2

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Warrants and Convertible Debt as Financing Vehicles in the Private Placement Market

ABSTRACT: The objective of the study was to determine the reasons for the strong growth during 1968-1969 and subsequent decline in the use of financial incentives ("equity kickers") in private placements. Analysis was based in part on a special tabulation of private placement financings, a sample survey of firms that issued such placements during 1968-1969, and 40 interviews with senior officers of financial institutions. ¶ All of the evidence indicates that the sharp increase in the use of equity kickers during 1968-1969 reflected both a general shift by institutions toward equities of all sorts and a shift in bargaining power toward the lenders. A strong, systematic relationship was observed between the riskiness of the debt issue and the inclusion of an equity kicker, as financially weak companies carefully designed their securities issues to meet the preferences of private placement lenders during this period of tight money conditions. ¶ The sharp decline in the use of kickers since 1969 reflects dampened investor interest in common stocks, especially those of

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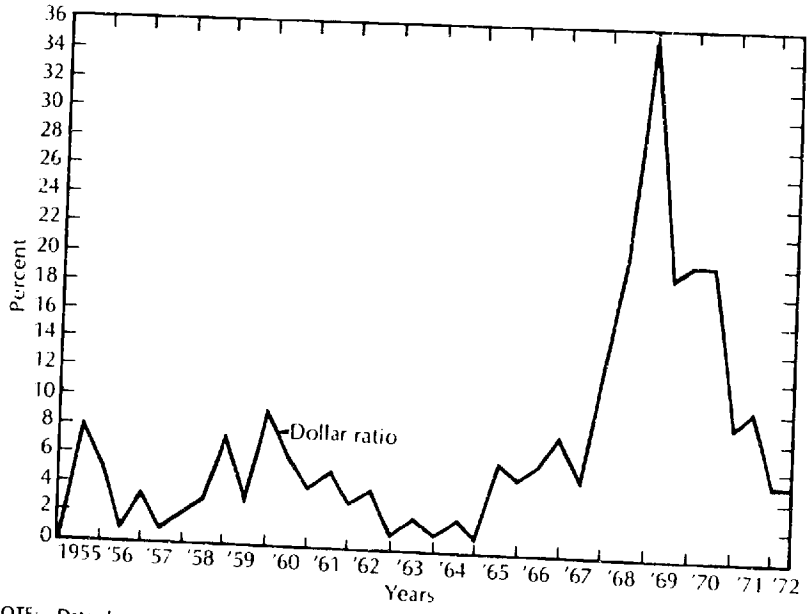
smaller or lower-quality companies, and the disappointing performance of the kickers issued during 1968-1969.

The period 1968-1969 saw a sharp rise in the use of warrants and conversion privileges in the private placement market, both in absolute dollar terms and relative to total privately placed debt issues (see Chart 1).[1] At their peak popularity in 1969, equity incentives ("kickers") were included in approximately 35 percent of the debt issues that were placed directly with investors. This contrasts with a range of 0-10 percent during 1955-1967. By year-end 1972, however, use of incentives had declined to a level only modestly above the average for the entire period 1955-1967, and it remained at a low level during 1973 and 1974.

In this study we trace the reasons for the growth and subsequent decline of equity kickers in private placements, examine the distinctive characteristics of the issues and issuers that included a kicker during the 1968-1969 surge in popularity, and assess the profitability of the kickers to the lenders. Analysis is based in part on a special tabulation of private placement financings during 1955-1972, a sample survey of 121 firms, and forty interviews with senior officers of three bank pension funds, twelve large life insurance companies, and seven investment banking firms.

CHART 1 Dollar Amounts of Debt Issues That Included Incentive Financing, as Percents of Total Privately Placed Debt Issues, Semiannual, 1955-1972



NOTE: Data shown are as of end of each six-month period.
SOURCE: See footnote 1.

[I] OVERVIEW OF THE RISE AND DECLINE IN USE OF EQUITY KICKERS

Institutional Interest in Common Stocks

The sharp increase in the use of equity kickers during 1968 and 1969 was part of a general shift by institutions toward equities of all sorts. The figures below show the net acquisition of corporate shares as a percent of the net acquisition of financial assets (data are from Board of Governors of the Federal Reserve System 1973):

	1955-1960	1961-1965	1966	1967	1968	1969
Noninsurance pension funds	42%	52%	51%	70%	74%	85%
State and local government	3	9	12	16	27	35
Life insurance companies	2	7	3	12	14	19
Other insurance companies	16	13	18	17	25	33
Mutual savings banks	2	3	1	4	5	8

The strong performance of stocks after World War II and the adoption of the concept of total return (dividend income plus capital appreciation) spurred each of the major types of financial institution to place an increasingly greater share of its net new investments in corporate stocks. The quickening pace of inflation was also widely used during 1965-1968 as a major justification for increased investment of institutional funds in common stocks. It was argued that stock investments should be increased still further because inflationary pressures were inexorably building *and* the further inflation would enhance equity values (Lintner 1973, pp. 23-26).[2] This reasoning underlay the inclusion of income participations on mortgage loans on income-producing properties[3] and contributed importantly to the rise in convertible bond issues sold in the public debt markets.[4] Inflation was seen as the major risk; and equities of all sorts, as the answer.

During the 1960s, the opportunity to attach equity kickers to the privately placed debt of smaller companies seemed particularly attractive because of their strong sales earnings and investment performance:

> ...a brief review of the experience of the *Fortune* 500 indicates that the smaller companies are growing the fastest. (The *Fortune* 500 are the 500 largest manufacturing firms, comprising 63.7 percent of all manufacturing sales in 1969. Statistics for the "Second 500" largest firms, first compiled by *Fortune* for 1969, revealed that this group accounted for 6.5 percent of sales.) The 50 largest manufacturing firms in the *Fortune* 500 have sustained a slower growth rate since the beginning of the economic expansion in 1961, through periods of both rapid and slower growth. In 1969, sales by the 50 largest firms rose 6.5 percent over the previous year, while the sales growth of the entire 500 was 9.7 percent. Sales growth for the "Second 500" firms was 11.7 percent....
>
> Much the same pattern appears in earnings per share, a critical determinant of stock prices in the long run. For the entire decade 1960-1969, the 50 largest firms achieved an average growth rate in earnings per share of 5.94 percent; for the entire

500 the growth rate was 7.01 percent; for the "Second 500" it was 7.50 percent; and for the 50 smallest firms of the "Second 500" it was 10.21 percent. In short, the highest growth in sales, earnings, and opportunities for equity investment has generally been outside the largest companies (Goldsmith, ed. 1973, p. 252).

