Moody's Investors Service
Global Credit Research

Corporate Bond Defaults and Default Rates 1970-1994

January 1995

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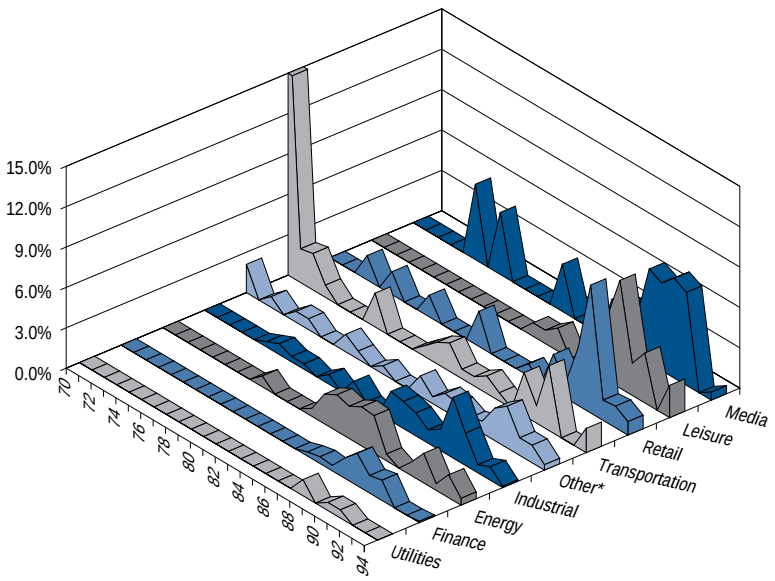
Summary

Moody's 1995 corporate bond default study extends our previous default research to cover the 25 years from 1970 through 1994. Over this period, 640 issuers defaulted on over $96 billion of public, long-term debt. Various aspects of these defaults, including default rates by Moody's rating and by industry, rating histories, and recovery estimates are examined in this report. Highlights of the study are:

- Twenty four issuers defaulted on $2.3 billion of long-term publicly held corporate debt in 1994. This is down sharply from 1993's total of 39 issuers ($3.4 billion of debt) and 1992's 49 issuers ($8.3 billion).
- The low number of defaulters in 1994, combined with recent growth in the number of speculative-grade issuers, produced a one-year speculative-grade default rate of 1.67%, the lowest for the speculative-grade market in 13 years.
- Four of 1994's defaulters were non-U.S. firms. They contributed a total of $514 million (22%) of defaulted debt to the year's total.
- The insurance sector claimed the largest share of defaulted debt in 1994. Other industries impacted, in order of decreasing par amount of debt affected were entertainment & leisure, retail and wholesale groceries, transportation and shipping and, for the first time, cable television.
- The estimated recovery rate for bonds that default is 38 percent of par.

One-Year Industry Default Rates, 1970–1994



*Including Real Estate, Healthcare and Technology

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1994 DEFAULTS

Nineteen-ninety-four maintained a trend towards lower default activity dating to 1992. Just 24 corporate issuers defaulted on a total of $2.3 billion of public long-term debt. In terms of both the number of issuers and the total dollar amount of debt affected, defaults for 1994 were markedly lower than in any of the previous three years. In 1993, 39 issuers defaulted on $3.4 billion of debt; in 1992, 49 issuers defaulted on $8.3 billion of debt; and in 1991, 98 issuers defaulted on $21.2 billion. The low number of defaults in 1994, combined with recent growth in the number of speculative-grade issuers, produced a default rate of 1.67%, the lowest for the speculative-grade market in 13 years. This rate is in line with the average yearly speculative-grade default rate of 1.65% during the period from 1971 through 1981.

Our trailing 12-month speculative-grade default rate started 1994 at 3.06%, but fell to an intra-year low of 1.44% in June and climbed again only modestly, to finish the year at 1.67%. The higher year-end figure reflects the 17 issuers that defaulted on $1.6 billion of long-term public debt in the last six months of the year, as compared with defaults by only seven issuers affecting $698 million in January through June.

The year's largest default occurred when the Canadian life insurance provider Confederation Life Insurance Company (and related entities) was seized by regulators. The $490 million of debt involved in the Confederation default accounts for 21% of 1994's total dollar amount of defaults. Confederation's misfortune stemmed primarily from overexposure to the North American real estate market. Other major corporate bond defaults of 1994 in descending order of par amount of debt affected are:

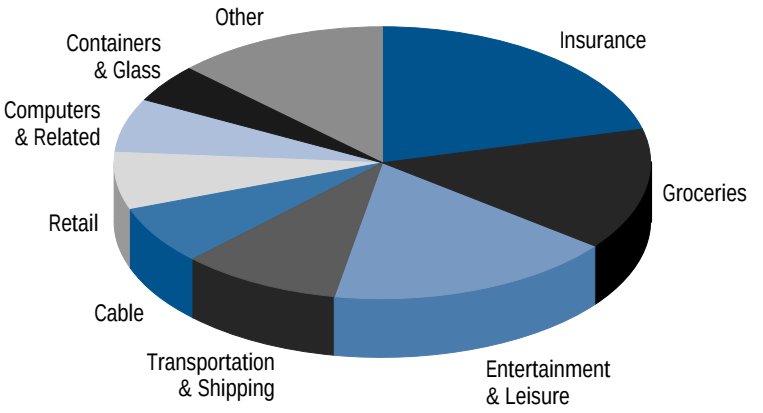
- Maryland Cable Corp. ($162 million), a cable operator in the Maryland suburbs of Washington DC, succumbed to the debt burden incurred in its 1988 leveraged acquisition. The default is especially noteworthy since it is the first in the cable television industry.
- Kash 'n Karry Food Stores Inc. ($155 million), a Tampa, Florida-based supermarket operator, is another victim of an ill-conceived 1988 LBO.
- Fair Lanes, Inc. ($138 million) is one of the three largest bowling center operators in the country. A decade-long decline in the popularity of bowling combined with excessive debt incurred in an 1989 LBO precipitated the omission of a February interest payment.

Credit concerns were not limited to the corporate bond market in 1994. Two structured finance transactions suffered serious credit deterioration as well. These cases are significant because they are rare examples of structured finance transactions in distress. ComFed Bancorp was once one of Massachusetts' largest residential mortgage lenders. However, the region's slack economy and real estate market combined with fraud to render the savings and loan's asset pool particularly risky. Moody's currently rates a total of $124 million of ComFed's mortgage pass through certificates series 88-2 through 88-7 at or below Caa . The multi-family mortgage pass through certificate series 1991-1 and 1993-MF2 of DLJ Mortgage Acceptance Corp. were also downgraded to Caa or below in 1994 as the economic value of the first liens on the apartment complexes that backed the transactions proved to be far below what was expected at issuance. The listing at the end of this report describes these and 1994's corporate bond defaults in greater detail.

Industries Affected

Chart 1

1994's Defaulted Debt by Industry



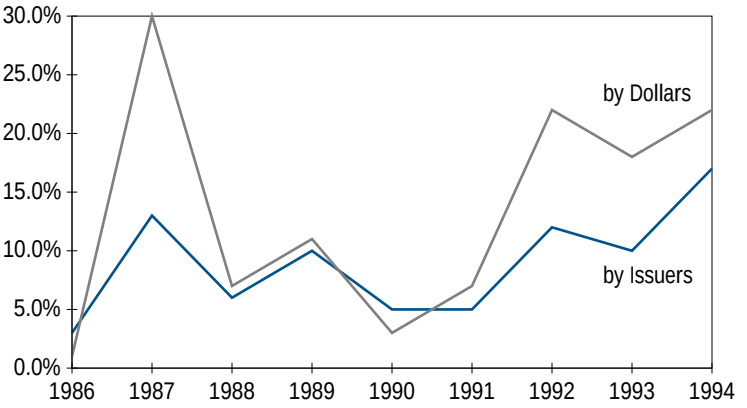
In both 1992 and 1993, the real estate sector claimed the largest share of defaulted debt. For 1994, that distinction fell to the insurance sector as a net result of the $490 million default of Confederation Life Insurance Company and two related entities. However, as it was primarily Confederation's overexposure to the weak North American real estate market that precipitated the company's decline, in an indirect way, real estate again claimed the largest share of defaulting debt. Filling the number two spot was the entertainment and leisure sector. Five issuers contributed $406 million, or 17%, to 1994's total. Within this sector, Belle Casinos became the first Mississippi-based gaming company to default, with Treasure Bay following suit three months later. Rounding out the top three was the retail and wholesale grocery sector. Here, three issuers defaulted on $337 million, contributing 14% of the year's total.

Transportation and shipping contributed $224 million, or 10%, to 1994's default total. Cable television contributed $159 million, or 7%, marking the first year the cable television industry has had a default on long-term public debt. While the retail industry contributed tremendous amounts of defaulted debt in 1990 through 1992, 1994 marks the second straight year of low default activity in this sector, with only $160 million, or 7% of the annual total. For more on the industry characteristics of defaults, see the section entitled *Default Rates by Industry Group* on page 16 of this report.

Other Aspects

Chart 2

Non-US Defaults as a Percentage of Yearly Totals

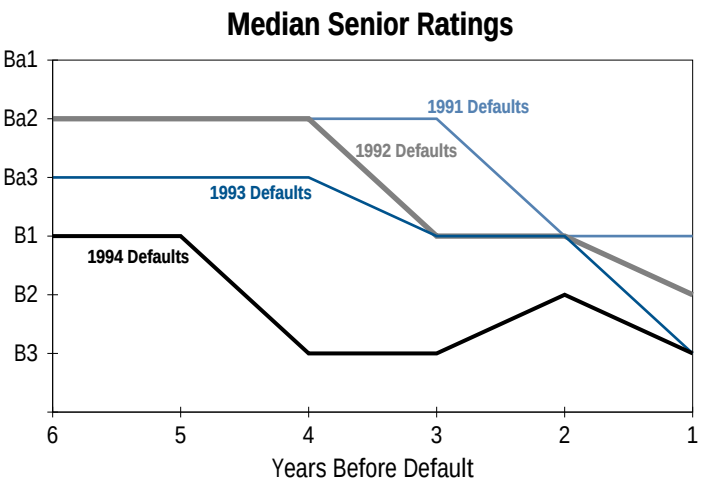


Ffiteen long-term public debt issuers, comprising 63% of this year's defaulters, sought protection from creditors, up from about 40% in 1991 and 1992 and 55% in 1993. Three additional companies were seized by Canadian regulators. Of the remaining six defaulters, one completed an exchange, one made payment within the grace period, one made payment after the grace period, and three are in continuing negotiations with bondholders.

Consistent with the pattern established over the past five years, about one-quarter of 1994 defaulters underwent an LBO or leveraged refinancing in the eighties or early nineties. The year's six LBO-related defaults affected $675 million of debt.

Four of the year's defaulting issuers were based outside the United States: Confederation Life Insurance Company and two related entities along with Grand Tibidabo, a Spanish leisure concern. Although these defaults represent only four out of 24 issuers, or 17%, the large amount of debt owed by the Canadian companies relative to the total amount of defaulted public long-term

Chart 3



debt in 1994 made non-U.S. defaulted debt an even larger percentage, 22%, of the year's total in terms of dollar figures. Since 1986, non-U.S. domiciled defaults have averaged 9% of the yearly total based on issuer counts. In terms of the dollar amount of debt affected, they have accounted for a slightly larger 13%. As Chart 2 illustrates, in recent years these percentages have trended upward.

The deterioration in credit quality of defaulting issuers was generally signaled by a lowering of Moody's ratings as the default date approached. Chart 3 shows six years of median senior ratings for issuers defaulting in the last four years. Where a company had only subordinated debt rated, we implied a senior rating of one or, more typically, two rating notches higher than the rating on the subordinated debt. The decline in median ratings prior to default indicates that Moody's ratings, on average, provide ample warning that risk of default has risen. The level of risk indicated by each rating category is discussed further in the following sections.

MARKET OVERVIEW

Supporting 1994's benign default environment was a slight strengthening of U.S. corporate credit quality. Over the course of the year, upgrades exceeded downgrades both in terms of issuers (183 vs 160) and in terms of debt affected ($152 billion vs $113 billion). But the improvements were not evenly spread across either the credit or industry spectrum. In the speculative-grade market, for example, upgrades almost perfectly matched downgrades both in terms of issuers (94 vs 92) and in terms of debt affected ($27 billion vs $26 billion). In the broader market, financial companies made noticeable gains as upgrades far outstripped downgrades (61 vs 13, or $79 billion vs $4 billion). Utilities, on the other hand, suffered downgrades at twice the rate of upgrades (23 vs 10, or $40 billion vs $9 billion).

In non-U.S. markets, however, aggregate rating changes were decidedly skewed toward the negative. Downgrades surpassed upgrades by a margin of nearly three to one. Sixty-one issuers with a total $167 billion of long-term debt were downgraded, outstripping only 24 issuer upgrades totaling $65 billion. The downgraded entities included several large issuers such as the Republic of Venezuela ($21 billion) and Credit Foncier de France ($20 billion). In all, 26 of the Non-U.S. issuer downgrades involved more than $1 billion of debt.

"Fallen Angels" (once investment-grade issuers that were downgraded to speculative-grade) outpaced "Rising Stars" (once speculative-grade issuers that were upgraded to investment-grade) in terms of both the number of issuers and the amount of debt affected. Fifteen issuers lost their investment-grade status, adding $31 billion to the speculative-grade bond market. The largest "Fallen Angel" is the Republic of Turkey. Expectations of high fiscal deficits prompted two downgrades that lowered the ratings on $8.5 billion of the country's debt from Baa3 to Ba3. Notable among the 10 "Rising Stars" were the upgrades of McDonnell Douglas Corporation and McDonnell Douglas Finance Corporation. These two accounted for two-thirds ($4.1 billion) of a total of $6.1 billion of "Rising Star" debt.

New issuance of U.S. corporate debt slowed in comparison with 1993's figures as rising interest rates choked off supply (see Chart 4). Considering all rating categories, new issuance fell from $255 billion in 1993 to just $123 billion in 1994, a plunge of 52%. Within the speculative-grade market, lower-rated B debt was issued at almost three times the rate of higher-rated Ba debt in 1994 ($22 billion vs $8 billion). Since speculative-grade upgrades almost exactly equaled downgrades in size and number, credit revisions led to no net change in average credit quality. However, the excess issuance of low-rated speculative-grade debt signals a slight weakening of

Chart 4

U.S. Corporate New Issuance by Rating, 1989–1994

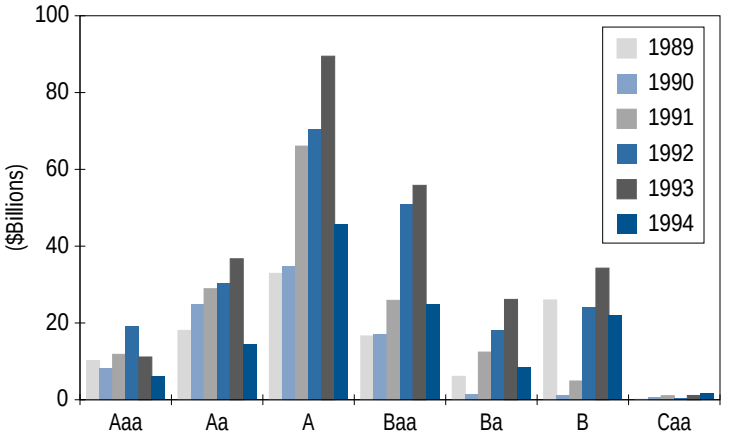


Chart 5

Trailing 12-Month Spec-Grade Default Rate vs. Spread Between Median Spec-Grade Yield and 7-Year Treasury

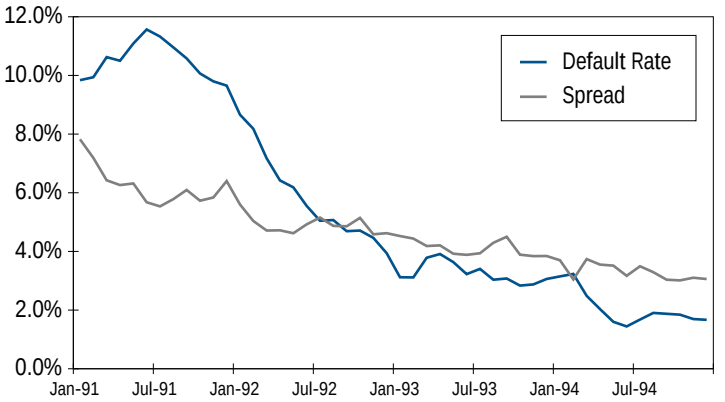
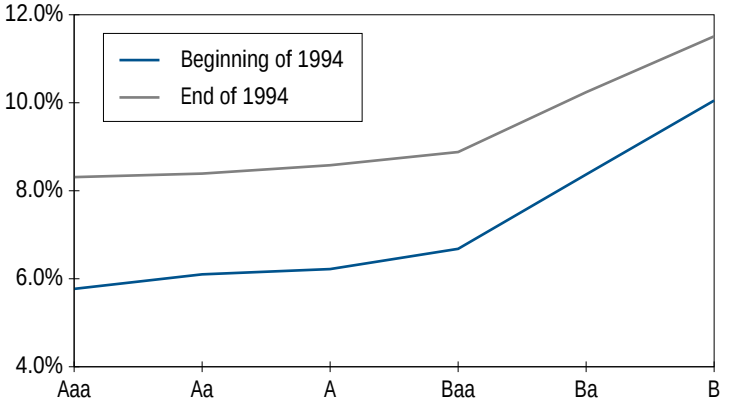


Chart 6

Median Yields by Rating

Adjusted to reflect a 7-year maturity



the speculative-grade market's average credit quality. From 1993 through 1994, B-rated debt increased from 48 percent to 52 percent of the speculative-grade bond market.

