state unambiguously its desired consequence. Its first paragraph states: ". . . the corporation's success depends on its ability to attract, retain, and motivate key employees of superior competence. . . . The Board believes that in order for the Corporation's compensation programs to be competitive and motivational, a significant part of the total compensation of key employees should be *related to an increase in the market price of the Corporation's stock*". [12] Now managers who wish to maximize their own compensation must maximize shareholder wealth.

The Plan uses stock options and SAR as in the 1979 Plan, and it introduces exercise payments. Exercise payments are made to holders of stock options when those options are exercised. The Board sets the amount of any exercise payment but in no case can it exceed 60% of the appreciation of the market price of the underlying stock, at exercise, above the option price. Significantly, exercise payments cannot be made on options for which SAR payments are made. This limitation indicates that the corporation's use of exercise payments may be an attempt to induce holders of options to exercise and take delivery of the stock rather than take payment for the related stock appreciation rights. Finally, the 1984 Plan increases the maximum number of optionable shares to 5 million over five years and limits to 50,000 the number of options any single person can be granted in any given year.

As in past years, Union Carbide provided its officers with a cash bonus plan during the period.[13] Awards under the cash bonus plan are made in cash, stock, restricted stock, or some combination of these and are based on factors such as (1) corporate financial results, (2) individual and group performance, and (3) levels of salaries and bonuses paid by competitors.

With the 1984 Plan, Union Carbide shifted management incentives in ways intended to motivate top executives to maximize shareholder wealth. The introduction of exercise payments should only sharpen this motivation as managers exercise their options for ownership in the company rather than simply take payments for stock price appreciation. Finally, this action was taken before the Bhopal disaster and GAF Corp.'s takeover attempt indicating that it was a deliberate, unforced shift in policy and not an action taken in time of crisis. This change in compensation policy undoubtedly affected the actions top executives took in response to the events of the subsequent year.

d.The 1985 Severance Compensation Agreements

One of the preparations UCC made to defend itself against possible takeover was to set up "golden parachutes" or severance agreements for its top executives (WSJ, December 17, 1985).[14] These agreements provided that if the executive was terminated after a change in control of the firm for a reason other than cause, retirement, death or disability, or if the duties of the executive are changed such that he resigns, the following benefits will be extended to him:

(1) lump sum payment of accrued salary and vacation pay;
(2) accrued incentive compensation;
(3) extended insurance benefits (life, health, disability, and accident);
(4) lump sum payment equal to 2.99 times the average annual compensation over the previous five years of service to the company;
(5) retirement pension calculated assuming service continued for an additional three years beyond the termination date;
(6) six months of continued employment after any "Potential Change in Control" of the company as designated by the Agreement.

Articles in the popular press frequently give the impression that golden parachutes are merely attempts to enrich those covered by the agreements. Others argue that severance agreements such as these ensure that managers will not oppose favorable merger offers simply out of fear for their jobs. With regard to the agreement outlined above, provisions like the first four are expected by any worker in a good corporation. The last two may be more unusual but do not seem overly controversial or onerous.

e. The 1987 Union Carbide Stock Compensation Plan for Non-employee Directors

At the 1987 annual meeting, stockholders approved a new compensation plan for non-employee directors of the firm. This plan was designed to provide directors with the same stock price-maximization incentives the 1984 Plan provided management. The Plan consists of the granting of 400 shares of common stock to directors with at least two years service to the company and 1000 shares of forfeitable stock to all

[12] Union Carbide Corp. 1983 Proxy Statement, page 23, italics mine.

[13] Details of the 1984 Cash Bonus Plan are contained in the Union Carbide Corp. 1986 Proxy Statement.

[14] The 1986 Union Carbide Proxy Statement contained a section describing the severance agreements entered into with top officers of the Corporation.

directors[15]. The forfeitable shares become non-forfeitable at the rate of 200 shares per year. New directors will be granted 200 shares for each remaining year of the Plan, i.e. until 1991. The sale of these shares is restricted. UCC also agreed to pay personal income-tax incurred by directors as a result of the granting of these shares of restricted common stock[16].

f. The 1988 Union Carbide Long-term Incentive Plan

The 1988 Plan is the final one during the sample period. It uses several new provisions to strengthen the ties between management and owners of UCC. These new provisions include (1) outright grants of common stock; (2) separate performance awards based on the market price of UCC common stock; (3) payment of "dividends" on incentive stock options; (4) allowing exercise of options granted under the Plan after just one year from the date they were granted; and (5) extending the Plan to 1,000 employees from the previous 350.