The higher growth in sales and earnings was, in fact, reflected in the relative performance of stock prices. Over-the-counter stocks, on average, far outperformed the stocks of larger, well-established companies. An index of 35 over-the-counter industrial stocks rose 80 percent in value during 1967-1968, versus only 34 percent for Standard & Poor's index of 425 industrial stocks.[5] Interestingly, their performance tended to be superior in both rising *and* falling markets during 1963-1969.[6]

Tight Money Conditions: 1968-1969

The ability of private placement lenders to secure incentive financing during 1968-1969 was facilitated by a shift in bargaining power toward the lender. Financing demands from most sectors of the economy were strong. Net funds raised by nonfinancial corporations increased from an annual average of $13 billion during 1960-1964 to $30 billion in 1968 and $38 billion in 1969. Net bond sales by corporations rose from an average of $4 billion during 1960-1964 to $13 billion and $12 billion in 1968 and 1969, respectively (Board of Governors 1973).

The heavy financing demands coincided with a tightening of money conditions in late 1967 that continued through 1970. The net reserve position of the commercial banking system turned negative in 1968, reaching its tightest position in mid-1969. At almost exactly the same time, the level of investable funds flowing to traditional private placement lenders failed to increase. The failure resulted from both an increase in policy loans by life insurance companies and an unwillingness of these lenders to increase their level of investable funds by borrowing. It was reflected in a decrease in their net acquisition of financial assets in 1969 (see Table 1).

Some corporate borrowers who were able to offer standard contracts undoubtedly shifted from the private placement market to the public market as differences developed between the two markets in borrowing costs or in the conditions on which the funds could be obtained.[7] However, smaller, less financially secure companies were either unable to do so at all or were unable to do so on acceptable terms or at acceptable cost, and suddenly found their two primary sources of financing—the banking system and the private placement market—far from assured. Bargaining power had shifted strongly toward the lender at a time when lenders were interested in achieving superior investment performance by increasing their equity holdings.[8]

Attractiveness of Equity Kickers to Borrowers

It apparently was not necessary for lenders to exert heavy pressure on bor-

TABLE 1 Measures of Tightness in the Capital Markets, 1963-1972 (billions of dollars)

	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972
Net reserve position of all member banks	0.21	0.17	0	−0.17	0.11	−0.31	−0.83	−0.05	−0.06	−0.83
Net acquisition of financial assets:										
Life insurance cos.[a]	6.6	7.4	8.2	6.8	7.7	8.5	6.7	7.7	11.7	14.1
Private pension funds	4.5	4.9	5.5	7.2	6.6	6.4	6.3	7.1	7.3	6.8
State and local pension funds	2.6	3.0	3.3	4.2	4.1	4.8	5.5	6.3	6.3	7.9
	13.7	15.3	17.0	18.2	18.4	19.7	18.5	21.1	25.3	28.8

SOURCE. Board of Governors of the Federal Reserve System (1973).
[a]Net of the change in policy loans.

rowers to secure an incentive feature.[9] Sixty-one firms that issued equity incentives during 1968-1969 were surveyed for this study. Almost all agreed with the statement that:

> At the time of the financing we felt that the amounts of earnings per share dilution resulting from the kicker would not be too excessive.

In part, this attitude reflected the high price-earnings ratios of the issuers and the fact that the conversion and warrant exercise prices were typically set at roughly a 15 percent premium over the market price. The stocks of the sixty-one firms traded at an average price-earnings ratio of 27 in the year in which the financing was negotiated.[10]

The near lack of concern over the potential dilution reflected management's belief that "if things work out well, we'll be happy and so will the lender since the kicker will yield a nice return. If things don't go so well, we will have succeeded in raising money at a relatively low interest rate without suffering any dilution from the worthless kicker we give the lender."

Conditions during 1970-1972

The use of equity kickers declined sharply in 1970 as investor interest in common stocks—especially those that were not issued by high-quality companies—was dampened by the recession, the bankruptcy filing by Penn Central Transportation Company, and the sharp decline (20-30 percent) in the stock market during the twelve months ended June 1970. The gospel that stocks were a sound hedge against inflation was so far stood on its head that there developed a very high inverse correlation between changes in stock prices and the most recent news on how the current battle against inflation was going (Lintner 1973).[11] Interest in investing in low-rated companies declined sharply. The response of investors to both the new perceptions of risk and the opportunity to invest in high-quality companies at historically high yields was to emphasize liquidity and creditworthiness. It is not surprising, therefore, that equity incentives were included in only 19 percent of total debt financings negotiated in the private placement market during 1970—down from a high of 38 percent during the first half of 1969 (see Chart 2, below).

Use of equity kickers continued to decline in 1971 and 1972, accounting for less than 10 percent of total privately placed debt during that period. The decline reflected continued fear that inflation was bad for common stocks as well as a substantial easing of conditions in the private placement market. In 1971-1972, in sharp contrast with the 1968-1969 period, the traditional lenders in the private placement market had substantial funds to lend and found it difficult to negotiate the inclusion of an equity incentive with companies that met their tightened quality standards (see Table 1).