Nineteen-ninety-four's strong economy and the benefits of lower interest expense for firms that refinanced before the six Fed rate hikes supported lower default rates. As default rates fell, so did investors' assessment of credit risk in the speculative-grade bond market. The spread between Moody's index of the median of over 500 speculative-grade bond yields (adjusted to reflect a seven-year maturity) and the seven-year Treasury Note narrowed by 78 basis points during 1994. This has been the trend since the beginning of 1991. Chart 5 juxtaposes Moody's trailing 12-month speculative-grade default rate with the previously mentioned credit spread. It clearly shows the high degree of positive correlation between the risk of default and the credit spread in the speculative-grade market. As of the start of 1991, the depths of the speculative-grade bond market crash, this default rate stood at 9.84% while the spread between the median spec-grade bond yield and the seven-year treasury measured a whopping 782 basis points. Over the next four years, except for minor upticks and downturns, both the default rate and the spread fell fairly steadily. The spec-grade default rate ended 1994 at just 1.67%. The spread, reflecting the abatement of default risk, narrowed to 306 basis points, a fall of 476 basis points.

The most recent interest rate declines ended in February of 1994, when the Fed began hiking short-term rates. Our index of speculative-grade bond yields bottomed out that month at 8.85% before shooting up to 10.89% by the end of the year. Chart 6 compares yields for each broad rating category at

the beginning of the year to its year-end level. It reveals that yields increased by a wider margin for investment-grade bonds than for speculative-grade bonds. As mentioned above, the perception of decreased risk of default has led to a narrowing of credit spreads in the speculative-grade bond market. As a result, speculative grade bonds have been insulated from the full effects of rising interest rates. This, in turn, has mitigated spec-grade price declines.

SEVERITY OF DEFAULT LOSS

A critical aspect of a corporate bond default is the severity of the loss incurred. Eventually, most bond defaults are resolved in a manner that provides bondholders with some form of recovery. What investors recover may take the form of cash or other securities. The recovery rate, defined here as the fraction of par value returned to the bondholder, is a function of several variables. These include the seniority of the issue within the issuer's capital structure, the quality of collateral (if any), the overall state of the economy, and the market for corporate assets.

The most straightforward methodology for calculating recovery rates is not particularly practical. It would track all payments made on a defaulted debt instrument, discount them back to the date of default, and present them as a percentage of the par value of the security. But that approach requires the aging of defaults until final recovery has occurred; by the time such a study could be completed, it already would be out of date. It is impractical also due to the difficulty in valuing certain forms of payment received in place of the original obligation, including various equity and derivative instruments, certain enhancements in the terms of the surviving debt instrument, or sometimes even an asset delivered in lieu of cash payment.

For these reasons, we use the trading price of the defaulted instrument as a proxy for the present value of the ultimate recovery. While it is at best a rough estimate, it has the advantage of being a definitive measure of the recovery realized by those debtholders who liquidate a position soon after default.

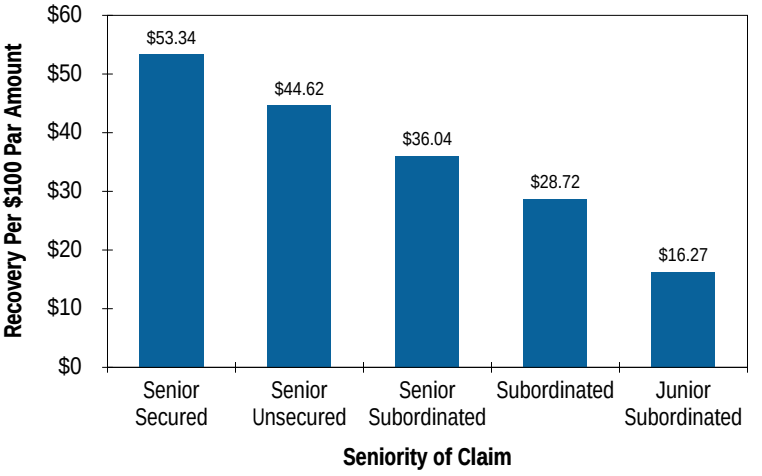
Our estimates of recovery can be translated into recovery rates by presenting them as percentages of par (not percentages of original issue prices or accreted values). Investors are entitled to receive face value at maturity, even though they may have paid somewhat less or more for the bond either at issue or in the secondary market. Expressing recoveries as a fraction of some price other than par improperly biases recovery rates. The exceptions are deferred interest debt and deep discount bonds, which we removed from the sample.

We collected from several sources prices for bonds that defaulted between January 1, 1974 (the earliest point for which reliable data are available) and December 31, 1994. For each nonconvertible, defaulted issue, we looked at the seniority, date of default, price one month after default, and the dollar amount outstanding at default. The entire sample comprised 750 defaulted bonds, aggregating to over $60 billion in face value.

We calculate our recovery estimates as the weighted (by par amount outstanding at default) average of these prices.[1] Chart 7 breaks out recoveries by seniority of claim. Based on prices for 91

Chart 7

Defaulted Bond Recoveries



1 We exclude Texaco's 1987 default from these calculations. The default amounted to delayed interest payments on over $7 billion of debt. These payments were subsequently made up along with accrued interest. Because the default was mild, Texaco bond prices never dipped very far. The high prices, combined with the massive amount of debt involved, bias the dollar-weighted averages upward significantly. Because of the extraordinarily large influence of this single, highly atypical default, we believe that excluding it provides a more accurate estimate of likely recovery.

Chart 8

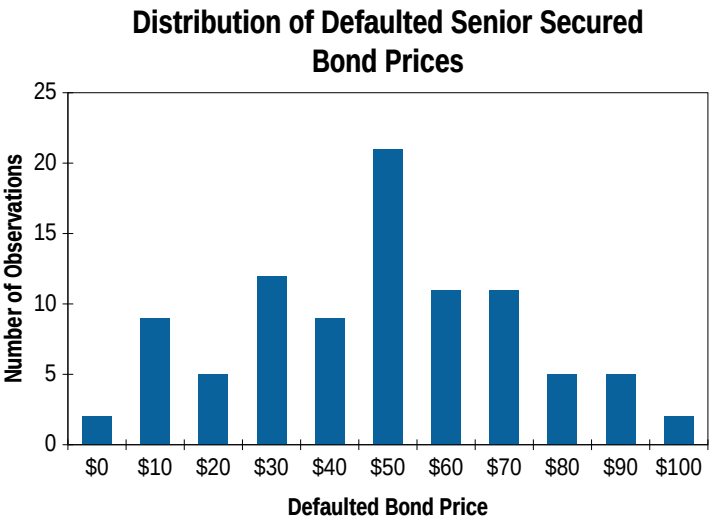


Chart 9

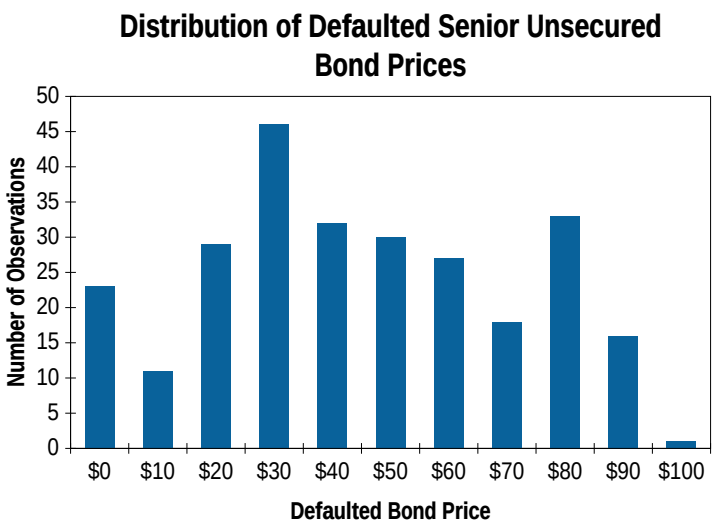
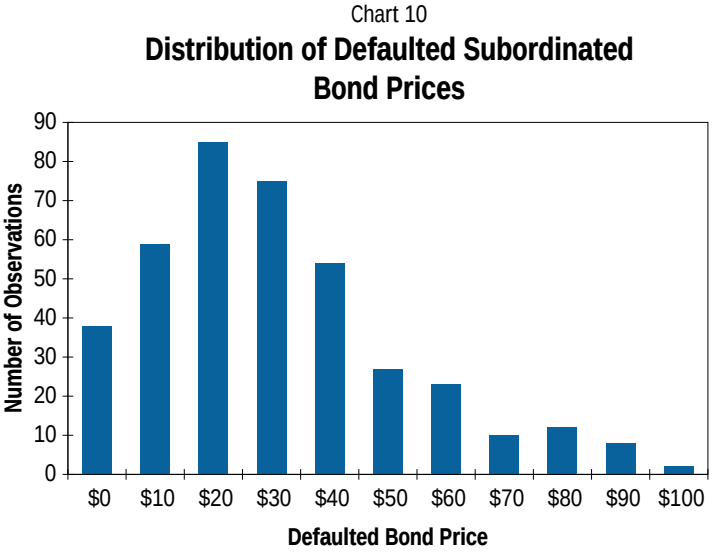


Chart 10



senior secured bonds, our estimate of the recovery is $53.34 per $100 face amount; the 246 senior unsecured bonds sold for $44.62 on average; the 176 senior subordinated bonds sold for $36.04; the 209 subordinated bonds sold for $28.72; and the eight junior subordinated bonds sold for $16.27. Aggregating all subordinated bond classifications yields a recovery estimate of $32.22, based on 393 prices. The overall recovery estimate drawn from the entire sample above yields a value of $37.61 per $100 face amount.

Recoveries, on average, decline as priority of claim declines, lending support to Moody's practice of assigning lower ratings to an issuer's subordinated debt. Generally speaking, a bond default is an issuer-level event that will in time affect all of the issuer's outstanding debt obligations. That is, the probability of an issuer defaulting on a particular debt issue is independent of the seniority of that issue relative to the company's other obligations. However, holding all else constant, severity considerations suggest that while default likelihood is the same across an issuer's bonds, the greater expected losses for its subordinated issues should be reflected in lower ratings for these issues.

The recoveries estimated above are weighted averages of defaulted bond prices. They approximate the most likely bond price to arise from a particular default, but they do not convey the range of possible outcomes. For example, in our sample of defaulted senior subordinated bonds, two issues were priced at just $1 and at least one was a priced at $106. In addition to the expected defaulted bond price, many investors want to know how likely they are to receive defaulted bond prices that are much higher or lower than what is expected. In order to determine this, we need to look at

the distribution of prices while paying particular attention to the dispersion or standard deviation. The more spread out the distribution of defaulted bond prices, the less confidence we can place in any estimate of the most likely outcome from that distribution.

Charts 8, 9, and 10 are histograms of the prices underlying our recovery estimates for senior secured, senior unsecured, and all subordinated bonds. The centers of these histograms drift lower (leftward) as the seniority of the claim decreases from senior secured to subordinated. This pattern is captured by our recovery estimates. However, the recovery estimates do not address the wide dispersion in these prices. This is especially apparent in the histogram for defaulted senior unsecured bond prices (Chart 9). The standard deviations for the senior secured, senior unsecured, and subordinated defaulted bond prices are $24.27, $26.32, and $21.86, respectively. The relative sizes of these standard deviations indicate that subordinated bond prices are more tightly distributed about their sample mean than are either senior unsecured or senior secured prices. Senior secured bond prices emerge as the next least dispersed category of prices, and senior unsecured are the most dispersed prices. This shows up in Chart 9 as a nearly flat histogram, with outlying prices occurring almost as frequently as those closer to the sample mean. This wide dispersion translates into greater uncertainty about the value of senior unsecured bonds after default than about the values of either senior secured or subordinated bonds. Table 5 provides additional descriptive statistics for the distribution of prices for defaulted bonds of each level of seniority.

Table 1 breaks out recovery rates for senior unsecured bonds according to their ratings at various times before default. The columns contain the weighted (by dollar amount outstanding) average, one-month after default bond prices for bonds with the given rating one year before default, five years before default, and at issuance. The third and fourth columns demonstrate that there is not a monotonic relationship between a bond's rating before default and its recovery. For example, bonds rated Aa at issuance have been typically worth $46.16 per $100 par amount upon default, while those issued at the lower A rating have on average been worth more: $53.81 per $100 par amount.

Table 1: RECOVERIES FOR SENIOR UNSECURED BONDS BY RATING BEFORE DEFAULT

Rating	Rating One Year Before Default	Rating Five Years Before Default	Rating At Issuance
Aaa			
Aa		$35.61	$46.16
A		$48.02	$53.81
Baa	$71.57	$63.05	$62.62
Ba	$42.75	$41.10	$38.27
B	$45.73	$29.14	$35.76
Caa	$30.85	$13.52	

Entries based on fewer than 5 observations are omitted.

While after default, bonds originally rated Aa have historically been worth less than bonds originally rated A, there is no implication that Aa-rated bonds have a higher expected loss than A-rated bonds. Expected loss is a function of two quantities: the probability of default and the severity of default. The results listed in Table 1 ignore the probability of default. For example, one bond could be deemed to have a lower expected recovery upon default than another. But if the credit strength of the first bond's issuer makes the possibility of default small enough, the expected loss to the first bondholder would be less than for the second bondholder. In this case, the first bond might receive a Aa rating, while the second bond might receive an A rating despite a lower expected recovery for the Aa bond.

For investment-grade bonds, the strength of the issuer usually suggests a very low probability of default. The possibility of default is so remote that the extent of recovery in the event of a default is only of secondary consideration. For speculative-grade bonds, however, the likelihood of the issuer defaulting is much greater. As a result, the recovery rate plays a more important role in determining a bond's rating. In light of this, it is not surprising that the recovery rates are more highly correlated with Moody's credit ratings for speculative-grade bonds. For these issues, an analysis of the value of the firm's assets in the event of bankruptcy played a much greater part in determining the rating.

METHODOLOGY

Definition of Default

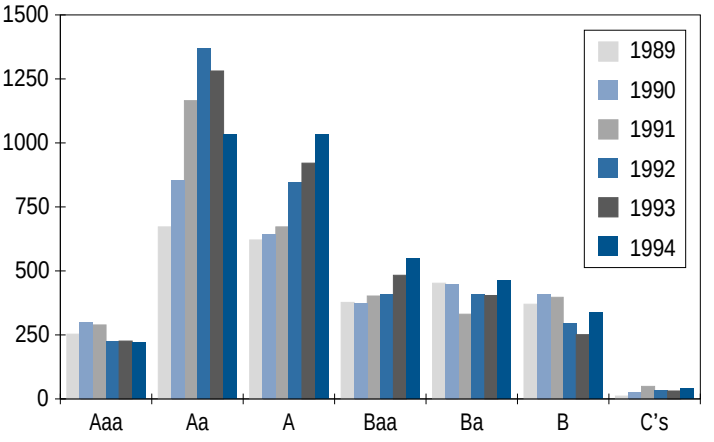
Moody's defines default as any missed or delayed disbursement of interest and/or principal. We include as defaults distressed exchanges where (i) the issuer offered bondholders a new security or package of securities that amount to a diminished financial obligation (such as preferred or common stock, or debt with a lower coupon or par amount) and (ii) the exchange had the apparent purpose of helping the borrower avoid default. Just one of 1994's defaults was a distressed exchange.

Moody's also includes as a default a delayed payment made within the grace period provided in the indenture. Our rationale for including grace period defaults is straightforward, that a contractual payment was not made when due. Over the course of 1994, one company, Carolco Pictures, missed interest payments on two issues only to make good within the 30-day grace period. These delays amounted to involuntary one-month loans to the company, a clear abuse of bondholders' legitimate expectations as to payment.

Moody's Rating Database

Chart 11

Number of Rated Issuers by Rating and Year



We calculate the default rates and other figures cited in this report using Moody's proprietary database of public long-term debt ratings on industrial companies, utilities, financial institutions, sovereign issuers, and structured finance transactions. Municipal debt issuers were excluded, as were issuers with short-term debt ratings only. In total, our database includes more than 4,800 issuers that have met these criteria over the past 25 years. As of January 1, 1994, the database contained long-term ratings for 3,675 non-defaulted issuers. These issuers account for the bulk of the outstanding dollar amount of U.S. public long-term corporate debt and a substantial part of public issuance abroad. Moody's database also contains information about defaults and distressed exchanges of public issuers not rated by Moody's.

In order to calculate default rates, which address only the default probability component of ratings,[2] we have tried to back severity considerations out of the rating. We do this by taking the rating on each company's senior unsecured debt or, if there is none, implying such a rating from rated subordinated or secured debt and using it as a proxy for default probability. This normalization results in a senior or implied senior rating history for each firm. In most cases, this will yield an assessment of risk that is relatively unaffected by special considerations of collateral or of position within the capital structure.

Moody's compiled the default histories used in this study from a variety of sources, including our own library of financial reports, press releases, press clippings, internal memoranda, and records of analyst contact with rated issuers. Moody's also examined documents from the Securities and Exchange Commission, The Dun & Bradstreet Corp., the New York Stock Exchange, and the American Stock Exchange.

2 Moody's ratings can be modeled as measures of a bond's expected loss due to credit events. Expected loss is the product of the probability of default and the severity of default.

CORPORATE DEFAULT RATES

Major Defaults and Historical Ratings

Over the 25-year period of 1970 through 1994, 640 corporate issuers defaulted on their long-term public debt (see Table 12 of the Appendix). Moreover, 21 of these companies defaulted twice over this period (see Table 2). All defaulting issuers except two – Johns Manville Corporation, which was rated A3, and Columbia Gas System, which was rated Baa1 – had actual or implied speculative-grade ratings at the senior unsecured debt level at the time of default. Other defaulting issuers, although speculative grade at the time of default, were rated investment grade at times prior to default. However, none of 1994's rated defaulters had ever held an investment-grade rating.

