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IV
AGENCY RATINGS

Corporate bonds have been rated by one or more private agencies since 1909. Even direct offerings are currently rated, so that agency ratings essentially cover all corporate bonds.

The ratings ordinarily attempt to rank issues according to risk of default, although this intent is not specifically stated in the current explanation by the principal agencies. One agency refers to the attempt to grade bonds by their "relative investment quality" in the foreseeable future without regard to current or future price or yield.[1] The other is even less direct, stating that its ratings are a "simple measure of basic investment quality." It implies that although earning power is the most important criterion of analysis, as it "measures the obligor's ability to accumulate funds to pay principal and interest," [2] it is default risk that is being measured.

The rating agencies indicate that they do not assign ratings merely on the basis of statistical analysis. In general, according to the agencies currently compiling ratings, the first two grades (Aaa and Aa or AAA and AA) are high-grade bonds with neither present default risk nor foreseeable susceptibility to this kind of risk in the future. The next two grades (A and Baa or A and BBB) are considered to have some speculative characteristics in the way of possible future lack of earnings protection, but for the present are considered secure in interest and principal payments. Bonds in the Ba or BB category (fifth grade) are those which have little future assurance and only minor investment characteristics. Bonds below these five grades are speculative in character in that there can be no assurance of payment of interest or dividends. Normally, the rating agencies do not rate issues of finance companies or real estate companies whose underlying assets they are unable to evaluate.

1 Moody's Investors Service, *Moody's Industrial Manual,* New York, 1964, pp. V–VI.
2 Standard & Poor's Corporation, *Standard Corporation Descriptions,* New York, Vol. 26, No. 3, Section 4, January 29, 1965, pp. 2–3.

Hickman has demonstrated that the record of the agencies in rating bonds at offering was remarkably good from 1900 to 1943, in that highly rated issues suffered a much smaller incidence of default than did lower-rated issues. For example, for all large issues offered during the period 1900–43, only 11 per cent of the dollar volume rated as of "investment quality" (i.e., in the first four grades) went to default in those years in contrast with 42 per cent of the volume rated as "predominantly speculative." [3]

Since the postwar period lacks ex post measures, agency ratings provide perhaps the most significant indication of bond quality, even though ex ante, because they represent an assessment of many different variables affecting risk. While they cannot be taken as perfect substitutes for an economic test sufficient to produce a noticeable number of defaults, they are one of the better measures of quality currently available. Moody's ratings have been used in this study. Essentially, they rate the same sample of bonds, as Standard & Poor's, principally publicly offered issues of major corporations.

It would be incomplete to leave the topic of casualty rates among bonds classified by different agency ratings without indicating one of Hickman's findings which has been subject to later reinterpretation. Hickman found that actual loss rates did not completely eliminate the higher yields accorded bonds with lower agency ratings. Loss rates were actually negative in the first four agency rating grades (indicating a gain) and only in grades V–IX was the realized yield lower than the promised yield by reason of losses.[4] Fraine and Mills, and later Fraine alone, restudied the problem whether agency ratings are a substitute for the ultimate indicator of quality, i.e., dollar losses.[5] They eliminated call premiums obtained on better-quality bonds that did not default and high terminal prices for bonds still outstanding at the end of Hickman's period because it was one of low interest rates. Their modified loss rates were found to increase directly with a reduction in agency rating.[6]

[3] See W. Braddock Hickman, *Corporate Bond Quality and Investor Experience,* Princeton for NBER, 1958, Table 33, p. 176.

[4] *Ibid.,* Table 1, p. 10.

[5] Harold G. Fraine and Robert H. Mills, "Effect of Defaults and Credit Deterioration on Yields of Corporate Bonds," *Journal of Finance,* September 1961, and Fraine, *Valuation of Securities Holdings of Life Insurance Companies,* Homewood, Ill., 1962.

[6] Fraine, *Valuation of Securities,* p. 48.

Publicly Offered Bonds

In the period 1944–65, 93.5 per cent of all rated publicly offered straight bonds were placed in the first four rating grades. This figure, of course, excludes finance, real estate, and similar bonds; also the 1 per cent not rated. The addition of serial bonds to this tabulation does not alter essentially the finding that only 6.5 per cent in dollar terms was rated below the first four grades.