Regression Analysis of the Rise and Decline of Equity Kickers

The relationship of equity incentive use to institutional interest in common stocks and to the tightness of money during 1955-1972 was tested statistically. The form of the model was as follows:

$$(1)\quad \frac{\$IF}{\$PP} = a + b_1\,(CS/LILF) + b_2\,(LILF/LILF \text{ lagged}) + b_3\,(NRP) + u$$

where

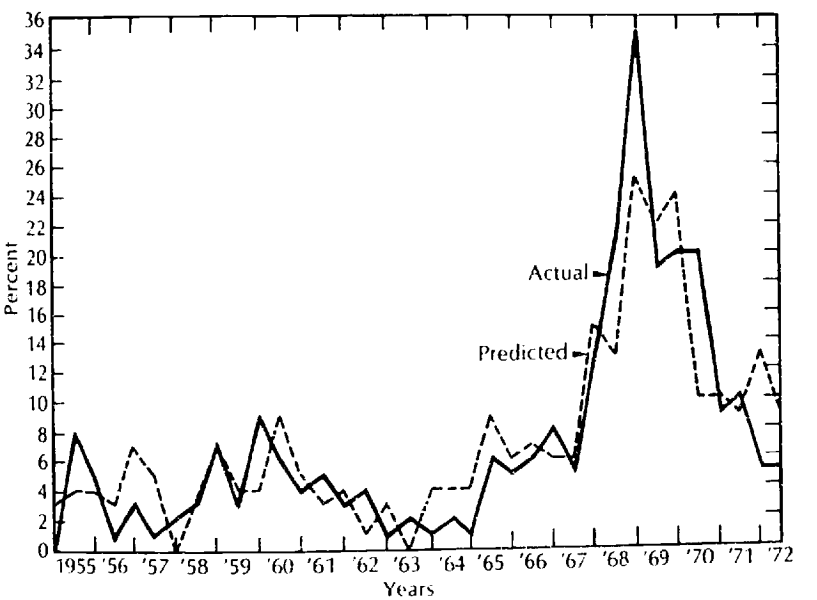
$\$IF$ = dollar amount of privately negotiated debt commitments that included equity incentives

$\$PP$ = total dollar amount of privately negotiated debt commitments during each six-month period

$CS/LILF$ = institutional interest in common stocks: dollar amount of net acquisition of common stocks by the life insurance industry divided by loanable funds of the industry during the six-month period[12]

$LILF/LILF\,(-2)$ = tightness of funds in the private placement market: loanable funds of the life insurance industry during the six-month period divided by average loanable funds of the industry over the past two years[13]

CHART 2 Actual and Predicted Percents of Privately Placed Debt That Included Incentive Financing



SOURCE: Equation 1 and mail-sample data.

NRP/Loans = tightness of conditions in the commercial banking system: net reserve position of the commercial banking system at the end of the six-month period divided by total loans of the system at the end of the six-month period[14]

u = random error term

As shown in Table 2, the model explained 69 percent of the variance; each variable entered with the correct sign and was significant at the 5 percent level. The error terms were not highly correlated, as evidenced by a Durbin-Watson statistic of 1.89. The results confirm the hypothesis that the use of equity incentives during 1955-1972 was positively correlated with institutional interest in common stocks as measured by the percent of loanable funds invested by the life insurance industry in common stocks, and was negatively correlated with easy money conditions as measured by the net reserve position of commercial banks and the trend in loanable funds of the life insurance industry.[15]

Chart 2 shows both the actual percent of privately placed debt that included an incentive feature and the percent predicted on the basis of the regression model, for each of the semiannual periods 1955-1972. The model is consistent with the longer-term movements although, with only two major changes in direction in the time series, the number of observations in the series is less than 36, and the R^2 is possibly overstated.

TABLE 2 Determinants of Equity Incentive Use

Dep. Var.	Constant	*CS/LILF*	*NRP/Loans*	*LILF/LILF(−2)*	R^2 (*DW*)
$\frac{\$IF}{\$PP}$	.2804	.6900	−.0049	−.2540	
	(.0561)	(.0909)	(.0024)	(.0552)	0.69
	[.001]	[.001]	[.022]	[.001]	(1.89)
$\frac{\$W}{\$PP}$	.0939	.3323	−.0017	−.0853	
	(.0295)	(.0477)	(.0012)	(.0290)	0.64
	[.002]	[.001]	[.086]	[.003]	(2.26)
$\frac{\$CV}{\$PP}$	.1728	.3061	−.0030	−.1571	
	(.0341)	(.0552)	(.0014)	(.0335)	0.59
	[.001]	[.001]	[.022]	[.001]	(1.67)

NOTE: The figures in parentheses are standard errors; the figures in brackets, the probability that the sign of the coefficient is incorrect. R^2 is the coefficient of multiple determination; *DW*, the Durbin-Watson statistic. $W is the dollar volume of issues that contained warrants; $CV, the dollar volume of convertible issues. The other symbols in the table are defined in the accompanying text.

[II] ISSUERS OF EQUITY INCENTIVES DURING 1968-1969

The Relationship between the Riskiness of the Debt Issue and the Inclusion of an Incentive Feature

During tight money periods, small, financially weak companies with limited financing alternatives must carefully design their securities issues to meet the preferences of private placement lenders. It is not surprising, in view of lender interest in equity kickers during 1968-1969, to find a strong, systematic relationship between the riskiness of the debt issue and the inclusion of an equity kicker. This is observed in the tabulation below, which shows the proportions of low- and high-risk financings within each security type and is based on the results of a mail survey of 121 firms that placed debt privately during 1968-1969. Low-risk financings included all those in which the borrower believed that the debt was rated the equivalent of BBB or higher; the numbers of respondents are shown in parentheses:[16]

	Straight Debt		Convertible Debt		Debt with Warrants		Total Number in Risk Class
Low-risk financings	71.7%	(33)	32.3%	(10)	26.7%	(8)	(51)
High-risk financings	28.3	(13)	67.7	(21)	73.3	(22)	(56)
	100.0%	(46)	100.0%	(31)	100.0%	(30)	(107)

The mean difference between straight debt and convertibles for low-risk financings (first column minus second column) is 39.4 percent. The standard error of the difference is 10.5 percent, and the Z value is 3.752; in a two-tailed test, the difference is significant at the 1 percent level. For straight debt less debt with warrants, the difference is 45.0 percent, the standard error is 10.3, the Z value is 4.368, and the difference is again significant at the 1 percent level.

Of the straight debt financings, 72 percent were categorized by the borrowers as low risk, in contrast to only 32 percent for convertibles and 27 percent for debt with warrants. Alternatively stated, 65 percent of borrowers with *low*-risk securities issued straight debt, but only 23 percent of borrowers with *high*-risk securities did so.