Table 3 traces the rating history of all rated defaulting issuers from one to 20 years prior to default. It shows that at default only two issuers held investment-grade ratings as mentioned above. However, 17 issuers were rated investment grade on January 1 of the year they defaulted, 40 were rated investment grade at the start of the second year before default, and so on. The company with the Aaa rating as of the fourth January prior to default was Getty Oil, a subsidiary of Texaco. The default of Texaco and its affiliates stemmed from the parent's litigation with Pennzoil over the purchase of Getty Oil. As of the fifth January prior to default, both Texaco and Getty Oil were rated Aaa. Texaco and Federated Department Stores (which had completed a leveraged buyout two years prior to default) were the two companies with Aaa ratings 10 and 15 years prior to default. The 17 defaulting issuers rated investment grade as of January 1 of the year of default are presented along with their ratings up to 20 years before default below in Table 4.

Table 2: TWO-TIME DEFAULTERS

Company	Year of First Default	Year of Second Default
AM International, Inc.	82	92
Carolco Pictures	92	94
Cherokee Inc.	93	94
Continental Airlines, Inc.	83	90
Damson Oil Corporation	86	91
Digicon, Inc.	86	90
First City Bancorporation of Texas	87	92
Greyhound Lines, Inc.	90	94
Harvard Industries, Inc.	72	90
Lionel Corporation	82	91
Rusco Industries	77	82
Savin Corporation	86	92
Seaman Furniture Company, Inc.	89	92
Sharon Steel Corporation (NVF Company)	85	93
John Blair & Company (Telemundo Group, Inc.)	86	92
Texas Air Corp. (Continental Airlines Holdings, Inc.)	83	90
Texas International Company	85	88
Thermadyne Industries, Inc. (TDII Co., Inc.)	91	93
Thousand Trails Inc.	87	92
United Merchants & Manufacturers Inc.	77	90
Western Union Telegraph Company	87	90

Table 3: RATING HISTORY OF 470 DEFAULTING ISSUERS

		Rating at Default	Calendar Years Prior to Default 1	2	3	4	5	10	15	20
Invest.	Aaa	0	0	0	0	1	2	2	2	1
Grade	Aa	0	2	1	3	6	5	2	1	2
	A	1	1	8	19	15	13	19	11	8
	Baa	1	14	31	33	44	39	37	32	20
Spec.	Ba	43	119	176	163	152	139	61	36	32
Grade	B	294	292	221	170	121	89	28	19	7
	Caa /Ca/C	145	59	17	12	11	11	9	7	3

Table 4: SENIOR RATING HISTORIES OF DEFAULTING ISSUERS RATED INVESTMENT GRADE AT JANUARY 1 OF YEAR OF DEFAULT

	Default date	Rating at default	Year 1	2	3	4	5	10	15	20
Arlan's Department Stores Inc.	05/13/73	Ba	Baa	Baa	Baa	Baa				
Columbia Gas System, Inc.	06/20/91	Baa1	Baa1	Baa1	Baa2	Baa2	Baa1	A		
DFC Financial (Overseas) Ltd.	10/03/89	Ba1	Aa3	Aa3						
DFC Overseas Investment Ltd.	10/03/89	Ba1	Aa3							
Equitable Lomas Leasing	09/01/89	B1	Baa2	Baa1	A2	A2	A2			
Kaneb Services/Moran Brothers Inc.	11/01/86	Ba3	Baa3	Baa3	Ba3	Ba3	Ba			
Kaneb Services/ Moran Energy Inc.	11/01/86	Ba3	Baa3	Baa3						
Kaneb Services/ Moran Energy Int'l	11/01/86	Ba3	Baa3	Baa3						
Lomas Financial Corporation	09/01/89	B2	Baa3	A3	A3	A3	A3			
Johns Manville Corporation	08/26/82	A3	A	A	A	Aa	Aa	A	A	A
Parkview-Gem Inc.	11/01/73	B	Baa	Baa	Baa	Baa	Baa			
Penn Central/Phil. Balt. & Wash. Railroad	06/21/70	Ba	Baa	Baa	Baa	Baa	Baa	Baa	Baa	Baa
Revere Copper & Brass Company	10/27/82	Ba1	Baa	Baa	Baa	Baa	Baa	Baa		
Smith International Inc.	03/07/86	Caa	Baa3	A3	A1	A	A			
Storage Technology Corp.	10/31/84	B2	Baa3	Baa3	Baa					
Storage Technology/Documentation Inc.	10/31/84	B1	Baa3	Baa2	Baa	B	Ba			
United Merchants & Manufacturers Inc.	07/12/77	B	Baa	Baa	Baa	Baa	Baa			

Defining Default Rates

In Table 12 of the appendix, we present a list of corporate issuers that have defaulted on public debt since 1970, arranged by year of default. While this list will be of interest to many investors, it cannot by itself reveal the likelihood of default associated with Moody's rating categories. Default rates, based on the experience of the entire rated bond market, have been constructed with this in mind. They may serve investors as a guide to the risks of default associated with Moody's ratings and as indicators of market stress.

The default rates presented here and in the appendix are calculated with the issuer as the unit of study, rather than on the basis of outstanding dollar amounts. Also, different issuers within an affiliated group of companies are counted separately because not all subsidiaries have cross-default provisions nor are affiliated companies always rated the same. The numerator consists of the number of rated-issuer defaults in a given time period. The denominator is the number of rated issuers at the start of the time period. This approach places equal weight on large and small issuers, under the rationale that the number of rating decisions (or in the case of an investor, credit decisions) does not rise with the size of the issuer.

One-Year Default Rates

A widely reported default statistic is the one-year speculative-grade default rate. Moody's calculates this rate by dividing the number of rated issuers defaulting over a calendar year by the number of (non-defaulted) speculative-grade rated issuers outstanding at the beginning of the year. Chart 12 plots one-year speculative-grade default rates from 1970 through 1994. The peak in 1970, at 10.9 percent, corresponds to the then market-shaking default of Penn Central Railroad and its 25 affiliates. The most recent peaks, 1990's 8.8 percent and 1991's 9.5 percent, reflect the effects of both a recession and the fall-out of the eight-year corporate borrowing binge that began in 1982. In 1994, the speculative-grade one-year default rate fell to just 1.67% – the lowest rate of default for speculative-grade issuers since 1981's 0.67%. Nineteen-ninety four mirrored the calm period from 1971 through 1981 wherein the average one-year speculative-grade default rate was just 1.65%.

Chart 12

One-Year Speculative-Grade Default Rates

1970 –1994

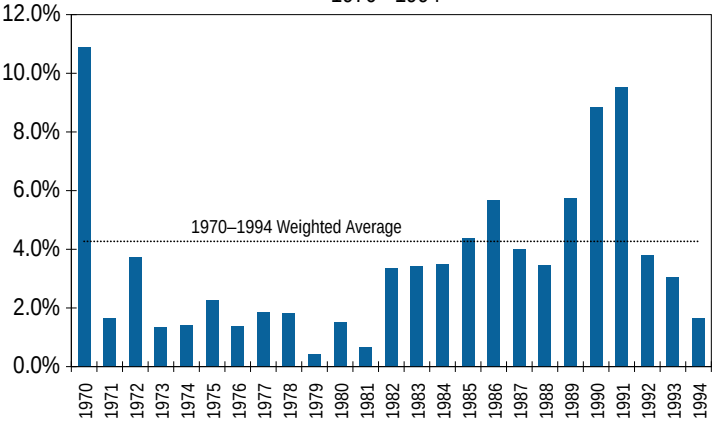
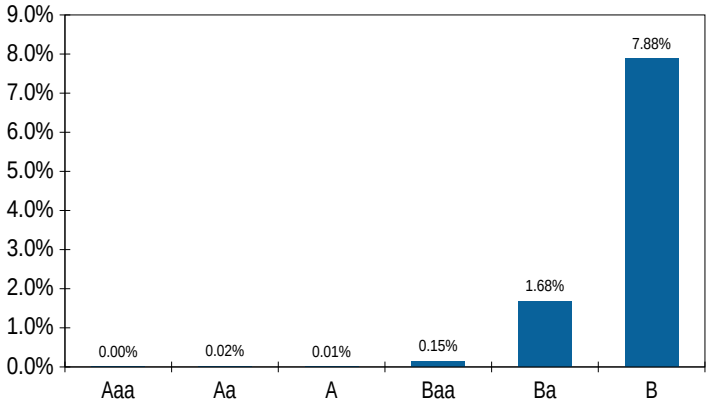


Table 6 presents one-year default rates from 1970 through 1994 for each broad rating category. To arrive at these default rates, we compute the number of defaulting issuers with a given rating at the beginning of a given year and divide this by the number of outstanding issuers with the same rating on January 1 of that same year. The last two rows of Table 6 give the one-year default rates for investment-grade and speculative-grade ratings. Note that for all but eight of the past 25 years, the one-year default rate for the investment-grade sector was zero.

Chart 13

One-Year Default Rates

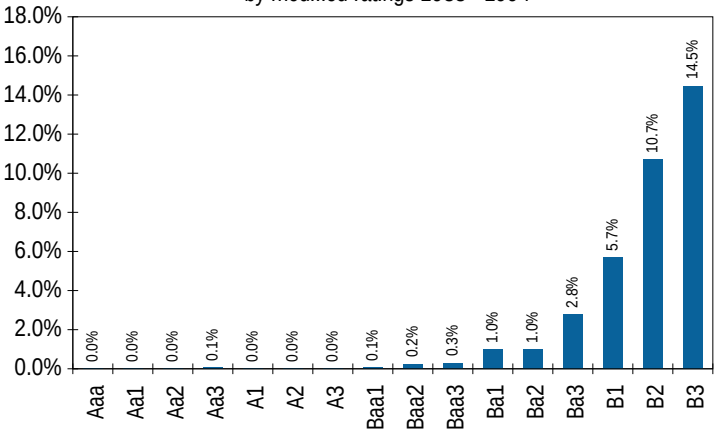


Our default rates provide esti-

Chart 14

One-Year Default Rates

by modified ratings 1983 –1994



mates of the probability of default for a particular rating class. For example, the one-year default rates displayed in Chart 13 climb from 0.00 percent for Aaa to 7.88 percent for B. To calculate this statistic for a given rating, we take the average of the one-year default rates for each year since 1970 while weighting each year's default rate by the number of issuers with the same rating at the start of that year. By this methodology, 4.27 percent of speculative-grade issuers defaulted within one year over the last 25 years, compared with 0.05 percent of investment-grade issuers.

Moody's refined its rating categories in 1982 by adding numerical modifiers. Table 7 and Chart 14 suggest that the relationship between ratings and default likelihood also holds generally for numerically modified rating categories. Default rates climb from 0.00 percent for Aaa to 14.47 percent for B3.

Multi-Year Default Rates

Although one-year default rates are the most commonly reported, some investors find cumulative default rates more relevant. The construction of multi-year default rates parallels that of one-year default rates, except that we follow the members of the annual cohorts for longer periods. Thus, a cumulative 10-year default rate (described in detail in the Appendix) estimates the share of a portfolio of bonds that can be expected to default over a 10-year period.

Chart 15

5, 10, 15, and 20-Year Default Rates

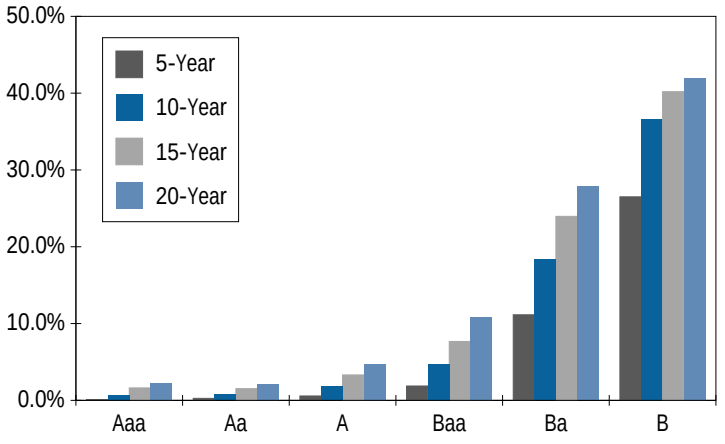


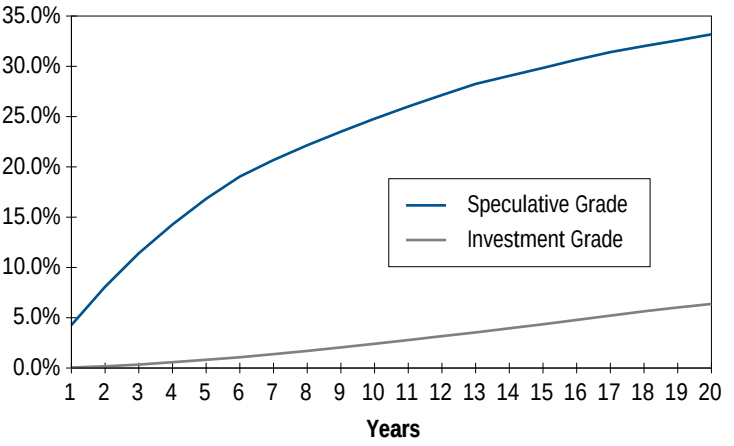
Table 9 traces annually for up to 20 years the cumulative default rates of cohorts of Moody's-rated issuers formed at the beginning of each year from 1970 through 1994. Cohort groups are separated by Moody's rating categories to answer, for example, the question "What percent of B-rated issuers with bonds outstanding as of January 1, 1983 defaulted by 1994?" The answer is found in the last row and last column of the section labeled "Cohort Formed January 1, 1983": 45.7 percent. The first column of each subsection, by definition, is the one-year issuer default rate and corresponds to that year's entry in Table 6. The cohort methodology has the advantage that year-over-year comparisons of actual default experiences can be made. In cases where an investor feels that the business conditions of the current year are similar to those of some previous year, he may consult that year's cohort directly to ascertain what default patterns to expect.

Some other studies look at cohorts of bonds issued during a given year and track the bonds' subsequent performance. In contrast, Moody's approach, which forms cohorts of all Moody's-rated issuers with debt outstanding at January 1 of each year, provides an indicator of the experience of a portfolio of both seasoned and new-issue bonds purchased in a given year. Table 8 in the Appendix presents in detail average cumulative default rates by rating category for investment horizons spanning one to twenty years (Table 11 presents average cumulative default rates

by numerically modified ratings for up to six years). It shows that higher default risk for lower rating categories remains evident over investment periods exceeding one year. For example, as seen in Chart 15, average default rates for five-year holding periods climb from 0.11 percent for issuers rated Aaa to 26.5 percent for issuers rated B. Chart 15 also shows that the pattern recurs for average default rates for 10-year, 15-year, and 20-year holding periods.

Chart 16

Average Cumulative Default Rates



Throughout the study period, there is a sharp distinction between the experience of companies in the investment-grade categories and companies in the speculative-grade categories. In the past 25 years, the highest quality speculative-grade issuers (those rated Ba), have been two to ten times more prone to default than the lowest rated investment-grade companies (those rated Baa), over any time horizon. With a one-year investment horizon, B-rated companies have been over four times more prone to default than Ba-rated companies.

Chart 16 plots the average cumulative default rates of Table 8 for investment- and speculative-grade issuers from one to 20 years. This chart highlights an important difference between the default characteristics of speculative-grade issuers and investment-grade issuers. For speculative-grade issuers, the marginal risk of default is higher in the near term than in the long term. That is, the increase in probability of default from year 19 to year 20 is much smaller than the increase in the probability of default from year zero to year one. This is the reason for the concave structure of the speculative-grade average cumulative default rate. For investment-grade issuers, however, there is no decrease in the rate at which default risk grows. The increase in risk of default from year 19 to year 20 is at least equal to, if not greater than, the increase in risk from year zero to year one. This shows up as a linear or perhaps even slightly convex, and increasing cumulative default rate. These patterns suggest that the year-over-year default risk faced by investment-grade issuers is nearly constant. However, for speculative-grade issuers that survive past the first – and riskiest – years, the risk of default declines.

Default Rate Volatility

The default rates highlighted in this report represent estimates of default likelihood over varying time horizons. Because realized default rates are themselves random draws from the "true" population of default rates, our default rate averages approximate the true mean default rates associated with each rating category and time horizon. A parameter designed to help characterize the shape of the distribution generating actual default experience is the sample standard deviation. In general, the larger the standard deviation, the more variable actual default rates are likely to be year over year. We present in Table 10 standard deviations of cumulative default rates by rating category and time horizon, up to 10 years. Each point in this figure represents the standard deviation of cumulative default rates across those cohorts with histories spanning the indicated time horizon. We have limited our calculations in order to assure that there are at least 15 data points behind each calculation.

The results demonstrate a greater default rate volatility at lower rating categories. That is, not only are default rates higher on average at the low end of the rating scale, but realizations of default rates are more volatile and less predictable over any given investment horizon. For example, standard deviations of one-year default rates for the investment-grade categories run as low as 0.0 percent for the Aaa category and as high as 0.3 percent for the Baa rating category. For the speculative-grade rating categories, the standard deviation begins at 1.9 percent for Ba's and increases to 4.9 percent for B's, indicating that not only are speculative-grade default rates higher, on average, than those for investment-grade ratings, but they are much more variable. This volatility ranking is maintained for up to 10 years.

Default Rates by Industry Group

Moody's ongoing default research documents the high correlation between ratings and default risk. As the database expands, patterns of defaulting issuer characteristics emerge and invite new comparisons. Yet database limitations, classification difficulties, and small sample sizes make some statistical comparisons hazardous. With this in mind, we carefully approach the concept of industry-specific default rates.