Provision 1 is meant to provide a new manager with ownership incentives much more quickly. Under previous plans a new employee would have to wait for the exercise period and then come up with the exercise price, a sum he or she may not have. Provision 2 eliminates accounting-based bonuses and instead awards cash bonuses based on the market price of stock. A likely reason UCC established provision 3, payments of "dividends" on incentive stock options, is to negate the unintended incentives contained in previous Plans. Holders of stock options are not entitled to any dividend payments on the underlying shares of stock. Therefore, option value accumulates only from appreciation of the market price, which payment of dividends may limit. Since management may have some control over dividend policy, particularly officer board members, provision 3 decreases this possible disincentive for dividend payments.

For comparison purposes, recall that the 1974 Plan required grantees to wait five years from the grant date before exercising options, which then expired within two years. Under that plan, any expected payout must be discounted at least five years. Under the 1984 and 1988 Plans the present value of granted options is greater since the waiting time to exercise the options was reduced to two years and one year, respectively. The value of granted options was increased further by extending the period of exercisability to nine years from 1984's eight and 1974's two.

IV. Bhopal

The first event that prompted refocusing occurred on December 3, 1984, when 40 tons of lethal *methyl isocyanate* (MIC) gas escaped from a storage tank owned by a UCC subsidiary in Bhopal, India. The deadly gas killed 2,000 to 8,000 people and injured tens of thousands more in what is believed to be the largest industrial catastrophe ever. Obviously, the disaster had an enormous impact on the people of Bhopal and on UCC. This section briefly outlines the events that led up to, and may have contributed to, the fatal accident and how the disaster itself may have contributed to subsequent events.

UCC began an operational restructuring when William Sneath became CEO in 1977. Sneath believed that UCC had grown too large and unwieldy under previous leadership. Evidence supporting his belief came in the form of lower profit in the years 1975 through 1977 and a stock price which dove from a high in 1976 of nearly $77 to under $35 by early 1979. To combat these trends UCC embarked on a program designed to focus attention on core businesses and cut excess personnel.

In October 1977, UCC announced plans to cut staff, spending, and product lines (WSJ, October 10, 1977).

The implementation of these plans to refocus began shortly after the announcement in October with a reduction of 1,250 managers, spending plan reductions of hundreds of millions of dollars and the sale of UCC's European petrochemical business in December 1978. In subsequent years UCC sold off its ferroalloy plants in the U.S. and Norway (WSJ, March 25, 1981), and its medical diagnostic equipment business (WSJ, April 14, 1981). Table 2 lists the major divestitures of assets concluded by Union Carbide over the years.

These cost-cutting efforts seemed to be working as net income was up sharply for the years 1979 ($8.47 per share) and 1980 ($13.36 per share). Evidence suggests that, in addition to divesting assets, UCC was trying to distance itself from ownership in the erratic petrochemical business. In 1983 it announced the creation of a subsidiary division to design and build chemical plants for other companies (WSJ, June 1, 1983). In November 1983, UCC announced plans to close petrochemical plants in Texas and Louisiana (WSJ, November 18, 1983). Cost-cutting became crucial in late 1983 and 1984 as the firm posted earnings of just over $1.00 per share for 1983.[17]

In 1984, UCC's quarterly earnings rebounded from the recession buoyed by cost-cutting measures

[15] In this section, "directors" refers to non-employee directors.

[16] From observing over 500 proxy statements I have learned that outside directors may hold fewer than 50 shares of stock in the companies they direct, some hold zero. This plan is an attempt to give these board members a financial stake in their decisions.

[17] It was reported that UCC attempted to sell its Bhopal plant early in 1984 but found no buyers (WSJ December 17, 1984).

and previous spending reductions. Despite increasing earnings, however, UCC managers were under continuing pressure to cut costs. A glance at Figure 1, which graphs a cumulative index of excess stock returns for Union Carbide Corp., indicates why.[18] From the beginning of 1979 through 1984, UCC stock returned negative excess returns cumulating to 70 percent. Kurzman (1987) reports from personal interviews that managers at the UCC subsidiary in India felt pressure to reduce operating expenses in 1984 as well.