The above results were based on assessments by borrowers of the quality ratings of their securities. It was decided, therefore, to determine whether there were systematic differences between straight debt and equity incentive financings as measured by security risk. The measures we used included the

borrower's ratio of total debt to total assets, the number of times the borrower's interest expense was covered by earnings before interest and taxes, total asset size of the borrower, age of the borrowing company, and position of the debt instrument vis-à-vis other debt obligations of the borrower. The first two are rough measures of the amount of financial risk involved; total asset size was hypothesized to relate to the degree of product-market diversification and, therefore, the degree of business risk. Our measure of borrower age reflects our assumption that it is riskier to invest in young companies than in older, well-established ones. Companies originally founded before 1940 were assigned a value of 1 in computing the averages; 1941-1949 = 2; 1950-1959 = 3; and 1960-1969 = 4.

The tests confirmed that debt issues with incentive features were, on average, riskier than straight interest issues partly because of the design of the specific security. Only 3 percent of the latter were subordinated, while the respective proportions for convertible debt issues and debt issues with warrants were 67 percent and 22 percent.[17] A significant difference at the 1 percent level was found between the straight debt proportion and each of the equity incentive proportions.

Debt issues that included equity incentives also tended to be riskier than straight debt issues as a result of the underlying financial condition of the issuer (see Table 3). Companies that included incentives were significantly younger than straight debt companies and had significantly higher debt levels in relation to total assets. Companies that issued convertibles were also significantly smaller in total asset size. Surprisingly, no significant differences were found in the means for interest coverage.

Importance of Borrower's Growth Prospects

Use of equity incentives reflected a strong institutional interest in common stocks and in the possibility of capital gains. In view of this, a systematic relationship might be expected to exist between the borrower's growth prospects and the lender's interest on an equity incentive. There is some evidence that the use of incentive features was positively correlated with the growth prospects of the company. It was found that 59 percent of the 95 *high*-growth companies in our sample included either warrants or a conversion privilege in their debt financing. This compares with only 41 percent for the 12 *low*-growth companies.

However, important questions remained unanswered. Specifically, were there systematic differences between the high-growth companies that issued straight debt and those that included an equity incentive? The substance of the preliminary interviews suggested that companies with good growth prospects would include an incentive feature on *high-risk* debt issues; it was also

suggested that companies with good growth prospects would include an incentive on *low-risk* debt issues *only* if the *borrower* desired it in return for one or more of the following concessions:

To secure a lower fixed rate for "cosmetic" or other reasons (Brigham 1966 and Hayes and Reiling 1969);

To reduce the total cost of financing (including the value of the incentive feature) to below what would be possible on a straight interest basis (Larson 1971);

To secure relatively easier restrictive covenants and repayment provisions. This may be especially important in the case of convertible securities (Shapiro and Wolf 1972, p. 5);

To raise common equity on a delayed basis at an effective price above the present market price.

The impact of growth on the type of security issued can only be identified, therefore, by considering low-risk and high-risk financing separately. In Table 4 the borrowers are divided into four categories according to their risk and growth characteristics.[18]

High-Risk Financings by Forty High-Growth Companies

An incentive feature was included in 77 percent of the high-risk financings negotiated by companies with high-growth prospects (Table 4).[19] As expected, the most important reasons cited by the forty borrowers for the inclusion of an incentive feature related to their perceptions of the lenders' demands (see Table 5). Most of the forty borrowers were very interested in the private placement of a long-term debt issue[20] and were either uncertain that the lender would provide the financing on a fixed interest basis or believed that the lender would not do so. Twenty-six of the forty borrowers agreed with the statement that:

> The availability of the financing was such an important consideration that we were not that deeply concerned over the giving of a kicker.

A number of the forty borrowers were also attracted to the easier covenants. No significant difference was observed in the maturities of the straight debt issues and those that included equity kickers; each group averaged fifteen years. However, convertible issues had significantly longer sinking fund holidays (an average of ten years versus four years for all others) and, according to the loan officers interviewed,[21] considerably less stringent covenants than those on issues of straight debt and debt with warrants. For 26 percent of the high-risk, high-growth borrowers, the nonprice concessions were very important and the cost of the equity incentive was considered a reasonable price to pay for them.

TABLE 3 Means and Tests of Significance of Differences in Means of Various Measures of Risk

Measure of Risk	Mean Straight Debt	Mean Equity Incentive Debt	Mean Difference	Standard Error of Difference	Degrees of Freedom	Significance Level[a]
			Straight Debt vs. Convertible Debt			
Ratio: Total debt to total assets	58.18%	63.13%	−5.0%	2.3	200	.05
Total assets (mil. $)	$193	$93	$100	42.54	200	.025
Age of borrower[b]	1.844	2.628	−0.784	0.172	188	.001
Ratio: EBIT[c] to interest expense	7.1	5.7	1.4	0.985	167	.16
			Straight Debt vs. Debt with Warrants			
Ratio: Total debt to total assets	58.18%	67.59%	−9.4%	2.4	175	.001
Total assets (mil. $)	$193	$170	$23	58.843	175	.70

Age of borrower[b]	1.844	2.453	−0.609	0.185	169	.01
Ratio: EBIT[c] to interest expense	7.1	8.4	1.3	4.219	145	.76

SOURCE: Mail sample. All companies to which a questionnaire was mailed and for which financial data were gathered from *Moody's Manuals*.
[a]Two-tailed *t* tests.
[b]Companies originally established before 1940 were assigned a weight of 1; 1941-1949 = 2; 1950-1959 = 3; and 1960-1969 = 4.
[c]EBIT = earnings before interest and taxes.

TABLE 4 Financing Pattern for 107 Mail-Sample Borrowers[a]

	High-Growth Companies		Low-Growth Companies	
	No.	Percent	No.	Percent
		Low-Risk Financings		
Straight debt	27	62.8	6	75.0
Debt with incentive feature	16	37.2	2	25.0
	43	100.0	8	100.0
		High-Risk Financings		
Straight debt	12	23.0	1	25.0
Debt with incentive feature	40	77.0	3	75.0
	52	100.0	4	100.0

[a]A firm was placed in the high-growth category if its management expected its stock price to appreciate by more than 6 percent per year for the five years following the private placement negotiations, as reported in the mail questionnaire responses, and it was placed in the high-risk category if its management indicated that the debt security was rated BB or lower.