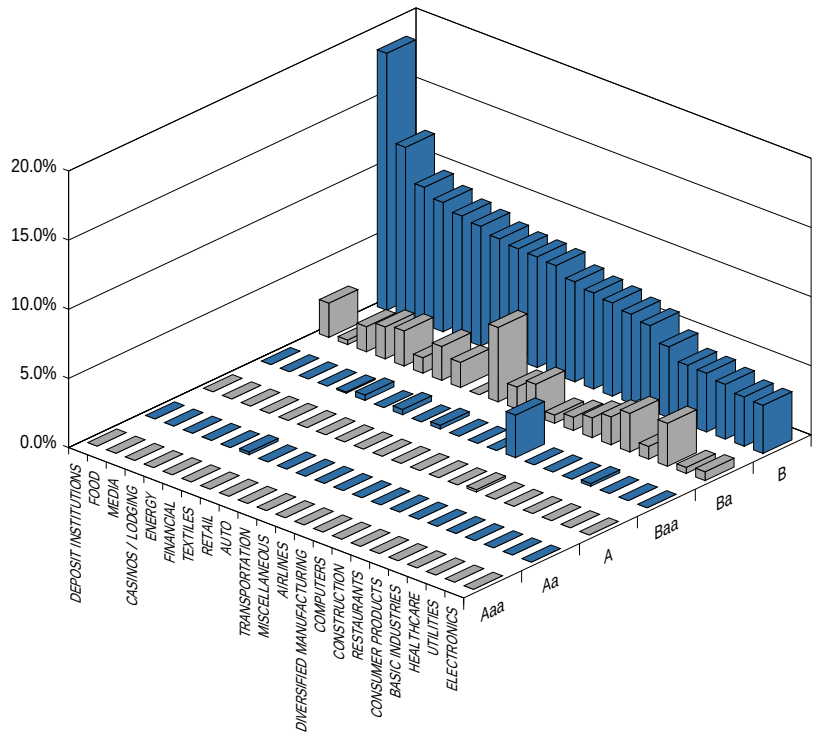
Because Moody's ratings are opinions about the protections afforded investors against credit loss and not predictions about the event of default, it is not surprising that there would be some variation in default rates for a given rating category and sector. Short-term shocks affect some sectors more than others, generating different stress scenarios for various industries. Moreover, such shocks may affect one geographic region with a heavy concentration of a particular industry more than another. The situation is further complicated by the fact that, even if short-term weakness is anticipated for a particular industry, wholesale downgradings would be confusing and disruptive. By design, the rating time horizon is often longer than many business cycles.

Chart 17 presents weighted average one-year default rates for selected industries. At the start of each year, 1970 through 1994, we formed cohorts by industry group and rating category and followed them for one year. The sum across cohorts of all issuer defaults for a particular industry and rating is divided by the sum of all issuers in all cohorts for that industry and rating to arrive at our weighted average one-year default rate for that industry and rating. The results are sorted in order of increasing B default rate.

With few exceptions, one-year default rates rise as rating level drops. For example, within each industry, the default rate for issuers rated B exceeds that for all other rating categories. Moreover, inter-industry comparisons reveal a consistency in the level of risk associated with a

Chart 17

Weighted Average One-Year Default Rates 1970–1994



particular rating across sectors. Excluding deposit institutions,[3] the single-B default rates vary surprisingly little as one moves from industry to industry. The large spike for Baa-rated computer

3 Composed principally of thrifts. This number is relatively high in part because we present the default rate as a weighted average. The weighting places most importance on the past several years since the number of rated thrifts grew explosively in the eighties. This, combined with three years of trouble for savings and loans, produced the abnormally high default rate presented.

companies is more of a statistical anomaly than an indication of excessive default risk. Just two computer companies held the Baa rating at the senior unsecured level as of January 1 of the year of default (Storage Technology and Storage Technology/Documentation). However, the number of Baa-rated computer companies is small. In 1994, for example, there were just two computer companies with Baa-rated senior unsecured debt. As a result, the reported default rate is anomalously high.

The chart on the cover of this report depicts overall industry default rates through time. In order to overcome small sample sizes, we considered an entire rated industry without making distinctions between issuers of various ratings. In addition, we aggregated some of the 21 industries represented in Chart 17 into nine broader classifications. This chart explicitly shows the uneven effects of various forms of market stress over the past 25 years. For example, the economic slowdown of the mid-eighties, combined with plunging oil prices appears as a surge of defaults in the energy sector. Other industries affected by these factors were transportation and, to a lesser degree, finance. The finance industry provides another example. Although 1990 and 1991 saw the highest default rates of recent memory, financial industry defaults peaked in 1989, reflecting the timing of the savings and loan crisis.

APPENDIX

Table 5: DESCRIPTIVE STATISTICS FOR DEFAULTED BOND PRICE DISTRIBUTIONS

Level of Seniority	Number	Average	Median	Standard Deviation	Inter-Quartile Range	Minimum	10th-Percentile	90th-Percentile	Maximum
Senior Secured	91	$53.11	$56.00	$24.27	$32.78	$5.00	$18.50	$85.32	$103.00
Senior Unsecured	266	$49.86	$46.56	$26.32	$41.12	$4.00	$11.46	$87.88	$108.25
Senior Subordinated	176	$38.07	$35.00	$24.02	$29.02	$1.00	$11.26	$75.38	$106.00
Subordinated	209	$32.83	$30.17	$19.67	$23.50	$1.00	$9.18	$60.40	$101.00
Junior Subordinated	8	$17.80	$19.13	$11.42	$13.37	$3.63	$3.72	$30.55	$36.50
All Subordinated Securitizations	393	$34.87	$32.00	$21.86	$24.50	$1.00	$10.00	$65.00	$106.00
All Securitizations	750	$42.40	$38.28	$25.09	$35.46	$1.00	$10.63	$83.51	$108.25

Weighted-Average Cumulative Default Rates

In this appendix we outline the methodology used to calculate corporate bond default rates. Let $m_t^Y(R)$ be the number of issuers from the cohort composed of all outstanding issuers with rating R at the start of year Y (Y=1970, 1971,...), that defaulted *in* the t^{th} year after cohort Y was formed. And let $n_t^Y(R)$ be the number of issuers from the same cohort that have not defaulted by year t. The weighted-average marginal default rate, $d_t(R)$, is the average issuer-weighted probability of default for R-rated issuers *in their* t^{th} *year given no previous default*.[5] Formally, $d_t(R)$ can be expressed as

$$d_t(R) = \frac{\sum_{Y=1970}^{T} m_t^Y(R)}{\sum_{Y=1970}^{T} n_t^Y(R)} \quad \text{, where T = 1995 - } t.$$

Here, T restricts the summations to only those cohorts for which t years of history are available. The weighted-average marginal survival rate, $(1 - d_t(R))$, is the probability of survival past the t^{th} year, given survival past year t-1.

The t^{th} year average cumulative survival rate for rating R, denoted here by $S_t(R)$, is the probability that an issuer does not default by year t. It is found by taking the product of the intervening average marginal survival rates:

$$S_t(R) = \prod_{i=1}^{t} (1 - d_i(R)) \ .$$

We denote the weighted-average cumulative *default* rate, for a given rating category R and a given number of years t, by $D_t(R)$. It estimates the fraction of an initial population of issuers that has historically defaulted within t years of having the rating R. As the average cumulative survival rate is the probability that an issuer has not defaulted in each year leading up to t, the average cumulative default rate is its complement:

$$D_t(R) = 1 - S_t(R) \ .$$

Specifically, $D_t(R)$ summarizes historical default experience through the t^{th} year as a function of marginal default rates. In particular, the one-year average cumulative default rate equals the one year average marginal default rate: $D_1(R) = d_1(R)$.

The above specification suggests a simple means to convert a T-year cumulative default rate into an "average" one-year default rate. That is, in the special case where the marginal default rate is assumed to be the same year over year, ($d_j(R) = d_k(R)$ for every j and k), we have

$$d(R) = 1 - [1 - D_T(R)]^{1/T}.$$

Cumulative Default Rates

The cumulative default rates, shown in Table 9, are not weighted by cohort size. For the cohort formed in year Y, the t^{th} year cumulative default rate for rating category R, denoted by $C_t^Y(R)$, is the fraction of all issuers rated R when cohort Y was formed that defaulted by year t. Using the notation introduced above,

$$C_t^Y(R) = \frac{\sum_{i=1}^{t} m_i^Y(R)}{n_0^Y(R)} \ .$$

Note that $n_0^Y(R)$ is the total number of issuers with rating R at the start of year Y.

5 Since these and all default rates derived from these ones will be, in some sense, averages, we will simply denote them by "average" rather than the more cumbersome "weighted average."

Average Cumulative Loss Rates

The methods used to calculate average marginal and average cumulative default rates generalize to loss rates. Loss rates factor in the severity of default in addition to the likelihood of default. We indicate the expected recovery rate, in the event of default, by the symbol μ and note that the expected severity rate is simply (1-μ). Algebraically, the expected loss is the product of the probability of default and the expected severity of default. In particular, the average marginal loss rate $l_t(R)$ for any period t is the product

$$l_t(R) = d_t(R)\,(1-\mu).$$

Extending our definition of the average cumulative default rate, we define the average cumulative loss rate $L_t(R)$

$$L_t(R) = 1 - \prod_{i=1}^{t} (1 - l_i(R)) .$$

Note that $L_t(R)$ represents the expected loss of principal and coupon (as a fraction of par) by period t. It is not, however, an estimate of the present value of future losses. Chart 18 below depicts the behavior of average cumulative loss rates, by rating category, for investment horizons spanning 1 to 20 years, assuming a fixed recovery rate of 40¢ on the dollar.

Chart 18

Average Cumulative Loss Rates by Rating Category

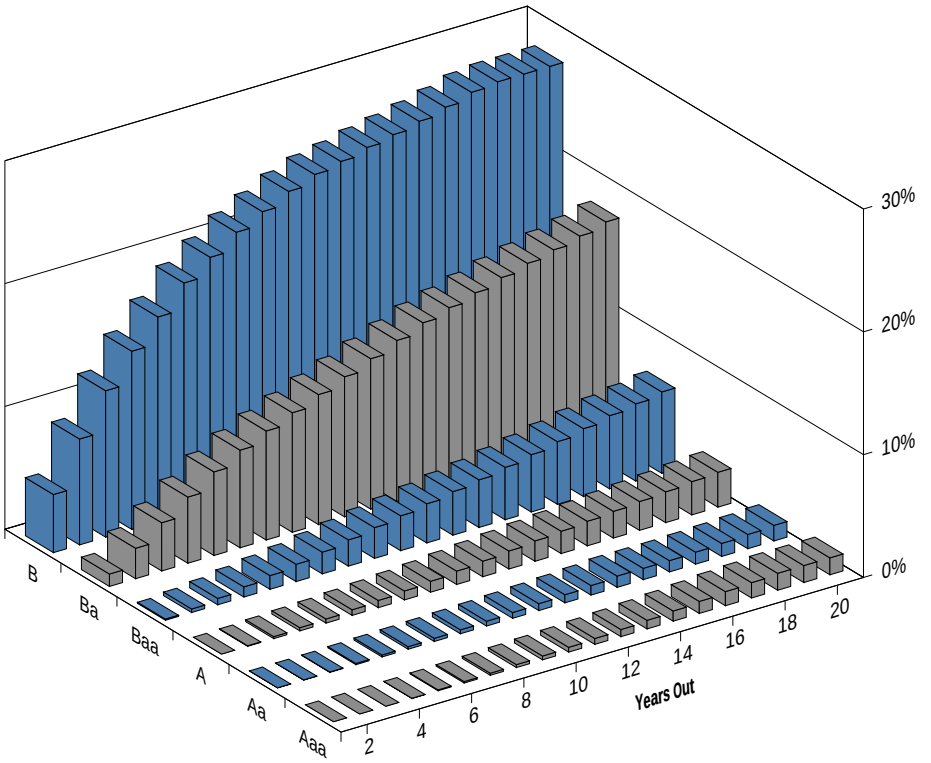


Table 6: One-Year Default Rates by Year and Rating 1970-1994 (Percent)

	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Wtd. Avg
Aaa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.0	0.0
A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Baa	0.3	0.0	0.0	0.5	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	0.3	0.0	0.6	0.0	1.1	0.0	0.0	0.5	0.0	0.3	0.0	0.0	0.0	0.2
Ba	8.4	1.5	0.5	0.5	0.0	1.6	1.1	0.6	1.1	0.5	0.0	0.0	2.6	1.0	0.5	2.0	1.9	2.6	1.5	2.7	3.3	5.1	0.3	0.5	0.2	1.7
B	21.6	0.0	11.8	3.5	6.9	3.0	0.0	8.8	5.3	0.0	4.4	4.1	2.2	6.0	7.3	8.7	11.6	5.3	5.7	8.7	12.9	13.1	6.4	5.2	3.6	7.9
Investment-Grade	0.1	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.2	0.0	0.2	0.0	0.3	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.1
Speculative-Grade	10.9	1.6	3.7	1.4	1.4	2.3	1.4	1.9	1.8	0.4	1.5	0.7	3.4	3.4	3.5	4.4	5.7	4.0	3.5	5.8	8.8	9.5	3.8	3.1	1.7	4.3

Table 7: One-Year Default Rates By Year and Modified Ratings 1983-1994 (Percent)

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Weighted Avg
Aaa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aa1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aa2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aa3	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0	0.0	0.1
A1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
A3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Baa1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	0.1
Baa2	0.0	0.0	0.0	2.5	0.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.2
Baa3	0.0	1.8	0.0	0.9	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.0	0.3
Ba1	0.0	0.0	0.0	1.2	5.1	0.0	1.0	3.2	1.3	0.0	0.8	0.0	1.0
Ba2	0.0	1.5	4.6	1.1	0.8	0.0	1.7	3.3	0.0	0.0	0.0	0.0	1.0
Ba3	2.4	0.0	1.8	2.6	2.4	2.9	3.8	3.4	9.6	0.6	0.7	0.5	2.8
B1	1.3	9.5	4.4	9.8	4.2	5.0	7.3	9.5	8.7	1.2	3.8	1.0	5.7
B2	18.5	3.7	17.9	7.0	6.8	7.0	11.7	12.4	16.8	9.5	3.6	6.3	10.7
B3	11.1	0.0	5.0	26.9	8.7	8.3	11.8	41.2	21.1	14.9	9.2	6.7	14.5

Table 8: Average Cumulative Default Rates 1 to 20 Years (Percent)

Years:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Aaa	0.0	0.0	0.0	0.0	0.1	0.2	0.3	0.4	0.5	0.7	0.8	1.0	1.2	1.4	1.6	1.9	2.1	2.3	2.3	2.3
Aa	0.0	0.0	0.1	0.2	0.3	0.4	0.4	0.5	0.6	0.8	0.9	1.1	1.3	1.5	1.5	1.5	1.6	1.8	1.9	2.1
A	0.0	0.1	0.3	0.4	0.6	0.8	1.0	1.2	1.5	1.8	2.1	2.4	2.7	3.0	3.3	3.6	3.9	4.2	4.5	4.7
Baa	0.2	0.5	0.9	1.4	1.9	2.3	2.9	3.6	4.2	4.7	5.3	5.8	6.4	7.0	7.7	8.4	9.1	9.7	10.3	10.8
Ba	1.7	4.1	6.5	8.9	11.1	12.9	14.4	15.8	17.1	18.4	19.6	21.0	22.2	23.1	24.0	24.9	25.7	26.4	27.1	27.8
B	7.9	14.2	19.3	23.3	26.5	29.7	31.8	33.8	35.3	36.7	37.7	38.3	39.0	39.6	40.2	40.9	41.7	42.0	42.0	42.0
Investment-Grade	0.0	0.2	0.3	0.6	0.8	1.1	1.4	1.7	2.1	2.4	2.8	3.2	3.5	3.9	4.4	4.8	5.2	5.6	6.0	6.4
Speculative-Grade	4.3	8.1	11.4	14.3	16.8	19.0	20.7	22.2	23.5	24.8	26.0	27.1	28.2	29.1	29.8	30.7	31.4	32.0	32.6	33.2

Table 9: All Corporate Department Cumulative Default Rates for Cohorts Formed 1970 through 1994 (Percent)