How does this finding compare with the prewar period? Tabulation of the Hickman data from 1909, when rating grades commenced, through 1943 indicates that 83 per cent of rated public offerings in that period were placed in the first four rating grades. For public offerings, therefore, the postwar quality as indicated by agency ratings was apparently better than the quality of prewar bonds as shown by this measure.

The distribution of public offerings by agency rating grades was covered earlier in the comparison of public and direct placements. The percentage of publicly offered bonds rated below the first four rating grades is given in Table 15.

"Investment Grade" Ratings of All Corporate Bonds

An over-all judgment of trends in bond quality requires a consistent measure or indicator of quality that applies to direct placements and public offerings alike. Lacking this, the analysis will be subject to speculation that shifts of bond financing from public to direct offerings, or vice versa, obscure what is happening to credit quality. Although it has not been possible to solve the problem of quality comparisons of two unlike types of bonds, it is possible to make a comparison in terms of two broad classes, investment grade and subinvestment grade bonds.

As indicated earlier, over the years there has developed a convention that certain bonds possess investment, as distinct from speculative, characteristics. For example, in 1949, the three federal bank examination agencies with a committee of the National Association of Supervisors of State Banks issued a statement of examination procedure, followed since 1938, which describes those bonds achieving favored treatment for valuation purposes: "Group I securities are marketable obligations in which the investment characteristics are not distinctly

TABLE 22

Percentage Distribution of Public Offerings and Direct Placements of Corporate Bonds Among Agency Ratings, Four-Year Periods, 1908-65

Period of Offerings	Investment Grade	Subinvestment Grade: Per Cent of Total	Subinvestment Grade: Per Cent of Rated	No Rating	Total Par Amount (million dollars)
1908-11	24.8	6.0	19.5	69.2	4,808.8
1912-15	45.5	11.0	19.5	43.5	4,942.7
1916-19	65.9	14.0	17.5	20.1	4,552.7
1920-23	79.3	17.7	18.2	3.0	7,911.0
1924-27	81.7	17.1	17.3	1.2	11,011.0
1928-31	77.8	18.8	19.5	3.4	9,963.1
1932-35	72.6	20.6	22.1	6.8	4,214.2
1936-39	85.3	11.4	11.8	3.3	9,400.9
1940-43	68.8	8.6	11.1	22.6	6,128.8
1944-47	96.4	2.3	2.3	1.3	13,975.8
1948-51	96.0	1.3	1.3	2.7	15,822.6
1952-55	95.3	2.6	2.7	2.1	22,296.9
1956-59	89.8	5.2	5.5	5.0	27,269.4
1960-63	91.9	4.4	4.6	3.7	27,653.8
1964-65[a]	86.4	9.0	9.4	4.5	16,107.9

Source: 1908-43, Hickman, *Corporate Bond Quality and Investor Experience,* Table 28, p. 153; 1944-65, Tables B-1, B-2, and B-3 of this study.

[a]Two years only.

or predominantly speculative. This group includes general market obligations in the four highest grades and unrated securities of equivalent value." [7] A similar determination of "investment grade" for insurance companies has existed since the early 1930's through ratings published by the National Association of Insurance Commissioners, although standards in terms of published rating grades have changed; only since 1951 has the favored classification been equated to the first four rating grades.

If one can conclude that the intent of the N.A.I.C. ratings was to designate "investment grade" obligations in selecting those securities

[7] *Federal Reserve Bulletin,* July 1949, p. 777.

eligible for prime treatment in valuation method, it is possible to combine public and private offerings to obtain the percentage distribution of bonds considered investment grade and below investment grade by one or another of the rating agencies.[8] Using this definition, Table 22 shows that since the 1920's[9] approximately 97 per cent of all corporate bonds have been rated, and that the percentage rated subinvestment grade fell through the beginning of the postwar period and has not varied greatly since then except for a sharp increase in the last two years. At the time of this writing, it is not possible to interpret the increase with any assurance of accuracy.