Thirty-one (78 percent) of the high-risk, high-growth borrowers that issued debt with an incentive feature believed that the *total* cost (fixed rate plus the cost of the feature) was less than the interest rate that would have been required on a straight debt deal. A few of those borrowers saw uncertain or bad times ahead for their companies and stocks and, therefore, assigned zero cost to the incentive. However, research by Larson (1971) suggests an alternative explanation based on the failure of borrowers to understand the nature of the financing negotiated. More specifically, Larson suggests that many borrowers mistakenly believed that they had negotiated the certain sale of equity at a premium over the current market price. They failed to recognize that when a company issues long-term options for its common stock at a fixed price, it is giving up the freedom to issue those shares in good markets at better prices. The exercise price of the warrant does not assure the minimum proceeds possible but, rather, the *only* proceeds possible. The minimum of no funds at all occurs if the price of the common happens to be less than or equal to the exercise price at expiration. The company could easily plan to sell common at the time the warrants expire, and, therefore, the options offer no advantage, but several possible disadvantages.[22] However, apart from the merits of their reasoning, a number of borrowers believed that the inclusion of an incentive feature resulted in a total cost that was lower than that of their straight debt alternative; and for 55 percent of the high-risk, high-growth issuers of debt, this was either a very important or fairly important consideration.

TABLE 5 Relative Importance of Various Reasons for Inclusion of an Equity Incentive Feature, as Assigned by High-Risk, High-Growth Companies

	Percent Citing Reason as				
	Very Important	Fairly Important	Slightly Important	Average Rating[a]	Number of Respondents
1. Lender wanted incentive feature to compensate for borrower's risk	38%	34%	28%	1.9	39
2. To make sale of securities easier since incentive feature popular	34	34	32	2.0	38
3. To secure lower "total cost"	24	31	45	2.2	38
4. To induce lenders to make loan during tight money conditions	28	21	51	2.2	39
5. To get easier covenants	26	18	56	2.3	39
6. To raise equity capital	21	23	56	2.4	39
7. Lender used incentive feature to avoid violating usury laws	0	0	100	3.0	37

SOURCE: Mail sample.

[a]The average rating is the sum of the weights (very important = 1; fairly important = 2; slightly important or unimportant = 3) assigned to a specific reason by each respondent, divided by the total number of respondents. The lower the rating, the more important the reason.

Finally, thirty-eight of the forty borrowers agreed with the statement that:

> At the time of the financing we felt that the amount of earnings per share dilution resulting from the kicker would not be too excessive.

As discussed earlier, this attitude reflected the high price-earnings ratios of the issuers and the realization that "if things work out well, we'll be happy and so will the lender. If things don't go so well, we will have succeeded in raising money at a relatively low interest rate without suffering any dilution from the worthless kicker we gave the lender."

Low-Risk Financing by High-Growth Companies

The mail-sample data provided additional evidence that low-risk financings by high-growth companies included an equity incentive only at the *borrower's* option. First, the proportion of all financings that included an equity incentive was lower for *low*-risk, high-growth companies than for *high*-risk, high-growth companies (37 percent versus 77 percent). Furthermore, the rankings of the reasons for including an incentive feature were different for the two categories. The former ranked "to raise equity capital" second in importance, which is consistent with the hypothesis that inclusion of an incentive would benefit the borrower. The latter ranked it sixth (see Table 6). The former also saw the inclusion of an incentive feature "to compensate the lender for risk" as far less important than did the latter.

There was also some interest in window dressing among *all* issuers of debt with incentive features—an interest that was confirmed by field interviews with institutional lenders and investment bankers. Seven of the 61 issuers (11 percent) indicated that window dressing was a very important reason for including an incentive, especially during the period when interest rates were moving up to record high levels. The financial officer could report to top management and to outsiders that the company not only had secured a relatively attractive coupon but had also sold shares at a price that was typically above the current market. While the reported "sale" of shares can be challenged for reasons outlined earlier, it apparently was convincing to some managements.

It is noteworthy that the sixteen low-risk, high-growth companies which included an incentive feature (37 percent of the total sample in this category) reported that the most important reason for doing so was to facilitate placement of the debt. This does not necessarily conflict with the belief that such borrowers *could* have negotiated a straight debt issue had they wished to, a supposition supported by interviews with three life insurance investment officers, who revealed that they were unwilling to insist upon a kicker on low-risk financings by companies with high-growth prospects for fear that the borrower would go elsewhere for the loan.[23] It does suggest, however, that in offering an equity kicker, the sixteen companies had not correctly assessed the market.

TABLE 6 Rankings of Various Reasons Given by Borrowers for Inclusion of an Equity Incentive

	Low-Risk, High-Growth Companies		High-Risk, High-Growth Companies	
	Ranking	Average Rating[a]	Ranking	Average Rating[a]
1. Lender wanted equity incentive feature to compensate for borrower's risk	5	2.5	1	1.9
2. To make sale of securities easier since incentive feature popular	1	1.8	2	2.0
3. To secure lower "total cost"	3	2.3	3	2.3
4. To induce lenders to make loan during tight money conditions	4	2.3	4	2.3
5. To get easier covenants	6	2.9	5	2.3
6. To raise equity capital	2	2.2	6	2.4
7. Lender used incentive feature to avoid violating usury laws	7	3.0	7	3.0

SOURCE: Mail sample.
[a]The average rating is the sum of the weights (very important = 1; fairly important = 2; slightly important or unimportant = 3) assigned to a specific reason by each respondent, divided by the total number of respondents. The lower the rating, the more important the reason.

Debt Financings by Companies with Low-Growth Prospects

Only 12 of the 107 borrowers in the mail sample characterized their companies as having low growth prospects. Although this may reflect the ability of many low-growth firms to finance themselves internally, it may, instead, lend support to the hypothesis that companies with high-risk securities and low growth prospects had difficulty in placing their debt privately on any basis. The latter hypothesis is supported by the results of interviews with several investment bankers who stated that BB- and B-rated borrowers with low-growing, unexciting stocks and without an existing relationship with a lender had substantial difficulty in placing their debt privately during 1966-1969. Further support for this hypothesis was provided by interviews with three life insurance companies about loans made to nine high-risk, high-growth companies during this period. The lenders stated that in seven of the nine cases, the loan request would have been denied if the company's outlook had been for little or no growth. They stated that the low-growth prospects would have made the incentive feature uninteresting and that, as a matter of the basic prevailing

philosophy during 1966-1969, they would only invest in a high-risk security if they could receive an incentive feature with a potentially big payoff.