Years:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Cohort Formed January 1, 1970																				
Aaa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	2.2	2.2
Aa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	1.3	1.3	1.3
A	0.0	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.8	0.8	0.8	0.8	0.8	0.8	1.2	1.2	1.6	1.6
Baa	0.3	0.3	0.6	1.2	1.5	1.5	1.8	2.4	2.7	2.7	3.0	3.0	3.9	4.2	4.5	5.2	6.1	7.0	7.3	7.6
Ba	8.4	9.9	10.3	11.3	11.8	12.8	13.3	13.8	15.3	15.3	15.3	16.3	16.7	17.2	17.2	17.7	19.7	19.7	19.7	20.2
B	21.6	21.6	27.5	27.5	29.4	29.4	29.4	33.3	33.3	33.3	33.3	33.3	37.3	37.3	37.3	39.2	39.2	39.2	39.2	39.2
Cohort Formed January 1, 1971																				
Aaa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1	2.1	2.1
Aa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3
A	0.0	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.7	0.7	1.1	1.4	1.4	1.4	1.8	1.8	2.5	2.5	2.5
Baa	0.0	0.3	0.9	1.1	1.1	1.4	2.0	2.6	2.6	2.8	2.8	3.7	4.0	4.3	4.8	5.7	6.6	6.8	7.1	8.3
Ba	1.5	2.0	3.0	3.6	5.1	5.6	6.1	7.1	7.1	7.1	8.1	8.6	9.1	9.1	9.6	12.2	12.2	12.2	12.7	12.7
B	0.0	8.3	8.3	11.1	11.1	11.1	16.7	16.7	16.7	16.7	16.7	22.2	22.2	22.2	25.0	25.0	25.0	25.0	25.0	25.0
Cohort Formed January 1, 1972																				
Aaa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	1.9	1.9	1.9
Aa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3
A	0.0	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6	1.0	1.0	1.0	1.3	1.3	1.9	1.9	2.3	2.9
Baa	0.0	0.5	0.8	0.8	1.1	1.6	2.2	2.2	2.7	2.7	3.3	3.5	3.8	4.3	5.1	6.0	6.2	6.8	8.1	10.0
Ba	0.5	1.5	2.0	3.5	4.0	4.5	5.6	5.6	5.6	6.6	7.6	8.1	9.1	10.1	12.6	12.6	12.6	13.1	13.1	16.2
B	11.8	11.8	14.7	14.7	14.7	20.6	20.6	20.6	20.6	20.6	26.5	26.5	26.5	29.4	29.4	29.4	29.4	29.4	29.4	29.4
Cohort Formed January 1, 1973																				
Aaa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9	1.9	1.9	1.9	1.9	1.9
Aa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2
A	0.0	0.0	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.6	0.9	0.9	0.9	1.3	1.3	1.9	1.9	2.2	2.8	3.5
Baa	0.5	0.8	1.0	1.3	1.8	2.3	2.3	2.8	2.8	3.3	3.8	4.6	5.1	5.8	6.6	6.8	7.3	8.9	10.6	10.6
Ba	0.5	1.1	2.2	2.7	3.2	4.3	4.3	4.3	5.4	7.0	7.5	7.5	8.6	11.3	11.8	11.8	12.4	13.4	17.2	17.7
B	3.4	6.9	6.9	6.9	13.8	13.8	13.8	13.8	13.8	20.7	20.7	20.7	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1
Cohort Formed January 1, 1974																				
Aaa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	1.8	1.8	1.8	1.8	1.8	1.8
Aa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	2.2	2.2	2.2	2.2
A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.6	0.6	0.6	1.0	1.0	1.6	1.6	1.9	2.5	3.2	3.2
Baa	0.0	0.5	0.8	1.3	1.8	1.8	2.3	2.3	2.8	3.3	4.1	4.6	4.8	5.6	5.9	6.4	7.6	9.4	9.4	9.4
Ba	0.0	1.1	1.7	2.2	3.4	3.4	3.4	3.9	5.6	6.1	6.1	7.8	11.7	12.3	12.3	12.8	14.5	17.9	18.4	19.6
B	6.9	6.9	6.9	13.8	13.8	13.8	13.8	17.2	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	24.1	27.6	27.6	27.6
Cohort Formed January 1, 1975																				
Aaa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.5	1.5	3.1	3.1	3.1	3.1	3.1
Aa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9
A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.6	0.6	1.2	1.2	1.5	2.5	2.8	3.1	3.1
Baa	0.0	0.0	0.3	0.8	0.8	1.3	1.3	2.1	2.6	3.4	4.0	4.2	4.7	5.0	5.5	7.1	9.0	9.2	9.2	9.2
Ba	1.6	2.7	3.8	4.4	4.4	4.4	4.9	6.6	7.1	7.1	8.7	12.6	13.7	13.7	14.2	15.3	17.5	18.0	19.1	19.1
B	3.0	3.0	9.1	12.1	12.1	12.1	15.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	21.2	30.3	30.3	30.3	30.3

Table 9 (cont.)

Years:	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Cohort Formed January 1, 1976																			
Aaa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	2.4	2.4	2.4	2.4	2.4
Aa	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7
A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.8	0.8	1.6	1.6	2.2	3.5	3.5	3.8	3.8
Baa	0.0	0.3	0.6	0.6	0.9	0.9	2.0	2.6	3.5	4.1	4.3	4.9	4.9	5.5	7.2	9.0	9.6	9.6	9.6
Ba	1.1	2.2	3.2	3.2	3.8	4.3	5.4	5.9	5.9	7.6	11.4	12.4	12.4	13.0	14.1	17.3	17.8	18.9	18.9
B	0.0	6.3	9.4	9.4	9.4	12.5	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	18.8	25.0	25.0	25.0	25.0
Cohort Formed January 1, 1977																			
Aaa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	1.1	1.1	2.3	2.3	2.3	2.3	2.3	
Aa	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	1.6	1.6	1.6	1.6	1.6	1.6	1.6	
A	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.8	0.8	2.1	2.1	2.8	4.1	4.1	4.4	4.4	
Baa	0.3	0.6	0.6	0.6	0.6	1.8	2.3	3.2	3.8	4.1	4.7	4.7	5.3	6.7	8.5	9.1	9.1	9.1	
Ba	0.6	1.7	1.7	2.2	2.8	3.9	4.4	4.4	6.1	10.0	11.1	11.1	11.7	12.8	16.1	16.7	17.8	17.8	
B	8.8	11.8	11.8	14.7	17.6	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	23.5	29.4	29.4	29.4	29.4	
Cohort Formed January 1, 1978																			
Aaa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	2.0	2.0	2.0	2.0	2.0		
Aa	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.7	0.7	0.7	1.5	1.5	1.5	1.5	1.5	1.5	1.5		
A	0.0	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.8	0.8	1.9	1.9	2.9	4.0	4.0	4.2	4.2		
Baa	0.0	0.0	0.0	0.0	1.2	1.5	2.4	3.2	3.2	3.8	4.1	4.7	6.2	8.3	8.8	8.8	8.8		
Ba	1.1	1.1	1.1	1.7	2.8	3.9	3.9	6.7	11.8	13.5	13.5	14.0	15.7	19.1	19.7	21.3	21.3		
B	5.3	5.3	10.5	13.2	18.4	18.4	21.1	21.1	23.7	23.7	23.7	23.7	23.7	28.9	28.9	28.9	28.9		
Cohort Formed January 1, 1979																			
Aaa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0	1.9	1.9	1.9	1.9	1.9			
Aa	0.0	0.0	0.0	0.7	0.7	0.7	0.7	0.7	0.7	1.4	1.4	1.4	1.4	1.4	1.4	1.4			
A	0.0	0.0	0.0	0.0	0.3	0.3	0.3	0.8	0.8	1.9	1.9	2.7	3.7	3.7	4.0	4.0			
Baa	0.0	0.3	0.3	1.5	1.8	2.1	3.2	3.2	3.8	4.1	4.7	6.8	8.8	9.4	9.4	9.4			
Ba	0.5	0.5	1.0	2.0	4.0	6.6	9.6	14.6	16.2	16.2	16.7	18.7	22.7	23.7	25.3	25.3			
B	0.0	5.3	7.9	13.2	13.2	15.8	18.4	23.7	23.7	23.7	23.7	23.7	26.3	26.3	26.3	26.3			
Cohort Formed January 1, 1980																			
Aaa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.9	0.9	1.7	1.7	1.7	1.7	1.7				
Aa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.7	1.4	2.1	2.1				
A	0.0	0.0	0.3	0.5	0.5	0.5	1.3	1.6	2.3	2.3	3.1	4.2	4.2	4.4	4.4				
Baa	0.0	0.0	0.9	1.2	1.8	2.9	2.9	3.2	3.8	4.7	6.7	8.5	8.8	8.8	8.8				
Ba	0.0	0.5	2.8	3.8	6.6	9.9	14.6	16.0	16.4	17.8	19.7	24.4	26.3	27.7	27.7				
B	4.4	6.7	13.3	17.8	22.2	24.4	31.1	31.1	31.1	31.1	33.3	37.8	37.8	37.8	37.8				
Cohort Formed January 1, 1981																			
Aaa	0.0	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	1.6	1.6	1.6	1.6	1.6					
Aa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	1.3	1.3	1.3	2.0	2.6	2.6					
A	0.0	0.3	0.3	0.3	0.3	1.0	1.3	1.8	1.8	2.5	3.5	3.5	3.8	3.8					
Baa	0.0	0.6	1.1	1.7	2.5	2.5	2.8	3.4	4.5	6.5	7.9	8.4	8.4	8.4					
Ba	0.0	2.9	4.1	6.1	9.8	15.5	16.7	17.1	18.4	21.2	26.5	28.6	29.8	29.8					
B	4.1	10.2	14.3	20.4	22.4	30.6	30.6	30.6	30.6	32.7	36.7	36.7	36.7	36.7					

Table 9 (cont.)

Years:	1	2	3	4	5	6	7	8	9	10	11	12	13
Cohort Formed January 1, 1982													
Aaa	0.0	0.0	0.0	0.0	0.0	0.8	0.8	0.8	1.6	1.6	1.6	1.6	1.6
Aa	0.0	0.0	0.0	0.0	0.0	0.0	1.2	1.2	1.2	1.2	1.8	2.4	2.4
A	0.2	0.2	0.2	0.2	1.0	1.0	1.5	1.5	2.4	3.6	3.6	3.9	3.9
Baa	0.3	0.3	1.5	2.4	2.7	3.3	3.9	5.0	6.8	8.0	8.6	8.6	8.6
Ba	2.6	4.8	6.6	10.6	16.1	17.2	17.6	18.7	21.6	25.6	27.1	28.2	28.2
B	2.2	8.9	13.3	15.6	24.4	24.4	24.4	24.4	28.9	37.8	40.0	40.0	40.0
Cohort Formed January 1, 1983													
Aaa	0.0	0.0	0.0	0.0	1.4	1.4	1.4	2.0	2.0	2.0	2.0	2.0	
Aa	0.0	0.0	0.0	0.0	0.4	1.7	1.7	1.7	1.7	2.1	2.5	2.5	
A	0.0	0.0	0.0	0.2	0.2	0.7	0.7	1.5	2.4	2.9	3.1	3.1	
Baa	0.0	1.3	1.6	2.5	2.8	3.1	4.4	6.0	8.5	8.8	8.8	8.8	
Ba	1.0	2.6	6.1	11.7	12.8	14.3	15.8	17.3	21.9	22.4	23.5	23.5	
B	6.0	10.3	17.2	25.0	26.7	28.4	29.3	36.2	41.4	44.0	45.7	45.7	
Cohort Formed January 1, 1984													
Aaa	0.0	0.0	0.0	0.8	0.8	0.8	1.5	1.5	1.5	1.5	1.5		
Aa	0.0	0.0	0.0	0.8	1.5	1.5	1.5	1.5	1.5	1.9	1.9		
A	0.0	0.2	0.4	0.6	1.3	1.3	2.3	3.1	3.8	3.8	3.8		
Baa	0.6	0.6	0.6	0.9	1.2	2.2	2.8	5.3	5.6	5.9	5.9		
Ba	0.5	3.7	11.1	12.5	14.8	17.6	20.8	25.9	26.4	27.3	27.3		
B	7.3	15.4	22.8	25.2	28.5	32.5	39.0	43.9	45.5	48.0	48.0		
Cohort Formed January 1, 1985													
Aaa	0.0	0.0	0.0	0.0	0.0	0.7	0.7	0.7	0.7	0.7			
Aa	0.0	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.9	0.9			
A	0.0	0.2	1.1	1.9	1.9	3.0	3.7	4.1	4.1	4.1			
Baa	0.0	1.2	1.2	1.5	2.5	2.8	4.9	5.2	5.6	5.6			
Ba	2.0	6.3	8.2	10.9	15.2	18.0	22.3	23.8	24.6	24.6			
B	8.7	17.3	21.3	24.7	28.0	35.3	40.0	41.3	43.3	43.3			
Cohort Formed January 1, 1986													
Aaa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				
Aa	0.0	0.0	0.6	0.6	0.9	0.9	0.9	0.9	0.9				
A	0.0	0.2	0.7	0.8	1.3	1.9	2.0	2.0	2.0				
Baa	1.1	1.1	2.3	3.4	3.9	5.1	5.6	5.9	5.9				
Ba	1.9	5.6	7.8	11.5	15.3	19.9	21.8	23.4	23.7				
B	11.6	15.5	19.3	22.7	29.3	35.9	38.1	40.3	40.3				
Cohort Formed January 1, 1987													
Aaa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Aa	0.0	0.0	0.0	0.2	0.2	0.2	0.2	0.2					
A	0.0	0.0	0.2	1.1	1.4	1.4	1.4	1.4					
Baa	0.0	0.8	1.8	2.6	4.6	5.4	5.9	5.9					
Ba	2.6	4.5	8.5	13.2	19.3	21.2	23.3	23.8					
B	5.3	11.4	17.1	24.0	30.0	33.1	34.6	34.6					

Table 9 (cont.)

Years:	1	2	3	4	5	6	7
Cohort Formed January 1, 1988							
Aaa	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Aa	0.0	0.2	0.4	0.4	0.4	0.4	0.4
A	0.0	0.2	0.9	1.2	1.2	1.2	1.2
Baa	0.0	0.3	0.8	2.7	3.5	4.1	4.1
Ba	1.5	6.6	11.5	17.7	19.7	21.6	22.0
B	5.7	11.4	19.3	27.4	30.4	33.7	34.0
Cohort Formed January 1, 1989							
Aaa	0.0	0.0	0.0	0.0	0.0	0.0	
Aa	0.3	0.3	0.3	0.3	0.3	0.3	
A	0.0	0.3	0.8	0.8	0.8	0.8	
Baa	0.5	1.3	2.1	3.2	3.2	3.2	
Ba	2.7	8.6	15.3	17.5	19.7	19.9	
B	8.6	18.9	27.8	31.1	34.3	35.1	
Cohort Formed January 1, 1990							
Aaa	0.0	0.0	0.0	0.0	0.0		
Aa	0.0	0.0	0.0	0.0	0.0		
A	0.0	0.2	0.2	0.2	0.2		
Baa	0.0	0.8	0.8	0.8	0.8		
Ba	3.3	10.5	12.5	14.9	15.1		
B	12.9	22.2	26.8	30.0	30.7		
Cohort Formed January 1, 1991							
Aaa	0.0	0.0	0.0	0.0			
Aa	0.0	0.0	0.0	0.0			
A	0.0	0.0	0.0	0.0			
Baa	0.2	0.2	0.2	0.2			
Ba	5.1	6.3	8.2	8.5			
B	13.1	19.1	23.2	23.9			
Cohort Formed January 1, 1992							
Aaa	0.0	0.0	0.0				
Aa	0.0	0.0	0.0				
A	0.0	0.0	0.0				
Baa	0.0	0.0	0.0				
Ba	0.2	0.7	0.7				
B	6.4	12.5	13.9				
Cohort Formed January 1, 1993							
Aaa	0.0	0.0					
Aa	0.0	0.0					
A	0.0	0.0					
Baa	0.0	0.0					
Ba	0.5	0.5					
B	5.2	8.4					

Table 9 (cont.)

Years:	1
Cohort Formed January 1, 1994	
Aaa	0.0
Aa	0.0
A	0.0
Baa	0.0
Ba	0.2
B	3.6

Table 10: Default Rate Standard Deviations (Across Cohorts)

Years:	1	2	3	4	5	6	7	8	9	10
Aaa	0.0	0.0	0.0	0.2	0.3	0.4	0.5	0.6	0.7	0.7
Aa	0.1	0.1	0.1	0.3	0.4	0.5	0.5	0.6	0.5	0.6
A	0.0	0.1	0.3	0.5	0.6	0.8	1.0	1.1	1.3	1.4
Baa	0.3	0.4	0.6	0.9	1.1	1.2	1.3	1.4	1.7	1.9
Ba	1.9	3.0	4.3	5.3	6.3	7.0	7.5	7.8	7.7	7.7
B	4.9	5.4	6.7	7.1	7.9	8.9	8.8	9.3	9.7	9.9

Table 11: Average Cummulative Default Rates by Modified Rating

Years:	1	2	3	4	5	6
Aaa	0.0	0.0	0.0	0.0	0.0	0.1
Aa1	0.0	0.0	0.0	0.0	0.0	0.0
Aa2	0.0	0.0	0.1	0.2	0.3	0.3
Aa3	0.1	0.1	0.1	0.2	0.4	0.6
A1	0.0	0.0	0.2	0.4	0.5	0.7
A2	0.0	0.1	0.2	0.4	0.6	0.9
A3	0.0	0.0	0.1	0.1	0.2	0.4
Baa1	0.1	0.2	0.3	0.6	1.0	1.2
Baa2	0.2	0.9	1.4	2.3	3.0	3.6
Baa3	0.3	0.6	1.0	1.7	2.4	3.1
Ba1	1.0	2.8	4.8	7.9	10.3	13.1
Ba2	1.0	3.8	7.1	10.0	12.1	13.6
Ba3	2.8	7.2	11.5	15.4	18.7	20.9
B1	5.7	12.2	18.1	22.6	26.3	30.5
B2	10.7	16.9	20.4	23.4	25.2	26.5
B3	14.5	24.0	32.5	38.3	45.1	49.8

Table 12

Long-Term Corporate Bond Defaults Since 1970

1970 (31 Issuers)

Airlift International
Boston & Albany Railroad
Boston & Maine Railroad
Carthage & Adiorn Railway
Cleveland, Chicago & St. Louis Railway Co.
Elcor Chemical
Farrington Manufacturing Company
Fotochrome Inc.
Kanawha & Michigan Railway
Lake Shore & Michigan Railway
Lehigh & Lake Erie Railroad
Lehigh Valley Harbor Terminal Railway
Lehigh Valley Railroad
Michigan Central Railroad
Mohawk & Malone Railway
New Jersey Junction Railroad
New York & Harlem Railroad Co.
New York & Putnam Railroad
New York Central & Hudson Railroad Co.
New York Central Railroad Co.
New York Connecting Railroad
New York, New Haven & Hartford Railroad Co.
Northern Central Railway
Penn Central Co.
Peoria & Eastern Railway Co.
Philadelphia, Baltimore & Washington Railroad Co.
Pittsburgh, Cincinnati & St. Louis Railroad
Pittsburgh, Youngstown & Ashtabula Railway
St. Lawrence & Adirondack Railway Co.
United New Jersey Railroad
West Shore Railroad

1971 (4 Issuers)

Central Railroad Of New Jersey
Mohawk Airlines
Ozark Holdings Inc.
Reading Co.