Cyclical Aspects

Hickman's analysis of the cyclical characteristics of bonds by agency ratings was made largely in terms of the net upgrading and downgrading of outstanding issues. He found that rating agencies tended to upgrade issues in the expansion phase of the business cycle and downgrade them during contractions. Our findings indicate what types of offerings are associated with different cyclical phases, but do not describe the behavior of rating agencies themselves during the cycle. The problem is, of course, that during the cycle not only may the character of bond offerings change with respect to their quality but also those analysts judging the quality of given bond issues may become more lenient or less lenient depending on their view of the business conditions that are likely to prevail over the life of the bond. The rating agencies indicate that ratings of a given issue should not be conditioned by the stage of the business cycle, but it may not be possible to prevent changes in the thinking of those who judge quality according to the business cycle.

Short of submission of a series of "sample standard" bond issues to the analysts of rating agencies over several business cycles, there is no way to determine how much the change in ratings is a psychological

[8] This analysis, of course, ignores an unknown but obviously small volume of bonds directly placed between 1945 and 1950 which were rated as "investment grade," i.e., eligible for preferred valuation treatment even though equivalent to public offerings rated in the fifth agency rating class (Ba or BB).

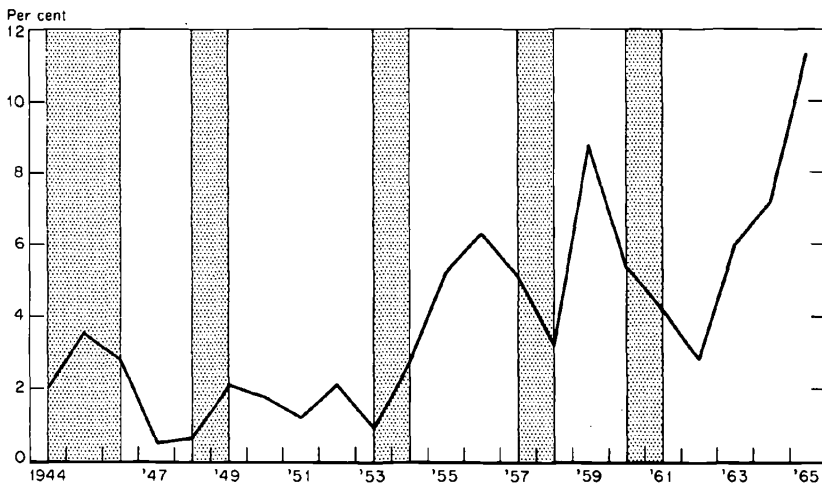
[9] The large proportion not rated in 1940–43 would probably have been reduced to that of other periods since 1920 if N.A.I.C. ratings had been used for direct offerings.

one and how much is due to a change in objective facts as these offerings reach the market at various points in the business cycle. The problem is further complicated by lack of clarity on what might be expected to happen to objective quality factors over the successive stages of the cycle. On the one hand, as an expansion progresses it might be reasoned that firms would show a stronger financial position; conversely, in a recession, they might show financial deterioration and therefore their bonds might be judged poorer risks. On the other hand, the nature of business expansion is to offer hope of success to enterprises that might not succeed except in boom periods. Similarly, investors may be receptive to poor bonds in expansion periods but be wary of them in recessions. This might cause bond offerings of relatively poor quality to be brought forth during expansions, with the opposite occurring during recessions.

Chart 7 shows that, in the first two business cycle expansions of the postwar period, a smaller proportion of offerings at the peak were rated subinvestment grade than at the previous trough. In the later

CHART 7

Percentage of Rated Bond Offerings in Subinvestment Grade, 1944–65 [a]



Source: Tables B-1, B-2, and B-3.
Note: Shaded areas represent business contractions; unshaded areas, expansions.
[a] Includes public offerings and direct placements of straight and serial bonds.

two recoveries (1954–57 and 1958–60) the opposite was the case. Precisely the opposite behavior was characteristic of the recession periods (eliminating 1944–46). The facts are consistent with the hypothesis that until 1954 the quality of bond offerings was primarily a function of the financial standing of companies, but that after 1954 quality varied inversely with presumed prospects, the greatest change taking place in the period following 1962.