The structure of the financings by the eight low-risk, low-growth companies was consistent with the belief that lenders would not be interested in negotiating equity kickers with low-growth companies but would be willing to lend to them on a straight interest basis because of their low risk. Six of the eight financings were done that way; the two companies that included equity incentives did so in the belief that a straight interest issue would have resulted in a higher total cost.

[III] PERFORMANCE OF EQUITY INCENTIVES

The field interviews and mail-sample data clearly indicate that lenders were required to grant some concession on the fixed rate in return for the incentive feature. Inclusion of warrants lowered the rate, on average, by roughly 20-30 basis points from the level necessary on a straight interest basis. As indicated in the following tabulation, a conversion feature lowered the fixed rate, on average, by roughly 100-125 basis points (the data shown are from the mail sample; the numbers of issues are shown in parentheses):[24]

	Straight Debt	Debt with Warrants	Convertible Debt
1968			
First half	6.92% (44)	6.90% (18)	6.20% (18)
Second half	7.27 (43)	7.00 (23)	5.91 (27)
1969			
First half	7.65 (28)	7.37 (32)	6.40 (38)
Second half	7.97 (26)	7.78 (24)	6.95 (33)

In these estimates, it is of course assumed that the straight debt financings in the mail sample and the debt financings that included an incentive feature were alike except for the feature. To the extent that the latter also tended to be lower in quality than straight interest financings, the concessions are understated.

Institutional lenders have been disappointed by the performance of the equity incentives negotiated during 1967-1970. Only one of the fifteen bank pension departments and life insurance companies interviewed in July 1975 felt that the profitability of the incentive features had been satisfactory; although several commented that insufficient time had elapsed to allow a final judgment. Discussions with three investment banking firms that are active in private placements confirmed that lender interest in securing incentives is low.

Several reasons were cited by the institutional lenders and the investment bankers for the poor profitability of equity incentives. First, there was a strong belief that quality standards had been compromised during 1967-1970, in part on the strength of forecasts—which proved to be overly optimistic—of enticingly high earnings per share. Second, the general decline in price-earnings ratios had often offset substantial earnings gains. Third, some difficulties had been encountered in both the timing and execution of the conversion or exercise of the warrant.[25] More specifically, several lenders had experienced difficulties in gaining their own committee's approval of the kicker, securing an effective registration statement for sale of the stock received upon conversion (or exercise), and selling large blocks of stock in small companies. The process often required four to eight months, by which time market conditions had frequently turned unfavorable.[26]

Analysis of the 65 incentive issues negotiated during 1968-1969 and included in the mail sample supports the field interview evidence. Only 17 of the 65 kickers had been exercised or converted as of December 1975; the tabulation below shows the ratio of the market price of those issues to their exercise or conversion price (data are from the mail sample):

65 Issues with Incentive Feature	On Date Exercised or Converted		At Year-End 1974		On December 16, 1975	
	Mean	Median	Mean	Median	Mean	Median
17 exercised	173%	132%	46%	35%	59%	42%
48 not exercised	Not exercised		31	32	34	28

The gains on these 17 were possibly quite substantial, as the market price at the time of exercise or conversion was, on average, 73 percent above the exercise (conversion) price (the corresponding median was 32 percent). Unfortunately, we have no information on whether the shares received were actually sold and, if sold, at what price. Indeed, failure to have sold promptly would have left the lender with substantial unrealized losses on the stock received. As of December 1975, the mean price was only 59 percent of the original exercise or conversion price. (Hereafter, the term "exercise" refers to conversion as well.)

Of the 65 debt financings that included equity kickers, 48 had not been exercised by December 1975, and prospects for doing so profitably seemed low. The median ratio of the December 1975 market price to the exercise price was only 28 percent. Of equal importance, only four of the 48 were selling at a market price in excess of the exercise price. Of the 48, 39 were selling at market prices less than half of the exercise price and seemingly have little chance of profitable exercise prior to expiration.

The failure of lenders to realize profits on the great majority of the sixty-five equity kickers resulted in part from relatively poor earnings patterns for the firms during 1969-1974. Twenty-five of the firms experienced a decline in earnings per share during this period, with 13 actually operating at a deficit in 1974. This record compares unfavorably with the earnings patterns for the 60 largest manufacturing corporations in the United States, in whose equities the insurance companies might have invested.[27] Sixteen firms showed a growth of earnings per share of over 100 percent during the period. However, as indicated in the following tabulation of changes in earnings per share during 1969-1974, that performance was about the same as for the 60 largest corporations:

	Decline of		Increase of				
	51-100%	0-50%	1-25%	26-50%	51-100%	>100%	Total
65 issuers of equity incentives	30%	9%	22%	8%	6%	25%	100%
60 largest cos. (oil cos. excl.)	7	10	3	13	35	32	100
76 largest cos. (incl. oil cos.)	5	8	3	11	33	40	100

The value of equity incentive features was also hurt by a general decline in stock prices. Various stock price indexes at year-end 1974 were down 30 to 40 percent from their 1968 levels, as indicated in following data for year-end stock index levels (1971 = 100):[28]

	1968	1969	1970	1971	1972	1973	1974
Dow-Jones industrials	110	90	94	100	116	95	69
S&P 425 industrials	100	89	90	100	117	96	67
NQBIA	84	83	72	100	—	—	—
NASDAQ industrials	—	—	—	100	113	72	49

Strong earnings growth was typically more than offset by a sharp decline in the price-earnings ratio.

Examination of the price-earnings ratios of the 65 companies that issued equity kickers confirms the severity of the problem. As reported earlier, firms that issued equity kickers traded at an average price-earnings ratio of 27 in the year of the financing. By year-end 1974, the average ratio was 5, with no close relationship to the earnings record the firms had compiled during 1969-1974 (see Table 7).