1972 (9 Issuers)

American Export Industries
Chicago & Erie Railroad
Delaware, Lackawanna & Western Railroad Co.
Delaware, Lackawanna & Western Railroad Co., (New York Division)
Erie Railroad
FAS International
Harvard Industries, Inc.
Morris & Essex Railroad
Warren Railroad Company

1973 (8 Issuers)

Ann Arbor Railroad Co.
Arlan's Department Stores Inc.
Equity Funding Corporation Of America
ESGRO, Inc.
Lyntex Corporation
Missouri-Kansas-Texas Railroad
Parkview-Gem Inc.
Sherwood Leasing Corporation

1974 (8 Issuers)

Boothe Computer
Continental Investment
Electrospace Corporation
Interstate Stores
National Bellas Hess Inc.
Omega-Alpha Inc.
Westgate-California Corporation
Wolf Corporation

1975 (8 Issuers)

Chicago, Rock Island & Pacific Railroad
Cuneo Press, Inc.
Daylin Inc.
GAC Proper Credit
Grant (W.T.) Co.
Gray Manufacturing Co.
Hallcraft Homes Inc.
Sanitas Service Corporation

1976 (5 Issuers)

Duplan Corporation
Midland Resources Inc.
New York, Susquehanna & West Railroad
Optical Scanning Corporation
Permaneer Corporation

1977 (8 Issuers)

Chicago, Milwaukee, St. Paul & Pacific Railroad Co.
Chicago, Terra Haute & Southeastern Railway
First Mortgage Investors
Grolier Inc.
Guardian Mortgage Investors
Rusco Industries
Southern Indiana Railway Co.
United Merchants And Manufacturers, Inc.

1978 (5 Issuers)

Allied Supermarkets, Inc.
Commonwealth Oil Refining Co., Inc.
Food Fair, Inc.
Frigitemp Corporation
Lundy Electronics & Systems

1979 (2 Issuers)

American Reserve Corporation
Inforex Inc.

1980 (6 Issuers)

Dasa Corporation
Itel Computer Leasing
Itel Corporation
Itel Financial International N.V.
Penn-Dixie Industries, Inc.
White Motor Corporation

1981 (4 Issuers)

American Communications
Fsc Corporation
Gateway Sporting Goods Co.
Seatrain Lines Inc.

1982 (22 Issuers)

AM International Inc.
Amarex Inc.
Braniff Airways, Inc.
California Life Corporation

Table 12 (cont.)

Curtis Publishing Co.
Electro-Audio Dynamics Inc.
Gambles Credit
Johns Manville Corporation
Lionel Corporation
Mego International Inc.
Morton Shoes Companies, Inc.
Nucorp Inc.
Revere Copper & Brass Co.
Rusco Industries
Saxon Industries, Inc.
Shelter Resources Corporation
South Atlantic Financial
Spector Industries, Inc.
Telecom Corporation
Tridex Corporation
Wickes Companies, Inc.
Wickes/Gamble Skogmo

1983 (18 Issuers)

Altec Corporation
Anglo Co. Inc.
Baldwin-United Corp.
Continental Airlines, Inc.
Energy Management Corporation
Flight Transportation Corporation
Hardwicke Companies Inc.
International Harvester Co.
Marion International Finance N.V.
MGF International Finance
MGF Oil Corporation
Peninsula Resources Corporation
Texas Air Corporation
Texas General Resources
Texas International Air
Texas International Airlines Capital N.V.
Texas International Airlines Finance N.V.
Wilson Foods Corporation

1984 (17 Issuers)

Anacomp, Inc.
Charter Company
Charter International Finance
Custom Energy Services Inc.
Delmed Corporation
Documation Inc.
Emons Industries Inc.
Great Western United Corporation
Kenai Corporation
Land Resources Corporation
North American Car Corporation
Page Petroleum Ltd
Pizza Time Theatre Inc.
Storage Technology Corporation
Tomlinson Oil Corporation
Transcontinental Energy Corporation
World Airways, Inc.

1985 (22 Issuers)

Beker Industries Corporation
Brock Hotel Corporation
Buttes Gas & Oil Co.
Castle & Cooke, Inc.
CLC Of America, Inc.
Crystal Oil Co.
Elsinore Corporation
Global Marine, Inc.
Hunt International
Macrodyne Industries Inc.
Mission Insurance Group, Inc.
Oak Industries Inc.
Oxoco, Inc.
Pettibone Corporation
Punta Gorda Isles
Sharon Steel Corporation
Tacoma Boatbuilding Co.
Texas International Company
Texfi Industries Inc.
Texscan Corporation
UV Industries, Inc.
Wolverine Exploration Company

1986 (37 Issuers)

American Adventure Inc.
Argo Petroleum Corporation
Chapman Energy Inc.
Consolidated Oil & Gas
Damson Oil Corporation
Digicon, Inc.
Frontier Airlines Inc.
Gearhart Industries, Inc.
ICO, Inc.
Ideal Basic Industries, Inc.
Inflight Services Inc.
John Blair & Company
Jones & Laughlin Industries
Jones & Laughlin Steel
Labarge Inc.
LTV Aerospace & Defense Co.
LTV Corporation
LTV International N.V.
Lykes Corporation
Macleod-Stedman Inc.
Mclean Industries Inc.
Moran Bros. Inc.
Moran Energy International
Na-Churs, Inc.
Petro-Lewis Corporation
Republic Steel Corporation
Republic Steel Overseas Finance
Savin Corporation
Smith International Inc.
Sunshine Mining Company
Texas American Energy Corporation
Towle Manufacturing Co.
Wedtech Corporation
Western Company Of North America
Westworld Community Healthcare, Inc.
Youngstown Sheet & Tube
Zapata Corporation

1987 (32 Issuers)

Allis-Chalmers Corporation
American Healthcare Management, Inc.
Cannon Group, Inc.
Cardis Corporation
Care Enterprises, Inc.
Charles P. Young Co.
Condec Corporation
Dart Drug Stores, Inc.

Table 12 (cont.)

First City Bancorporation Of Texas, Inc.
Getty Oil International N.V.
Greater S. W. Funding
Health Resources
Las Colinas Corporation
Melridge Inc.
Michigan General Corporation
Moran Energy Inc.
National Healthcare Inc.
Penril Corporation
Radice Corporation
Reading & Bates Energy Corporation N.V.
Spendthrift Farm
Texaco Capital Inc.
Texaco Capital N.V.
Texaco Inc.
Texaco Operations Europe
Thousand Trails, Inc.
Todd Shipyards Corporation
Western Union Corporation
Western Union Telegraph Co.
Worlds Of Wonder, Inc.
Yankee Companies, Inc.
YFC International Finance N.V.

1988 (34 Issuers)

ALC Communications Corporation
Allegheny International, Inc.
Basix Corporation
Campanelli Industries Inc.
Chemetron Corporation
Clabir Corporation
Coleco Industries, Inc.
Crazy Eddie, Inc.
De Laurentiis Entertainment Group Inc.
First Republicbank Corporation
General Defense Corporation
General Homes Corporation
Geothermal Resources International Inc.
Hamilton Technology Inc.
Healthcare Usa, Inc.
IFRB Corporation
IFRB Texas Finance N.V.
Interfirst Texas Finance
Maxicare Health Plans Inc.
Mcorp
Nelson Entertainment, Inc.
New World Pictures, Inc.
Po Folks, Inc.
Pope, Evans & Robbins, Inc.
Preway Inc.
Public Service Co. Of New Hampshire
Revco D.S., Inc.
Robert Bruce Industries Inc.
Southwest Bancshares, Inc.
Sunbeam Corporation
Texas American Bancshares, Inc.
Texas International Company
Tipco Finance N.V.
TPA Of America, Inc.

1989 (70 Issuers)

After Six Inc.
Alpine Group, Inc.
American Building Co.
American Capital Corporation
American Continental Corporation
AP Industries, Inc.
Audiotronics Corporation
Bastian Industries Inc.
Benjamin Franklin Federal Savings Association
Bio Response, Inc.
Bio-Technology General Corporation
Bond Brewing Holdings, Ltd.
Chartwell Group, Ltd.
Circle Express, Inc.
Columbia Savings & Loan Of Colorado
Commonwealth Savings & Loan Of Florida
Consolidated Companies
Continental Information Systems Corporation
Daisy Systems Corporation
DFC Financial (Overseas) Ltd.
DFC Overseas Investment Ltd.
Drum Financial Corporation
Eastern Airlines Inc.
Equitable Lomas Leasing Corporation
Erty Industries
Eskey Inc.
Financial Corporation Of America
Financial Trustco Capital Ltd.
First Texas Savings Association
FPA Corporation
G-Acquisitions
Gibraltar Financial Corporation
Gibraltar Savings & Loan Association
Griffin Resorts, Inc.
Healthcare International Inc.
Hillsborough Holdings Corporation
Integrated Resources, Inc.
Kane Industries, Inc.
Kelsey-Hayes Co.
Koor Industries Ltd.
L.F. Rothschild Holdings, Inc.
Leaseway Transportation Corporation
Lomas Financial Corporation
Merabank Federal, Fsb
Metropolitan Broadcasting Corporation
Miniscribe Corporation
Miramar Marine Corporation
New Visions Entertainment Corporation
Northview Coporation
Olympia Broadcasting Corporation
Ponderosa, Inc.
Qintex (Hal Roach)
Qintex Productions, Inc.
Republic Health
Resorts International Financing Inc.
Resorts International, Inc.
San Antonio Savings
Santa Barbara Savings & Loan Association
Sci Television, Inc.
Seaman Furniture Company, Inc.
Service Control Corporation
Simplicity Holdings
Southmark Corporation
Swan Brewery
Thortec International, Inc.
Vestron, Inc.
Vyquest Inc.
Walter (Jim) Corporation

Table 12 (cont.)

Webcraft Technologies
Western Savings & Loan Association

1990 (97 Issuers)

AIRCOA Hospitality Services, Inc.
Allied Stores Corporation
Amdura Corporation
American Pioneer Savings Bank
Ames Department Stores, Inc.
APL Corporation
Astrex Inc.
Balfour Maclaine Corporation
Bally Manufacturing Corporation
Bally's Grand, Inc.
BCE Development Corporation
Black Box, Inc.
C-U Funding Corporation
Calton, Inc.
CenTrust Federal Savings Bank
Circle K Corporation
Colorado-Ute Electric Association
Columbia Savings & Loan Association
Community Newspapers, Inc.
Concurrent Computer Corporation
Continental Airlines Holdings, Inc.
Continental Airlines, Inc.
County Bank, Fsb
CPT Corporation
Darling-Delaware Corporation Inc.
Days Inns Of America, Inc.
Digicon Finance N.V.
Digicon, Inc.
Divi Hotels N.V.
Doskocil Companies Inc.
Edgcomb Metals Company
Edgell Communications, Inc.
Equitec Financial Group, Inc.
Fairfax (John) Group Pty, Ltd.
Fairfield Acceptance Corporation
Fairfield Communities, Inc.
Far West Savings & Loan Association
Farley, Inc.
Federated Department Stores, Inc.
Federated Group Inc.
Firstcorp, Inc.
Forstmann & Company, Inc.
Forum Group, Inc.
Franklin Savings Association
General Development Corporation
Gillett Holdings, Inc.
Goldriver Finance Corporation
Greyhound Lines, Inc.
Hall-mark Electronics Corporation
Harvard Industries, Inc.
Imperial Corporation Of America
Imperial Savings Association
Interco, Inc.
International Controls
Iroquois Brands Ltd.
Kinburn Technology Corporation
Kinder-Care Learning Centers Inc.
Kurzweil Music Systems, Inc.
Leisure Technology, Inc.
Linter Textile Corporation
LVI Group, Inc.
Management Company Entertainment Group, Inc.
MGM-Pathe Communications Co.
MMR Holding Corporation
Morningstar Group, Inc.
Morse Shoes, Inc.
Mortgage & Realty Trust
Motor Wheel Corporation
Munsingwear Inc.
National Enterprises, Inc.
National Gypsum Company
Nichols (S.E.), Inc.
NVR, L.P.
One Bancorp, The
PGI, Inc.
Polly Peck International Finance Ltd.
Prime Motor Inns, Inc.
Salant Corporation
Semicon Inc.
Service America Corporation
Servico, Inc.
Siliconix Inc.
Southland Corporation
Specialty Equipment Companies, Inc.
Starcraft Corporation
Stotler Group, Inc.
TGX Corporation
Tracor, Inc.
Traditional Industries, Inc.
Trump Taj Mahal Funding, Inc.
Trump's Castle Funding, Inc.
Truvel Corporation
Union Valley Corporation
United Merchants And Manufacturers, Inc.
Univision Holdings, Inc.
USG Corporation
Western Union Telegraph Co.

1991 (98 Issuers)

Alleco, Inc.
Amalgamated Investment Corporation
AmBase Corporation
America West Airlines Inc.
American Shared Hospital Services
Appletree Markets, Inc.
Autodie Corporation
Bally's Health & Tennis Corporation
Bank Of New England Corporation
Barry's Jewelers, Inc.
Best Products Inc.
Bonneville Pacific Corporation
Burnham Broadcasting Company L.P.
C.R. Anthony Company
Carter Hawley Hale Stores, Inc.
Charter Medical Corporation
CNC Holding Corporation
Columbia Gas System, Inc.
Community National Bankcorp, Inc.
Continental Health Affiliates, Inc
Crossland Savings, Fsb
Damson Oil Corporation
Diversified Industries Inc.
DSC Communication Corporation
E-II Holdings, Inc.
Eagle Picher Industries Inc.
Enstar Group Inc.

Table 12 (cont.)

Entertainment Marketing, Inc.
Enzo Biochem Inc.
EUA Power Corporation
Executive Life Insurance Co.
EZ Communications, Inc.
First Capital Holdings Corporation
First City Industries Inc.
First Executive Corporation
Fries Entertainment, Inc.
Gaylord Container Corporation
Gilbert/Robinson, Inc.
Gordon Jewelry Corporation
Great American Bank, Fsb
Great American Industries Inc.
Hills Department Stores, Inc.
Hills Stores Company
Homestead Savings Fs & La
HQ Office Supplies Warehouse Inc.
Insilco Corporation
Journal Company Inc.
JPS Textile Group, Inc.
Koger Properties Inc.
Lavalin
Lexington Precision Corporation
Lionel Corporation
Marcade Group Inc.
Maxwell Communications Corporation PLC.
Maxwell Communications Finance Canada, Ltd.
Maxwell Finance (Jersey) Ltd.
Mayflower Group, Inc.
McCrory-Parent Corporation
Memorex Telex Corporation
Meritor Savings Bank
Metro Airlines, Inc.
Midway Airlines, Inc.
Mutual Benefit Life Insurance Co.
NACO Finance Corporation
National Convenience Stores Inc.
Nortek Inc.
Nu-Med Inc.
Orion Pictures Corporation
P.A. Bergner & Co.
Pacific International Services Corporation
Pan Am Corporation
Pan American World Airways, Inc.
Pay 'N' Pak Stores, Inc.
Peebles, Inc.
Petrolane Gas Service, L.P.
Price Communications Corporation
Rexene Corporation
Rule Industries, Inc.
Scovill Inc.
Southeast Banking Corporation
Southeastern Public Service Co.
Sterling Optical Corporation
Sudbury Inc.
Sun Carriers, Inc.
Sunshine Precious Metals Inc.
Talley Industries, Inc.
Telex Corporation
Thermadyne Industries, Inc.
Trans World Airlines
Transcisco Industries, Inc.
Triangle Pacific Corporation
Triton Group Ltd.
U.S. Home Corporation
Ultrasystems, Inc.
Work Wear Corporation Inc.
WTD Industries, Inc.
Zale Corporation
Zale Credit Corporation

1992 (49 Issuers)

Adience Equities, Inc.
Alliant Computer Systems Corporation
AM International Inc.
American Eagle Petroleums Ltd.
Bramalea Limited
Carolco Pictures Inc.
Cherokee Group Inc.
Control Securities Finance B.V.
Cook Inlet Communications Corporation
Del Norte Funding Corporation
DR Holdings, Inc.
El Paso Electric Company
El Paso Funding Corporation
Envirodyne Industries, Inc.
First City Bancorporation Of Texas, Inc.
Florida Steel Corporation
Galactic Resources, Ltd.
Heron International Finance N.V.
HomeFed Corporation
Horn & Hardart Co.
Ilio Inc.
Intermark Inc.
Ladish Co., Inc.
Live Entertainment, Inc.
Lomas & Nettleton Mortgage Investors
London & Provincial Shop Centres (Holdings) Ltd.
Mai Systems Corporation
Marquest Medical Products Inc.
McCrory Corporation
Mountleigh Group Plc.
NRM Energy Company, L.P.
Pathe Communications Corporation
Perpetual Financial Corporation
R. H. Macy & Co., Inc.
R. N. Koch
Restaurant Enterprises Group, Inc.
Robertson-Ceco Corporation
Rops Textiles, Inc.
Rymer Foods, Inc.
Savin Corporation
Seaman Furniture Company, Inc.
Spaulding Composites Company
SPI Holdings, Inc.
Spreckels Industries, Inc.
Telemundo Group, Inc.
Thousand Trails, Inc.
Town & Country Corporation
Wang Laboratories Inc.
Woodward's Ltd.

1993 (39 Issuers)

Almac's Inc.
Angeles Corporation
B-E Holdings Inc.
Brooke Group Ltd.
Bucyrus-Erie Company
Cherokee Inc.

Table 12 (cont.)

Consumer Packaging Inc
Cooper Companies, Inc.
Daf N.V.
Erly Industries, Inc.
GACC Holding Company
Glendale Federal Bank, Fsb
Glenfed, Inc.
Great American Communications Co.
Gulf USA Corporation
Healthco International, Inc.
Hexcel Corporation
Iverson Technology Corporation
Jamesway Corporation
JWP, Inc.
Kettle Restaurants, Inc.
Martech Usa, Inc.
MEI Diversified, Inc.
Mesa Capital Corporation
Mesa, Inc.
Microsemi Corporation
Minstar Inc.
NH Holdings Inc.
Norsk Data A.S
NVF Co.Peoples Jewellers Limited
Riedel Environmental Technologies, Inc.
Synergy Group, Inc.
TDII Co., Inc.
The Triangle Corporation
Trizec Corp Ltd.
Value Merchants, Inc.
Wean, Inc.
Westwood Group, Inc.