Another facet of the problem should be considered. Less than 12 per cent of offerings (by value) received a subinvestment grade rating in any year of the period 1944–65; hence the division into two groups may be too gross to show adequately the sensitivity to business cycles. More marked cyclical conformity might appear in the proportion in a larger class, such as the third grade or below.

Following this approach, the data on postwar cyclical swings in agency ratings are shown in Chart 8 only for public offerings of straight bonds, since the agency ratings on direct placements (N.A.I.C.) do not make a fine enough distinction for private offerings. The bottom curve represents what previously has been called "subinvestment grade" (grade V and below), but it differs slightly from Chart 7 because of differences in underlying data. The next higher curve represents grade IV and below, and so on. The spaces between the curves represent individual rating grades.

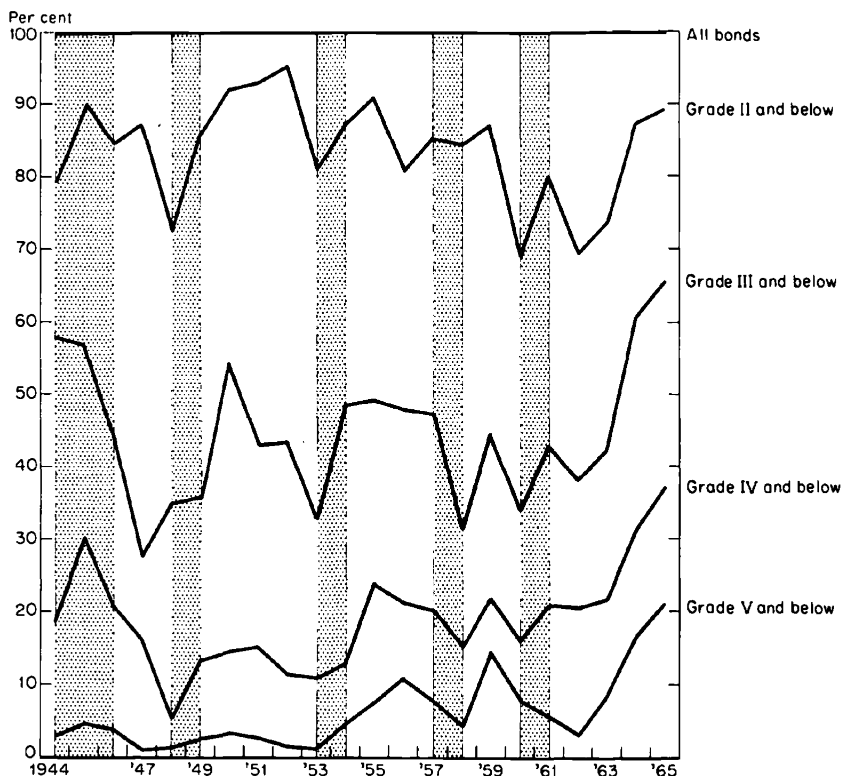
For public offerings of straight bonds, the class grade V and below has comprised from less than 1 to 21 per cent of rated public offerings in various postwar years. If only the first three grades are considered "investment grade," then "subinvestment grade" (grade IV and below) has represented 5 to 37 per cent. That curve rises in four of the five contractions. The same is true of grade II and below, while the intermediate curve (grade III and below) rises in only three contractions. The chart is hard to interpret, but it does show clearly the following three points:

1. The proportion of prime bonds (grade I–Aaa) increased from a low point (5 per cent) in 1952,[10] but since the early 1960's has been shrinking.

[10] This is exaggerated in 1960–63 by the upgrading of American Telephone and Telegraph bonds. If new offerings by that company had been rated only Aa in 1960–63, as in earlier years, grade I would have amounted to the following percentages of total rated offerings: 1960, 24.1; 1961, 13.3; 1962, 15.9; 1963, 19.4.

CHART 8

Percentage Distribution of Public Offerings of Straight Bonds by Rating Grade, Annually, 1944–65 [a]



Source: Computed from Table B-1.
Note: Shaded areas represent business contractions; unshaded areas, expansions.
[a] Based on rated bonds only.

2. On the average, just over half of the dollar volume of rated bonds were during the period in grades I or II and just under half in grade III and below. This is not true in the last two years.

3. The curve for grade III and below reached its highest point of the postwar period in 1965.