It would be unwarranted, however, to conclude that because profits were not realized on a large proportion of equity kickers, lenders did not have the

TABLE 7 Price-Earnings (P/E) Ratios of Issuers of Securities with Equity Incentives

Change in Earnings per Share, 1969-1974	P/E Ratios at Time of Financing		P/E Ratios at Year-End 1974	
	Median	Mean	Median	Mean
Decline				
51-100%	27	31	[a]	[a]
0-50%	15	16	5	6
Increase				
0-25%	19	21	4	4
26-50%	23	48	6	6
51-100%	15	16	5	6
100%	19	28	5	5

[a]The calculation could not be made because of the large number of companies that operated at a deficit in 1974.

opportunity in many cases to exercise the option at a substantial profit. The opportunity was often there, but lenders did not take advantage of it. At some point between issuance and year-end 1974, a substantial average profit could have been realized on 26 of the 48 equity kickers not exercised. Furthermore, the peak potential was not realized on the 17 equity kickers actually exercised. The mean peak potential for the 17, as measured by the ratio of market price to exercise price, was 325 percent (median = 177 percent). For the market price actually realized, the ratio was 173 percent (132 percent). At year-end 1974, the ratio was 46 percent (35 percent). On the 26 potentially profitable equity kickers not exercised, the peak mean ratio was 200 percent (median = 158 percent), and the year-end ratio was 44 percent (45 percent). The year-end 1974 ratio for the remaining 22 equity kickers not exercised was 16 percent (17 percent). The foregoing comparison are summarized in the following tabulation; the figures are ratios of the market price to the exercise price:

No.	Type of Equity Incentive	Peak Potential		Actual		Year-end 1974	
		Mean	Median	Mean	Median	Mean	Median
17	Actually exercised	325%	177%	173%	132%	46%	35%
26	Potential gain between issue date and year-end 1974	200%	158%	Not exercised		44%	45%
22	No potential gain between issue date and year-end 1974	No potential gain		Not exercised		16%	17%

[IV] OUTLOOK FOR THE USE OF INCENTIVE FINANCING

Very few debt financings placed privately in 1973 and 1974 included equity incentives. Interviews with fifteen institutional lenders and three investment bankers, as well as the results of an analysis of all privately placed debt issues reported by the *Institutional Investor* magazine in its annual corporate financing summary, indicate that 2-3 percent of all privately placed corporate debt included either warrants or a conversion privilege in 1974.

The sharp decline in use of equity incentives resulted from several changes in lender and borrower attitudes. The majority of the eighteen institutional lenders and investment bankers interviewed in 1975 reported either no interest or only a slight interest in incentive financing.[29] Lender interest in investing in securities rated BB or below is very low and most lenders are presently unwilling to compromise their tightened quality standards in return for an incentive. The reaction of lenders to high-risk financings seems to be either to avoid them or to try to protect themselves against the risk by imposing restrictions and security arrangements. This stands in marked contrast to attitudes in 1968-1969, when many lenders seemed willing to accept high risk if it was accompanied by the possibility of high return. All eighteen respondents stated that companies with poor growth prospects and with securities rated BB and below would be unable to raise debt money. Companies with securities rated BB and below but with good growth prospects would fare only slightly better. Thirteen respondents felt that these borrowers would be unable to get debt financing, while five indicated that these borrowers might be able to sell debt issues that included equity incentives. The decline in use of incentive financing (equity kickers) also resulted from the reluctance of borrowers to issue warrants or convertible securities at the low prices prevalent in 1974. Eleven of the eighteen respondents stated that it is not possible to negotiate an equity kicker on debt financings by companies rated BBB or above. Four others stated that it was possible to secure kickers on some BBB-rated financings, but not on financings rated A and above. The remaining three respondents had no opinion.

It is hazardous to forecast tomorrow's fashions on the basis of today's tastes. Clearly, many lenders have been hurt both by the low profitability of kickers and by delinquencies and defaults on loans to higher-risk borrowers. They stated in 1975 that they will not soon forget their troubles with marginal credits and will not relax their tightened quality standards. This suggests that high-risk borrowers will face considerable difficulty in issuing funded debt in the foreseeable future. In contrast to the period 1968-1969, inclusion of warrants or a conversion privilege will not entice lenders to drop their standards.

The outlook for the inclusion of equity kickers on debt issues rated BBB or higher is less certain. Although attitudes of both lenders and borrowers were largely negative in 1975, a strong stock market could change the situation substantially. Borrowers would find the issuance of kickers less painful and lenders, encouraged by a few successes in stock investing, might show increased

interest. Furthermore, lenders can avoid some of the risks and difficulties of equity kickers by changing their structure. For example, the lender might negotiate a participation in the income of the borrower or the right, upon exercise of the kicker, to sell the stock received back to the company either at a preset price-earnings ratio or at book value. However, it seems very unlikely that the use of incentive financing will come close to approaching the levels of 1968-1969 in the foreseeable future.

NOTES

1. Special tabulations were developed for this study by examining the structure of each of the 24,032 private placements reported for the years 1955 through 1972 in the *Corporate Financing Directory*, published semiannually by the *Investment Dealers' Digest*. Secondary issues and financings by small business investment companies and venture capital firms were omitted from the series. Data for 1973 and 1974 are based on field interviews.
2. According to Lintner, similar arguments were made in the mid-1950s for equity investments.
3. Approximately 50 percent of the forward commitments on income-producing properties made in 1968-1969 included an income participation. This compares with a level of only 6 percent during 1964-1967 (see Piper 1976).
4. Convertible bonds accounted for 25 percent of total bond sales in the public market during 1967-1969, up from 10 percent in 1964 and an average of 21 percent during 1965-1966 (see *Statistical Bulletin*, Securities and Exchange Commission).
5. The figures show the percent change in price during the year of the 35-stock index of shares traded in the over-the-counter market (NQBIA), taken from Dana (various issues) and the Standard & Poor's index of 425 industrials (S&P425):