1994 (23 Issuers)

Acme Holdings Inc.
Advanced Medical Inc.
Belle Casinos
Carolco Pictures Inc.
Cherokee Inc.
Confederation Life Insurance Company
Confederation Treasury Services Ltd.
Confederation U.K. Holdings Plc
Equitable Bag Company
Evergreen International Aviation, Inc.
F&M Distributors Inc.
Fair Lanes Inc.
Grand Tibidabo
Greyhound Lines, Inc.
Harvest Foods Inc.
Intelogic Trace
Kash 'n Karry Food Stores Inc.
Maryland Cable Corp.
Media Vision
Megafoods Stores Inc.
O'Brien Enviromental Energy Inc.
Regal Communications Corporation
Treasure Bay Gaming & Resorts, Inc.
Woodward & Lothrop

Chronological List of 1994 Public Corporate Bond Defaults
($Millions)

Company	Defaulted Debt	Not Defaulted	Status
January			
Woodward & Lothrop Inc.	$83.5		In Chapter 11
Defaulted Debt (mil):	*$83.5*		
Number of Companies:	*1*		
February			
Equitable Bag Co., Inc.	$105.0		Filed Prepackaged Chapter 11
Evergreen Int'l Aviation, Inc.	$125.0		Negotiating with Bondholders
Fair Lanes, Inc.	$138.0		Emerged from Chapter 11
Defaulted Debt (mil):	*$368.0*		
Number of Companies:	*3*		
March			
Maryland Cable Corp.	$162.4		In Chapter 11
O'Brien Environmental Energy, Inc.	$49.2		In Chapter 11
Defaulted Debt (mil):	*$211.6*		
Number of Companies:	*2*		
April			
Defaulted Debt (mil):	*$0.0*		
Number of Companies:	*0*		
May			
Defaulted Debt (mil):	*$0.0*		
Number of Companies:	*0*		
June			
Regal Communications Corporation	$35.0		In Chapter 11
Defaulted Debt (mil):	*$35.0*		
Number of Companies:	*1*		
July			
Intelogic Trace Inc.	$49.9		In Chapter 11
Media Vision Technology Inc.	$100.0		Emerged from Bankruptcy
Advanced Medical Inc.	$60.0		Made Interest Payment after grace period
Kash 'n Karry Food Stores, Inc.	$155.0		Emerged from Bankruptcy
Defaulted Debt (mil):	*$364.9*		
Number of Companies:	*4*		
August			
Megafoods Stores Inc.	$100.0		In Chapter 11
Confederated Life Insurance Company.	$185.5		Seized by Regulators
Confederated Treasury Services Ltd.	$227.2		Seized by Regulators
Confederated U.K. Holdings PLC.	$77.4		Seized by Regulators
Belle Casinos, Incorporated	$75.0		In Chapter 11
Defaulted Debt (mil):	*$665.1*		
Number of Companies:	*5*		

Chronological List of 1994 Public Corporate Bond Defaults
($Millions)

Company	Defaulted Debt	Not Defaulted	Status
September			
Greyhound Lines, Inc.	$98.9	$165.0	Exchanged convertible debenture
Defaulted Debt (mil):	*$98.9*		
Number of Companies:	*1*		
October			
Carolco Pictures	$54.4		Made interest payment within grace period
Defaulted Debt (mil):	*$54.4*		
Number of Companies:	*1*		
November			
Cherokee Inc.	$76.5		Emerged from Bankruptcy
Treasure Bay Gaming and Resorts, Inc.	$115.0		
Defaulted Debt (mil):	*$191.5*		
Number of Companies:	*2*		
December			
F&M Distributors, Inc.	$75.0		In Chapter 11
Acme Holdings Inc.	$78.0		
Harvest Foods Inc.	$82.3		Emerged from Bankruptcy
Grand Tibidabo	$23.4		
Defaulted Debt (mil):	*$258.7*		
Number of Companies:	*4*		

Year-to-Date Thru December 31	1994	1993	1992	1991
Defaulted Debt (mil):	$2,331.5	$3,426.50	$8,328.8	$21,222.0
Number of Companies:	24	39	49	98

1994 Public Corporate Bond Defaults

Acme Holdings Inc.

Rental equipment provider

$78.0 million 11.75% Guaranteed Senior Notes due 2000

Acme Holdings Inc., a privately held equipment rental company, operates in 21 locations throughout four states. Increased competition from equipment manufacturers doing their own leasing, overall lower rental rates and volume, and the loss of its key oil-refinery-related contracts in its latest fiscal year restrained earnings. As a result, the company's net loss increased to $14.1 million for FY93 versus a net loss of $1.1 million for FY92. Despite these losses, the company continued to enhance its rental fleet draining internally generated cash while also reaching limits of available vendor financing. EBITDA plummeted from $18.3 million for FY92 to $6.8 million in FY93 and over the same period leverage rose as Total Debt to EBITDA soared from 4.3 for FY92 to 9.6 for FY93. Ultimately, the highly leveraged company did not produce sufficient earnings to make the interest payment due December 1, 1994. The company has proposed a restructuring that would result in the noteholders owning 40% of the equity in a new organization that would be formed by the merger of Acme holdings and an affiliated entity Acme Acquisition Corp.

- 12/01/94 – Missed interest payment on senior notes due 2000.

(Contact: Thomas Keller, Tel: 553-1027)

Advanced Medical Inc.

Medical equipment manufacturer

$60 million 7.25% Convertible Subordinated Debentures due 2002

Advanced Medical Inc., based in San Diego CA, is one of the country's largest manufacturers of intravenous infusion pumps and disposable administration sets. Uncertainty surrounding healthcare reform has contributed to a general slowdown in hospital buying. This effect and intensifying market competition have combined to restrain the company's revenues. Furthermore, the company has been relying on investment sales and external borrowing to generate enough cash to meet its debt obligations. Since leveraging up in 1990, the beginning of the most recent recession, Advanced has maintained a high Total Debt/EBITDA ratio; in excess of 4. The firm's failure to declare a dividend on its cumulative preferred stock on March 29, 1994 signaled a working capital crisis. Although the company had a positive net income ($1.3 million) for the first time in five years, it was not sufficient to cover the debt service required for 1994. Subsequently Advanced Medical Inc. missed an interest payment due July 15. The company is currently attempting to restructure its debts obligations.

- 07/15/94 – Missed interest payment on subordinated debentures.
- 08/17/94 – Made interest payment on subordinated debentures.

(Contact: Randal Gaulke, Tel: 553-0814)

Belle Casinos, Incorporated

Casino owner and operator

$75.0 million 12% First Mortgage Notes due 2000

Belle Casinos, Incorporated is the owner and operator of the Biloxi Belle and Southern Belle gambling casinos in Mississippi. The mortgage notes due in 2000 were sold in October 1993, to raise capital for the construction of the Southern Belle in Tunica and a replacement for the small and aging Biloxi Belle riverboat in Biloxi. However, the company's plan to capitalize on Mississippi's booming casino market, failed when construction cost overruns on the Southern Belle exceeded $22 million. When the casino opened in February 1994, stiff competition from established and new competitors restrained revenues and profitability. Needing more funds to complete the construction of the second casino, management proposed a restructuring plan that combined an equity infusion with additional debt capital from existing bondholders. When the bondholders rejected the plan, Belle Casinos closed the Southern Belle and voluntarily filed for Chapter 11 Bankruptcy protection on August 31, 1994. Belle Casinos is the first Mississippi-based casino operator to default.

- 08/31/94 – Filed for Chapter 11 protection.

(Contact: Jeremy Hawes, Tel: 553-1495)

Carolco Pictures Inc.

Movie producer

$13.4 million 13%-12% Reducing Rate Senior Subordinated Debentures due 1999

$41.5 million 11.5%-10% Reducing Rate Senior Notes due 2000

Carolco Pictures Inc., based in Los Angeles, is an entertainment company engaged in the financing, production and leasing of motion pictures worldwide. Carolco previously missed scheduled interest payments on December 1, 1992, on $49.2 million of debt despite earlier resounding successes with "Terminator 2" and "Basic Instinct". In 1993, the company completed a restructuring plan that exchanged the original debt for the above issues in order to ease the financial stress. In the restructuring however, only 66% of the 14% Senior Notes due 1993 and 78.7% of the 13% Senior Subordinated Notes due 1999 tendered, the rest of the bondholders were paid in full – thereby failing to substantially alleviate the financial burden on the company. After the restructuring, Carolco decided to realign its corporate strategy to focus on a few major "event" releases per year. However, insufficient capital, production delays, and a reduction in the number of new films released soon recreated severe liquidity problems for the movie producer. That year, Carolco released only one film, "Cliffhanger", of which the company owned less than 50%. Consequently, revenues declined a devastating 81.6% from $560.6 million in 1992 to $103.1 million in 1993. In addition to the drop in revenues, a failed merger with LIVE Entertainment, the withdrawal of Michael Douglas from the leading role of one of its movies, and losses incurred from incomplete production efforts further restrained Carolco's profitability. With no new movies yet distributed in 1994, strapped for cash and unable to start filming new projects, Carolco Pictures announced that it would not make the payments on its senior and senior subordinated notes that were due on October 15, 1994.

- 10/15/94 – Missed interest payments on debentures due 1999 and Notes due 2000.
- 11/04/94 – Made interest payments within grace period.

(Contact: Christian Rauch, Tel: 553-1603)

Cherokee Inc.

Apparel and footwear manufacturer

$76.5 million 11% Senior Subordinated Pay-In-Kind Debentures due 1999

Cherokee Inc., a U.S. designer and marketer of casual apparel and footwear, is still feeling the aftershocks of its 1989 leveraged buyout by the now defunct Deutschman Clayton. In 1993, the company completed an ineffectual Chapter 11 reorganization in which it exchanged the 11% pay-in-kind notes for two existing issues. Stiff competition, industry wide sales volatility and the company's inability to meet the needs of retailers caused a decline in revenues from $157 million in FY93 to $114 million in FY94. A $24.8 million net loss in FY94 set the stage for a second Chapter 11 filing. Although the company has cut its men's apparel lines and refocused on women's apparel as its key business operation, any possible benefits from these moves have not had sufficient time to accrue. Using the PIKs option to issue additional notes instead of cash for the first three payments, the company missed their first required cash payment due November 1, and has been negotiating with bondholders to exchange the issue. On November 7, 1994, the company filed a prepackaged plan of reorganization.

- 11/01/94 – Missed interest payments on senior subordinated debentures due 1999.
- 11/07/94 – Filed prepackaged plan for reorganization.
- 12/28/94 – Emerged from Bankruptcy.

(Contact: Filippe Goossens, Tel: 553-4126)

Confederation Life Insurance Company

Life insurance provider

£100.0 million 9.875% Subordinated Eurobonds due 2003 [US$154.9 mil]

LF1,000.0 million 8.375% Subordinated Eurobonds due 2000 [US$30.6 mil]

Confederation Life Insurance Company, one of Canada's top five insurance companies, provides insurance for over 500,000 policyholders worldwide. The company's problems started in the late 1980s when it began to invest heavily in the North American real estate market. By 1989, 71% of the company's assets were in high-risk real estate or mortgages. As the real estate market experienced a severe downturn, so did Confederation. The latest regulatory filing reports a C$147 million loan loss and a C$29 million net loss for fiscal year 1993. After an Office of the Superintendent of Financial Institutions audit in 1993, Confederation publicly announced an initiative to raise capital, signaling that they were taking heed of regulators recommendations. The failure of the company to secure a strategic alliance with Great-West Life Assurance Co in July 1994, signaled the company's demise and federal regulators seized Confederation on August 11, 1994, to ensure an orderly liquidation.

- 08/11/94 – Seized by regulators.

(Contact: Francis de Regnaucourt, Tel: 553-4599)

Confederation Treasury Services Ltd.

Life insurance provider

£100 million 9.5% Senior Unsecured Euronotes due 1997 [US$154.9 mil]

$C100.0 million 9.5% Senior Unsecured Guaranteed Euronotes due 1997 [US$72.4 mil]

See accompanying critique of Confederation Life Insurance Company.

- 08/11/94 – Seized by regulators.

(Contact: Francis de Regnaucourt, Tel: 553-4599)

Confederation U.K. Holdings PLC

Life insurance provider

£50 million 8.5% Senior Unsecured Eurobonds due 2003 [US$77.4 mil]

See accompanying critique of Confederation Life Insurance Company.

- 08/11/94 – Seized by regulators.

(Contact: Francis de Regnaucourt, Tel: 553-4599)

Equitable Bag Co., Inc.

Shopping bag manufacturer

$105 million 12.375% Senior Notes due 2002

Incorporated in New York in 1919, Equitable Bag is a leading designer, manufacturer, and distributor of plastic and paper shopping bags. In January 1988, the Equitable Bag Holding Co. and its subsidiary EBC Services Corp., acquired Equitable Bag Co., Inc. through a primarily debt-financed transaction. Equitable Bag derives revenues principally from department stores and its ten largest customers account for over half of sales. The company's vertical integration through ownership of a paper mill and resin extrusion capabilities affords a significant competitive edge, allowing it to provide custom-design products, flexible manufacturing, and just-in-time store delivery. Yet the advantages of a strong market position and an established client base have been offset by the burden of the acquisition debt and the revenue volatility associated with an over-reliance on a relatively few retail and department store sales. Revenues have weakened since the acquisition and EBITDA/Interest expense has remained below one for the last three years. A 1992 recapitalization, which included the sale of these notes, did little to relieve the onerous debt burden, which now stands at 85% of market capitalization. Though the figures for the all-important Christmas season are not yet in, sales dropped slightly in 1993 due both to decreased orders and selective measures to limit low margin work. Equitable chose to omit the Feb. 15 interest payment in an effort to conserve cash pending a planned restructuring of the notes.

- 02/15/94 – Missed interest payments on Senior Notes.
- 10/14/94 – Filed prepackaged reorganization plan.

(Contact: Brian Oak, Tel: 553-4688)

Evergreen International Aviation, Inc.

International air cargo carrier

$125 million 13.5% Senior Notes due 2002

Evergreen International Aviation, Inc. is the world's largest contract air freight carrier. The company operates through several subsidiaries, and Evergreen International Airlines, Inc. is by far the largest. Its principal customers include air carriers, governmental agencies, and freight forwarders. Through the smaller subsidiaries Evergreen provides other aviation services such as ground handling support, aircraft maintenance and overhaul, contract helicopter services, and aircraft leasing and brokering. Evergreen relies heavily on contracts with the U.S. government and Japan Airlines (JAL), which at times have together provided over 65% of flight revenues. Evergreen enjoyed rapid growth from FY87 to FY92, as sales jumped an average of 27% each year and EBIT grew an average of 32% each year. Recently, lost business with JAL and intense price competition in the international air freight market have depressed revenues. In FY93 sales shrunk by 8% and EBIT fell 35% to a level insufficient to cover interest expense. FY94 has been only harsher with half-year figures reporting a further 5.5% decline in revenues and 27.9% plunge in EBIT. On Feb. 3, 1994 Evergreen announced its intention to pursue a comprehensive debt restructuring; the company also announced a suspension of payment of certain debt obligations, including the Senior Notes.

- 02/15/94 – Missed interest payments on Senior Notes.

(Contact: Thomas Keller, Tel: 553-1027)

F&M Distributors, Inc.

Discount merchandise retailer

$75.0 million 11.5% Senior Subordinated Notes due 2003

F&M Distributors is a superstore chain selling a wide selection of deeply discounted branded health and beauty products. Its stock reached an all time high of $28 in April 1992 just before a rapid, debt-financed expansion. By venturing outside of its traditional markets, F&M spread itself too thin. As a result the company was unable to utilize economies of scale in advertising and distribution to keep prices low. An increasingly competitive environment undercut F&M's prices thereby undermining one of its key advantages in the market. Weak inventory management caused a steady increase in inventory for the last three years bringing it to an excessive 67% of total assets for FY94. Net income has been on a steady decline for the last three fiscal years with it decreasing by 51% over the last year to $5 million in FY94. Although the closing of six underperforming stores in November this year might have alleviated some pressure, F&M Distributors' leveraged and weak balance sheet and a competitive environment drove F&M to file for Chapter 11 bankruptcy protection on December 6, 1994.

- 12/06/94 - Filed for Chapter 11 Protection.

(Contact: Filippe Goossens, Tel: 553-4126)

Fair Lanes, Inc.

Bowling center operator

$138 million 11.875% Senior Secured Notes due 1997

Fair Lanes, with over 100 bowling facilities, is one of the three largest such operators in the United States. The other two, Brunswick and AMF Bowling, are of comparable size. Together the three companies comprise just 10% of bowling facilities; the remaining 90% of the market consists mostly of small independents. Fair Lanes focuses on seven markets: Baltimore, Phoenix, D.C., Houston, Orlando, Atlanta, and Denver, comprising over 75% of all its centers operated. During the past ten years bowling has witnessed an average annual decline of 2% in total games bowled. Through aggressive marketing and upgrades of information systems in their key markets, Fair Lanes managed to sustain profits through FY93. EBIT/Interest expense remained near one from the time of their 1989 LBO until FY92. In FY93 expenses jumped 9% on higher employee expenses, higher real-estate costs, and the added expenses of a reorganization plan intended to set a new level of customer focus. In the first half of FY94, revenues slid 13% while expenses were trimmed by just 6.6%, resulting in a negative EBIT. Further siphoning Fair Lanes cash flow is approximately $82 million of debt at the holding company level, Fair Holdings Corporation (FHC); as the commune is the only operating asset of FHC, FHC's debt, in essence, double leverages Fair Lanes. On Feb. 4 the company announced it would suspend interest payments on the notes as it sought to restructure its obligations; a partial swap of debt for equity was proposed.

- 02/04/94 – Announced would suspend interest payments on Senior Notes.
- 02/15/94 – Missed interest payments on Senior Notes.
- 09/29/94 – Courts confirmed reorganization plan.