Unfortunately, the managers of the Bhopal plant were apparently given too much freedom with respect to cost cutting. Their cuts went too deep and included reduced spending on industrial safety. Every safety device on the MIC storage tanks at the Bhopal plant was inoperable at the time of the leak. The storage tank alarm system had not been operational for four years. The tank refrigeration unit, which kept the MIC in liquid form, was shut off and the Freon refrigerant was removed to reduce utility expenses. The chemical scrubber, designed to scrub dangerous chemicals from the air escaping from the tower vent had been under repair for some time and was inoperable. The flare tower was designed to burn toxic chemicals as they escaped. Unfortunately, the pilot light was not lit because it was missing key parts. And the final, low-tech, last ditch safety device, the fire hoses, which would have sprayed water on escaping gases in the hopes of neutralizing them, could not reach the top of the tower from which the MIC was escaping.

In their efforts to cut operating costs and produce bottom-line results, UCC apparently did not stress the paramount importance of safety to the operating units of the company, particularly those units far from headquarters such as in Bhopal. This was a costly oversight. American lawyers descended on Bhopal shortly after the leak and began a class action suit against UCC in the American courts. Simultaneously, the Indian government sued the company in Indian courts.[19]

The Bhopal disaster had a profound and long-lasting impact on UCC. The immediate effect was a sharp decline in stock price as investors rushed to discount it for the expected value of the potential liability from the billions of dollars in lawsuits filed. Note in Figure 1 that, although the excess stock returns index had been declining in the year prior to the disaster in Bhopal, shareholders lost another 28 percent in excess market value immediately following news of the accident. Moreover, on January 18, 1985, Moody's downgraded several of UCC's debt issues due to concern over liability for the accident. Negative stock returns and liability stemming from the most serious industrial disaster in history do not make stockholders happy.[20] In such a weakened position UCC was an easy takeover target.

V. Attempted Takeover and Subsequent Restructuring

This section chronicles the GAF Corp. takeover attempt, the subsequent restructuring, and the market reactions to both. The first published hint that UCC was a takeover candidate appeared when it was announced that the firm had enacted several anti-takeover measures (WSJ, July 29, 1985). Two weeks later GAF Corp. announced that it held 5.6% of UCC's outstanding common stock (WSJ, August 14, 1985). At this time, UCC stock had regained some of its value, and had acumulated over 31 percent in excess returns from its low. Hoping to ward off an expected takeover attempt, UCC announced a major restructuring program involving layoffs, plant-closings, and the tapping of its over-capitalized pension fund (WSJ, August 29, 1985)[21]. The reduction in workers was not limited to those with blue collars. In September, 1985 UCC announced plans to dismiss 15% of its salaried work force and by November of that year 2,800 salaried workers had taken the incentive package and left their jobs at UCC (WSJ, November, 1985). These moves and takeover speculation helped the excess returns index climb another 20 percent.

The formal announcement of the takeover attempt came on December 10, 1985. GAF's offer consisted of a package of cash, stock and debt valued at about $68 per share. The UCC board considered the GAF Corp. offer "grossly inadequate" and wasted no time in fighting the unsolicited bid. Their fight, however was an unconventional one. Just one week after GAF's announcement, UCC announced an $85 per share exchange offer of its own. This offer was for 35 percent of the outstanding shares and consisted of $20 in cash and $65 worth of debt per share of stock tendered (WSJ, December 16, 1985). Frequently a takeover target uses the Pac-man defense, which is a counter-offer to buy the bidder's shares. Another conventional defense is a leveraged buyout, i.e. the firm's management buys the company

[18] Excess returns are taken from the Center for Research in Securities Prices excess returns file.

[19] Litigation concerning the matter dragged on for years, ringing up large lawyer fees before the matter was resolved. There were two major developments in the legal battles. First, in 1986 an American judge ruled that the Indian courts had jurisdiction dismissing the cases filed in the U.S. Then in 1989, four and one half years after the disaster, UCC settled with the Indian government for $470 million as compensation for the victims (WSJ February 15, 1989).As late as 1991, however, the Indian government tried to revive the suit (WSJ, November 29, 1991).