	1963	1964	1965	1966	1967	1968	1969
NQBIA	18%	24%	31%	−2%	57%	15%	−1%
S&P425	20	14	9	−13	24	8	−11

6. Shapiro and Wolf (1972, p.16) cite the increased performance consciousness of life insurance companies and corporate pension funds as an important factor in the increased use of equity incentive during the latter half of the 1960s (see also Belliveau 1969). Every investment officer interviewed for this study stated that the investment performance philosophy of 1968 and 1969 and the desire for capital gains encouraged the inclusion of equity incentives on debt placed privately with their institutions.
7. See Shapiro and Wolf (1972) for a full discussion of the structure of the private placement market.
8. The importance of tight money conditions and a strong equity market have been cited by Williams and Williams (1960, pp. 123-134) and Hayes (1965) in explaining fluctuations in the use of equity kickers during the late 1950s and early 1960s.
9. This finding is consistent with the conclusions of Williams and Williams (1960), based on their study of incentive financing during the late 1950s. It stands in sharp contrast to the strong pressure exerted by lenders to secure income and equity participations on real estate financings during 1967-1969.
10. The price-earnings (P/E) ratios were calculated by dividing the average of the high and low stock price in the year of the financing by the earnings per share before extraordinary items in the same year. The sample includes all mail-sample borrowers for which the necessary data were available (268 borrowers) less 27 firms that reported operating losses and another 8 that had P/E ratios in excess of 100.

11. A similar reassessment of the profit potential of income participations on real estate loans was under way at approximately the same time, and the percent of mortgage loan commitments that included income participations in 1971 and 1972 fell to approximately 5-10 percent (Piper 1976).
12. We focus on the life insurance industry because of its importance in the private placement market.
13. The level of loanable funds for each six-month period was derived from seasonally adjusted flow-of-funds data by summing the net increase in surplus and the net increase in liabilities and subtracting the net increase in policy loans.
14. The net reserve position of the commercial banking system has been a reliable measure of the degree of tightness in the capital markets (see Sinai).
15. Additional tests were conducted to determine whether inflationary expectations may have had a unique impact not captured by the *CS/LILF* variable. The inflation variable was split, with one part (*EXINA*) representing the period 1955-1969, when investors believed that stocks should be purchased as a hedge against inflation, and the other (*EXINB*) representing 1970-1972, when investors believed that inflation was bad for stocks (see Lintner 1973). A measure of inflationary expection was created by using a second-order Pascal distributed lag on the implicit, fixed weight price deflator for nonfarm output, provided by Robert J. Gordon of the University of Chicago.

    As shown below, neither inflation variable was statistically significant at the 5 percent level and the explanatory power of the model was not improved:

$$\$IF/\$PP = \underset{\substack{(.0630)\\[.002]}}{.1950} + \underset{\substack{(.0104)\\[.057]}}{.0169\ EXINA} + \underset{\substack{(.0099)\\[.373]}}{.0032\ EXINB} + \underset{\substack{(.1333)\\[.001]}}{.6314\ (CS/LILF)}$$

$$- \underset{\substack{(.0023)\\[.040]}}{.0041\ (NRP/Loans)} - \underset{\substack{(.0548)\\[.001]}}{1994\ [LILF/LILF(-2)]}$$

$R^2 = 0.677$; $DW = 1.892$

16. Questionnaires were sent to all 257 borrowers who were reported to have negotiated a debt issue with warrants or a conversion feature with a life insurance company during 1968-1969. Questionnaires were also sent to 146 firms that negotiated straight debt deals with life insurance companies during the same period. Usable responses were received from 121 firms. Of the 121, 67 had negotiated debt financings that included equity kickers, and the remaining 54 had borrowed on a straight debt basis. No significant differences at the 5 percent level were found between respondents and nonrespondents in terms of the level of financial risk, as measured by the number of times that the firm earned its interest and by the ratio of total debt to total assets; the asset size of the borrower; the age of the firm; or the growth in earnings per share from the date of the financing through 1972.
17. Senior debt was assigned to the unsubordinated category. There were 120 straight debt issues, 114 convertible issues, and 81 issues with warrants, for a total of 315.
18. Only 107 of the 121 companies were tabulated in this fashion. The remaining 14 failed to answer one of the questionnaire questions necessary to assign them to one of the four cells.
19. Six of the twelve straight debt issues were by closely held companies. In interviews, lenders indicated they were reluctant to negotiate incentive features with closely held companies because there was no public market for the stock.
20. The advantages to the borrower of selling its debt in the private placement market include lower issuance costs, faster consummation, and flexibility of negotiation over the terms and provisions of the security, both at the time it is issued and subsequently as well (Shapiro and Wolf 1972, Chap. 2).

21. Forty interviews were held with seven investment bankers and with senior investment officers of three bank pension funds and twelve of the largest life insurance companies.
22. It is possible that some of the smaller companies could only have sold common at a substantial discount to market, in which case the use of warrants or a convertible might have been attractive in economic terms.
23. Depth interviews were conducted with three life insurance lenders on twenty-four private placements negotiated during 1968-1969.
24. The rate concession on a convertible issue was greater than on an issue containing warrants because the entire amount of the convertible issue could be converted into equity, whereas the warrants provided, on average, only a 38 percent equity play (based on the ratio of the dollar amount paid by the lender to the borrower upon exercise of the warrants and the initial dollar amount of the loan). The *difference* in rate concession was unrelated to the level at which the option prices were set. The mean exercise price for the warrants and the conversion price for the convertible debt were respectively 12 percent and 15 percent above the market price at the time of the negotiations.
25. Thirteen respondents cited compromise of quality standards as an important reason for the poor profitability of equity incentives negotiated during 1967-1970; 1 disagreed, and 2 thought the reason to be only slightly important. On the importance of overly optimistic forecasts, 14 agreed, 1 disagreed, and 1 thought the reason only slightly important. The third point was cited by 6 respondents, rejected by 6, and assigned only slight importance by 1.
26. The seriousness of this problem depended, of course, on whether (a) the lender secured full registration rights and (b) the loan agreement provided for a time period during which the kicker could not be converted (or exercised).
27. As reported in *Fortune* and ranked at year-end 1974 according to sales. Excluded are all oil companies because their earnings gains were extremely high during 1969-1974 for reasons considered peculiar to the industry.
28. NQBtA represents an index of 35 over-the-counter industrials reported in Dana (various issues). NASDAQ is the over-the-counter index of the National Association of Securities Dealers.
29. For a company whose outstanding securities were rated below BBB, 4 respondents expressed a definite interest in kickers; 3, slight interest; and 11, no interest. The corresponding figures for ratings of BBB or better were 3, 9, and 6.

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