(Contact: Jeremy Hawes, Tel: 553-1495)

Grand Tibidabo

Leisure holding company

3,094.7 million Pta 12.0% Convertible Subordinated Debentures due 1995 [US$23.4 mil]

Javier De la Rosa created Grand Tibidabo as a holding company for his portfolio of diversified leisure interests after resigning in 1992 as deputy chairman of Grupo Torras; which subsequently defaulted. Grand Tibidabo was Anheuser-Busch's partner in the construction of a theme park in Catalonia, Spain, that is scheduled to open in April 1995. Grand Tibidabo fraudulently, announced an after-tax profit of 189.5 million Ptas for FY93 against one of 756.4 million Ptas in FY92. Auditors later revealed a provisioning deficit closer to 7.7 billion Ptas. Mr. De la Rosa has subsequently been arrested and is facing charges of misappropriation of funds and falsifying documents. The company missed interest payments on December 8 1994 and bondholders have conceded to wait until February 15, 1995 for a partial coupon payment.

12/08/94 – Missed interest payments on convertible subordinated debentures due 1995 .

(Contact : Carlos Winzer, Tel. London Office 44-71-772-5307)

Greyhound Lines, Inc.

National inter-city bus transportation provider

$98.9 million 8.5% Convertible Subordinated Debentures due 2007

$165.0 million 10% Senior Notes due 2001

Greyhound Lines, Inc., the largest U.S. inter-city bus carrier, provides scheduled passenger services, packaged express delivery services and, at certain terminals, food services. In June 1990, primarily as a result of a labor strike, the company filed for Chapter 11 protection. Its emergence from bankruptcy on October 31, 1991, however, did not imply that the company had solved all of its problems. Decreasing air fares and cheaper, more reliable automotive transportation contributed to a decrease in ridership. As a result, net revenues fell $16 million (2.24%) from FY92 to FY93 and its load factor decreased from 65% in August 1993, to 56% in August 1994. To address these operational and competitive pressures, Greyhound adopted a national marketing strategy but failed to focus on the "medium distance" market segment. Citing the company's bleak outlook, financial advisors proposed a restructuring plan. Among their recommendations was omitting the September 30th interest payment on the convertible subordinate debentures due 2007.

- 09/30/94 – Missed interest payment on convertible subordinate debentures due 2007.
- 12/23/94 – Exchanged the convertible subordinated debentures due 2007.

(Contact: Thomas Keller, Tel: 553-1027)

Harvest Foods Inc.

Retail and wholesale grocery business

$46.7 million 9% Senior Subordinated Notes due 2003

$35.6 million 10% Senior Subordinated Pay-In-Kind Debentures due 2006

Harvest Foods Inc., is a privately held Arkansas based holding company for retail and wholesale grocery businesses. The company, as a result of stiffer competition, experienced lower sales volume and was forced to reduce prices in the latest fiscal year. For the nine months ending September '94, net sales declined by 3.8% in comparison to FY93's first nine months. Although the company was in compliance with its covenants regarding EBITDA/Interest Expense, EBITDA had declined 5.3% from $11.2 million for FY93's first nine months to $10.6 million for FY94's nine months. The company filed for Chapter 11 protection on December 13, 1994 and according to court documents, Harvest Foods lists assets of $88.8 million and liabilities of $186.6 million.

- 12/13/94 – Filed for Chapter 11 protection.
- 12/29/94 – Emerged from Bankruptcy.

(Contact: Frances Schulman, Tel: 553-4542)

Intelogic Trace Inc.

Services and maintains computers

$49.9 million 11.99% Subordinated Debentures due 1996

Intelogic Trace was the maintenance subsidiary of Datapoint Corp. when spun off in 1985. Intelogic provides computer services to manufacturers and resellers of computers and telecommunications equipment as well as end users. The company's revenues which were $88 million in 1993, have dropped as the computer market has shifted emphasis from mainframe and minicomputers to PCs. Moreover, the company is heavily dependent on Datapoint Corporation for a large portion of its revenues. Hence reduced sales and earnings at Datapoint also contributed to the decline in Intelogic's revenues which fell 28.13% from FY1991 to FY1992, and 14.93% from FY1992 to FY1993. Although the company returned to operating profitability in FY1993 and reduced net loss from $16,9 million (FY1992) to $884,000 (FY1993), it continues to experience severe financial difficulties and an inability to sustain sufficient coverage ratios. EBIT to interest expense was -.80 and -1.22 in FY1991 and FY1992; it only managed to return to .50 in FY1993. In the company's 10Q for the quarter ending April 30, 1994, the company reported that it was currently not in compliance with certain financial covenants relating to its current ratio and net capital funds. An additional financial burden on Intelogic Trace has been the 20% cross-shareholding that it has held in Datapoint Corporation. As of April 1994, the carrying value of this investment was zero. This cross-shareholding sparked a lawsuit from two of Intelogic Trace's shareholders that was eventually settled in order to avoid additional expense.

- 07/15/94 – Missed interest payment on subordinated debentures.
- 08/05/94 – Filed for Chapter 11 reorganization.

(Contact: Wei Yen, Tel: 553-1649)

Kash 'n Karry Food Stores Inc.

Supermarket operator

$105 million 14% Subordinated Debentures due 2001

Kash 'n Karry, based in Tampa, Florida, operates 100 supermarkets and 33 liquor stores located throughout west-central Florida. Despite a $30 million equity infusion by Leonard Green & Partners in 1991, the company has been struggling financially ever since its 1988 acquisition in an LBO. Although the firm has managed to increase sales, high fixed charges have generated a net loss in each of the last five years. Within the highly competitive supermarket industry, expansions and forward buying are necessary strategies to achieve higher profits. Kash 'n Karry, however, did not have adequate working capital for either. Consequently, sales did not grow, the operating ratio did not improve, and the gross margin declined. In August 1993, the company unsuccessfully attempted to refinance its debt to provide liquidity and the necessary capital for expansion. In July 1994, following several months of negotiation, the company reached an agreement with its bondholders to reorganize in a prepackaged Chapter 11 proceeding.

- 07/29/94 – Announced plans to file for Chapter 11 protection.
- 12/27/94 – Emerged from Bankruptcy.

(Contact: Fran Schulman, Tel: 553-4542)

Maryland Cable Corp.

Regional cable operator

$162.4 million 0% / 15.375% Senior Subordinated Discount Reset Notes due 1998

Maryland Cable Corp., a Maryland corporation, was formed in 1988 and owns cable systems in Prince George's County, MD, a suburbs of Washington, DC. About 150,000 households are passed by Maryland Cable and near 55% of those are basic subscribers. In 1988, ML Media Opportunity Partners, L.P. acquired the assets of Maryland Cable from Prime Cable of Maryland in a leveraged transaction of $198 million. These reset notes, sold at a deep discount, were used to fund almost 40% of the purchase. Since the acquisition, total homes passed has increased from 128,000, only marginally behind early projections. The sluggish pace at which the company has successfully recruited subscribers, though, has been its greatest impediment – subscription is far below what had been expected at the time of the acquisition. Moreover, heavy regulation and poor performance of "Pay-Per-View" programming and sales have depressed revenues. A few years of modest operating profits were never strong enough to support the heavy debt service taken on in the acquisition. On Jan. 22, 1993 Maryland Cable agreed to sell its cable system in Leesburg, VA, comprising about 6% of total basic subscribers; funds were used to pay down debt. As renegotiated in 1991, Maryland Cable's senior bank loan came due on December 31, 1993. The company was unable to restructure its bank financing primarily because it was clear that funds would not be available to make the first scheduled interest payment on the reset notes, which would have been due on May 15, 1994. A proposed bankruptcy plan would exchange debt for equity in the reorganized Maryland Cable under the name "Newco".

- 03/10/94 – Filed for Chapter 11 protection.

(Contact: Christian Rauch, Tel: 553-1603)

Media Vision Technology Inc.

Multimedia computing products manufacturer and marketer

$100 million 4.875% Convertible Subordinated Debentures due 2003

Media Vision Technology Inc., headquartered in Fremont, CA, is a major manufacturer and marketer of multimedia peripherals for personal computers such as multimedia kits, sound boards, graphics accelerator boards, audio chips and software titles. After going public in 1990, the company experienced significant growth and reached a share price as high as $46.00. However, all this came to a crashing halt when the company announced that its projected earnings of $19.9 million in FY1993 were to be restated to a loss of $80-90 million following misstated inventory and shipment delays. The company and its management have been accused of shipping products to "phantom warehouses", recording these shipments as sales, and not accounting for them when the products were returned. The company's woes continued with an investigation by the SEC and FBI into fraudulent practices and the resignation of its top three managers. The company was forced to file for Chapter 11, when two members of the creditor's committee would not approve a payment restructure plan.

- 07/25/94 – Filed for Chapter 11 protection.
- 12/27/94 – Emerged from Bankruptcy.

(Contact: Dan Pakenham, Tel: 553-4578)

Megafoods Stores Inc.

Supermarket operator

$100 million 10.25% Senior Notes due 2000

Megafoods Stores Inc. expanded rapidly from one Phoenix store in 1987, to a chain of 71 supermarkets that spanned four Western states by August 1994. Management's aggressive expansion in San Antonio, Texas, involving the acquisition of 15 stores from Kroger Co. in September 1993 and 21 stores from Handy Andy Inc. in April 1994, was poorly managed. The company faced stiffer-than-expected competition when the privately owned and highly competitive H.E.B. supermarket aggressively cut prices. Depressed earnings and the debt incurred to finance these acquisitions resulted in an EBITDA loss of $9.8 million for fiscal year 1993. Fleming Foods West Inc., the company's major supplier, stopped shipment for three days during August due to credit concerns and agreed to resume deliveries on a cash-only basis. Following Fleming's actions, other vendors demanded cash payments. Foothill Capital subsequently sent a notice of default relating to the company's revolving loan and security agreement, resulting in a cross-default under the bond indenture. As a result of the vendor demands and the notice of default, Megafoods filed for Chapter 11 bankruptcy protection.

- 08/17/94 – Filed for Chapter 11 protection.

(Contact: Fran Schulman, Tel: 553-4542)

O'Brien Environmental Energy, Inc.

Energy and energy related products provider

$11.4 million 7.75% Convertible Senior Subordinated Debentures due 2002
$11.5 million 11% Convertible Senior Subordinated Debentures due 2010
$26.3 million 11% Convertible Senior Subordinated Debentures due 2011

O'Brien Environmental Energy, Inc. was founded in 1981 as part of a group of companies owned by the O'Brien family, and subsequently spun off in 1984. O'Brien provides electricity and thermal energy to industrial and commercial users and public utilities using cogeneration, waste heat recovery, and biogas technologies. The company also designs and assembles related equipment for sale and lease. O'Brien presently operates eight projects totaling approximately 217 megawatts of electric generating capacity; seven of these are wholly owned by the company. In the past the company has maintained a strategy of financing new projects almost entirely with debt. Though the expansion generated average annual revenue growth of over 50% from FY88 to FY92, earnings were usually insufficient to cover interest expenses which averaged annual growth exceeding 70%. The company encountered a host of problems in FY93; a fire in their Newark, NJ plant and lawsuits alleging various claims and counter-claims combined to boost expenses 17% as revenues retreated marginally. EBIT/Interest expense dropped from a peak of 1.3 in FY92 to .3 in FY93. Though fire-related difficulties were remedied in the second quarter of FY94, litigation, which reportedly cost the company over $8 million in FY93, continues to hound O'Brien. Liquidity constraints have forced the omission of the most recent interest payment on these convertible debentures. The company is seeking to exchange them for equity.

- 03/15/94 – Missed interest payments on all convertible debentures.
- 09/29/94 – Filed for reorganization under Chapter 11.

(Contact: Michel Hugon, Tel: 553-1036)

Regal Communications Corporation

Marketing services and infomercial producer

$35.0 million 10% Convertible Subordinated Debentures due 2008

Regal Communications Corp., incorporated in 1986, produces and distributes infomercials (program length advertisements) as well as marketing and merchandising related products. The Fort Washington, PA, based company reported sales of $117 million for FY 1992. Following the resignation of its auditors and CFO in January this year, Regal was hit with a shareholder-initiated class-action suit charging the company with violating federal securities laws. Regal then failed to file financial statements for FY 1993, and advised the public that the 10K filed for the fiscal year ended September 30, 1992 should not be relied upon, pending the completion of an inquiry. The company was de-listed from the NASDAQ exchange on April 20, this year. Currently, Regal is the subject of an investigation by the Securities and Exchange Commission into possible securities-law violations.

- 06/15/94 – Missed interest payment on convertible subordinated debentures.
- 09/23/94 – Filed for Chapter 11 protection.

(Contact: Christian Rauch, Tel: 553-1603)

Treasure Bay Gaming and Resorts, Inc.

Casino Owner and Operator

$115.0 million 12.25% First Mortgage Notes due 2000

Treasure Bay Gaming and Resorts, Inc., is a Delaware-based corporation formed in August 1993 to develop, own, and operate casinos in Mississippi and other emerging gaming districts. The company runs two gaming operations, Treasure Bay Biloxi and Treasure Bay Tunica, which opened in April and May 1994, respectively. The Mississippi gaming market is proving to be a risky bet due to the saturation and consequent consolidation that has recently taken place in the market. The events leading up to the company's Chapter 11 filing are similar to those of Belle Casinos, another 1994 Mississippi-based gaming defaulter. Following construction cost overruns, projected revenues failed to meet expectations. Consequently, Treasure Bay Gaming and Resorts missed interest payments due on its first mortgage notes due in 2000, on November 17, 1994, and filed for Chapter 11 on January 11, 1995.

- 11/17/94 – Missed interest payment on First Mortgage Notes due 2000.
- 01/11/95 – Filed for Chapter 11 protection.

(Contact: Jeremy Hawes, Tel: 553-1495)

Woodward & Lothrop Inc.

Department store operator

$83.5 million 14.75% Subordinated Notes due 1995

Woodward & Lothrop (W&L) is a regional operator of 35 full-line department stores: 19 in the greater Washington, D.C. and Baltimore areas; and 16 John Wanamaker stores in the greater Philadelphia and New York areas. The company has struggled under a heavy debt load since 1986 when it acquired the Wanamaker chain from Carter Hawley Hale (whose 1991 default was profiled in Moody's Default Study of Jan. 1992). This purchase piggy-backed the 1984 LBO that transferred control of W&L to Alfred Taubman. Since mid-1988 when the Wanamaker stores were fully integrated into the corporate structure, W&L has suffered poor operating performance. In FY89, when the company last saw positive earnings, EBIT to interest expense was a poor .23; over the next four years, the company recorded over $80 million in negative EBIT. Interest expenses of approximately $50 million a year have been funded by Taubman through the holding entity, Taubman Investments Company.

- 01/17/94 – Filed for Chapter 11 protection.

(Contact: Jeremy Hawes, Tel: 553-1495)

1994 Distressed Structured Finance Transactions

ComFed Bancorp, Inc.

Savings and loan association

$73.7 million Mortgage Pass Through Certificates Series 87-1 due 2017
$60.6 million Mortgage Pass Through Certificates Series 88-1 due 2018
$48.0 million Mortgage Pass Through Certificates Series 88-2 due 2018
$57.7 million Mortgage Pass Through Certificates Series 88-3 due 2018
$50.7 million Mortgage Pass Through Certificates Series 88-4 due 2018
$51.8 million Mortgage Pass Through Certificates Series 88-5 due 2018
$32.3 million Mortgage Pass Through Certificates Series 88-6 due 2018
$25.0 million Mortgage Pass Through Certificates Series 88-7 Class A-1 due 2018
$25.0 million Mortgage Pass Through Certificates Series 88-7 Class A-2 due 2018

By the late eighties ComFed Bancorp of Lowell, MA, was the state's largest S&L and was also one of the state's largest residential mortgage lenders. With $200 million of non-performing loans in its portfolio, ComFed was seized by the RTC at the end of 1990. ComFed's asset pools suffered through the early 1990's as both the region's economy and real estate market slumped. Exacerbating this were many fraudulent dealings which contributed to the generally higher risk nature of the pool's mortgages. Moody's rated eight ComFed mortgage-backed securities with original rated debt of $424.8 million. Today, five of the issues are rated Caa or lower, two are just above speculative grade at Baa3, and one rating was withdrawn as the underlying assets were distributed to the security holders.

- 05/28/93 – Mortgage Pass Through Certificates Series 88-6 due 2018 downgraded to Ca.
- 11/19/93 – Mortgage Pass Through Certificates Series 88-4 due 2018 downgraded to Ca.
- 04/14/94 – Remainder of Mortgage Pass Through Certificates Series 88-2 through Series 88-7 due 2018 downgraded to Caa or lower.

(Contact: Jim Schmidbauer, Tel : 553-7938)

DLJ Mortgage Acceptance Corp.

Limited purpose mortgage backed securities issuer

$117.4 million Multi-Family Mortgage Pass-Through Certificates MF Series 1991-1 Class A
$116.2 million Multi-Family Mortgage Pass-Through Certificates Series 1993-MF2 Class A
$29.5 million Multi-Family Mortgage Pass-Through Certificates Series 1993-MF2 Class B

DLJ Mortgage Acceptance Corp. is a limited purpose corporation organized primarily to facilitate the issuance of mortgage backed securities. Both series of pass-through certificates are backed by first liens on multi-family apartment complexes that are owned or controlled by Morton L. Ginsberg. The economic performance of the underlying properties was considerably below that reported at the time of issuance, which resulted in the following downgrades.

- 09/29/94 – Multi-Family Mortgage Pass-Through Certificates MF Series 1991-1 Class A downgraded to Caa.
- 09/29/94 – Multi-Family Mortgage Pass-Through Certificates Series 1993-MF2 Class A downgraded to B3.
- 09/29/94 – Multi-Family Mortgage Pass-Through Certificates Series 1993-MF2 Class B downgraded to Ca.

(Contact: Cedric Philipp, Tel: 553-1992)

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