[20] Two separate class-action lawsuits were brought against UCC by their own stockholders precipitated by the Bhopal disaster (WSJ, December 24, 1984).

[21] A common funding strategy for takeovers is to simply use a target’s excess cash and marketable securities, or excessively funded pension funds as collateral for debt financing of the takeover.

from the shareholders and takes it private. Seldom, however, does a company get into a bidding war for its own shares. By the end of November the market had already incorporated the takeover attempt into the price of UCC stock, although the excess returns index rose another 7.4 percent in December.

With the stakes raised so high GAF chose to fight on two fronts. First, it raised its offer to $74 in cash per share. All-cash offers are thought to be nearly unstoppable. And second, GAF went to court hoping to block the UCC exchange offer. However, the judge quickly ruled against GAF refusing to block a firm's offer to its own shareholders. When UCC announced its final exchange offer on January 2, 1986, GAF threw in the towel. UCC extended its offer of cash and securities worth $85 per share to 55% of the outstanding shares, a package valued at over $3.3 billion. It also promised to sell its consumer products divisions and distribute the proceeds, above the assets' book values, to shareholders as a special dividend (WSJ, January 3, 1986). GAF, if successful in the takeover attempt, had reportedly wanted to breakup UCC. UCC's counter-offer accomplished this, but the beneficiaries were UCC stockholders not those of GAF. Meanwhile, UCC would be able to focus on its core businesses, chemical and gas production.

The court ruling and the resulting restructuring effectively stopped the takeover attempt. UCC was simply no longer a desirable takeover target. By one account, the swap of debt for equity to finance the counter-offer would double UCC's debt and cause equity values to plunge 79% (WSJ, January 1, 1986). On January 8, 1986 GAF Corp., recognizing these facts, abandoned its attempted takeover. UCC's exchange of cash and debt for 55 percent of the outstanding stock was made in January 1986. Apparently, the market did not agree with the Wall Street Journal author predicting a plunging stock price. The month of January, 1986 ended with the excess returns index up almost seven points higher than where it began.

The payout to shareholders forced both operational and financial restructurings. On April 4, 1986 UCC announced that Ralston Purina was buying its Eveready battery unit for $1.42 billion. Less than three weeks later, on April 22, UCC announced that a group of investors had purchased its home and automotive products division for about $800 million. These announcements resulted in a 35.5 percent gain in the excess returns index. Keeping its promise, UCC distributed the proceeds of these two sales in two special distributions. The first came on July 30, 1986 and amounted to $30 per share, and the second, on October 14, 1986, totalled $3.22 per share.

There were two additional major asset sales in 1986. The company headquarters building was sold for $340 million and immediately leased back, and the agricultural chemicals division was sold to Rhone-Poulenc S.A. for $545 million. For the year UCC sold assets totalling $3.1 billion and its excess returns index was up 43 percent. In 1987, UCC sold subsidiaries to their managers. Fifty percent of the electric capacitor business was sold to its managers for $150 million forming Kemet Electronics Corp. (WSJ, April 28, 1987). And the managers of Linde Homecare Medical Systems Inc. bought Linde for $50 million.

In September, 1987 UCC completed the financial restructuring brought on by the takeover attempt by issuing three series of floating-rate preferred stock backed by trade receivables. The issues brought in $249 million which was used to replace higher-cost debt incurred in the takeover defense. This brought to a close UCC's takeover-motivated restructuring. It did not, however, mark the end of its asset sales and restructuring. In 1989 and 1990 UCC sold off three additional businesses that brought in a total of $687 million. And in December, 1991 Carbide announced another radical restructuring plan. This one included spinning off a major business and selling an additional $500 million worth of assets.

VI. Summary

This paper is a case study of UCC during a very tumultuous period of declining product demand, industrial disaster, and unsolicited takeover attempt. Incentive compensation practices at UCC evolved from those encouraging maximization of accounting profit to those encouraging maximization of stock price. The 1974 Plan that relied primarily on bonuses based on accounting profits, evolved into the 1988 Plan relying mainly on incentive stock options and other stock price-based methods.

These compensation plans may have been a primary motivation for Union Carbide's self-buyout bid. UCC's novel method of fighting an unwanted takeover bid was simply to outbid the outside rival bidder. This strategy produced not only a reversal in the long-term slide of the stock price, but a greater than 50 percent gain relative to the market. These excess returns and the huge special dividends where enjoyed by all owners including management. The operational and financial restructurings following the self-buyout added another 35.5 percent to the value of UCC equity. The run-up in equity value from the low incurred due to the Bhopal disaster added 150 percent to the risk-adjusted index of excess stock returns. Without the new compensation plans, management may have followed a very different course of action.

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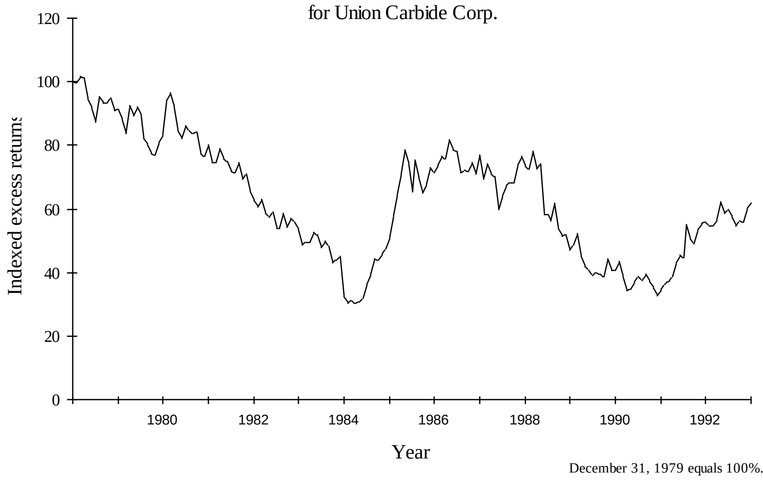
Figure 1

Index of cumulative excess returns for Union Carbide Corp.



December 31, 1979 equals 100%.

Monthly excess returns are obtained from the Center for Research in Securities Prices.

Table 1. Industry Position of Union Carbide

This table provides statistics describing Union Carbide's industry position. Total Assets and Sales are self-evident. Debt Ratio is calculated long-term debt over total assets. Liquidity is calculated as current assets less current liabilities plus net income plus depreciation all over total assets. CEO Salary and CEO Holdings (market value of shares and stock options owned by CEO) are collected from proxy statements. Tobin's-q is calculated as total assets less book equity plus market equity all over total assets.

	Total Assets	Sales	Debt Ratio	Liquidity	CEO Salary	CEO Holdings	Tobin's-q
1979							
Industry	$3,607	$4,440	.222	.121	$0.42	$4.65	0.997
UCC	$8,802	$9,180	.201	.200	$0.63	$0.41	0.833
1981							
Industry	$8,068	$10,840	.202	.148	$0.57	$4.41	0.984
UCC	$10,423	$10,170	.202	.184	$0.76	$0.60	0.809
1990							
Industry	$15,297	$13,440	.282	.093	$1.19	$4.52	1.312
UCC	$8,733	$7,620	.268	.150	$1.42	$1.19	0.957

Table 2. Major Divestitures of Union Carbide Corporation

This table lists Union Carbide's major asset divestitures during the sample period.

Date	Unit Divested	Price*
12/21/78	European petrochemicals	$208
1/80	Amchem Products	NR
6/16/80	Seed companies	$70
3/15/81	Ferroalloy operations	$181
4/14/81	Medical diagnostics	NR
12/20/84	Welding and cutting systems	$70
12/16/85	Film packaging	$230
5/86	Metals business	$83
4/8/86	Battery business	$1,420
4/22/86	Home and auto products	$800
11/7/86	Headquarters building	$340
12/22/86	Agricultural chemicals	$545
4/28/87	Electronics	$150
12/1/87	Homecare systems	$50
9/29/89	Chemicals business	$220
11/21/90	UCAR Carbon	$232
12/26/90	Kemet Electronics	$235
7/92	Industrial gases	Spinoff

* In millions. Prices do not include assumption of debt. NR Not Reported