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# Appendix C <br> Trends in Credit Ratings 

The following tables represent the work of Victor Zarnowitz, who conducted a sampling analysis of the credit ratings published by Dun \& Bradstreet.

## TABLE C-1

## Percentage Distribution of Firms by Credit Rating, All Firms, 1950-58



Source: Bi-Monthly Reference Book, Dun \& Bradstreet. Based on an average sample of about 1,200 firms selected at random in each period. (Sampling analysis directed by Victor Zarnowitz, hereafter referred to as "Zarnowitz' samples.")

## The Quality of Trade Credit

TABLE C-2
Percentage Distribution of Firms by Credit Rating, by Net Worth of Firm, 1950-58

|  |  |  |  |  |  |
| :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Net Worth Under $\$ 20,000$ |  |  |  |

(continued)

## Appendix C

## TABLE C-2 (concluded)

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  | Net Worth Under $\$ 20,000$ |  |  |

Source: Bi-Monthly Reference Book, Dun \& Bradstreet (Zarnowitz' samples).

## The Quality of Trade Credit

## TABLE C-3

## Percentage Distribution of Firms by Credit Rating, by Age of Firm, 1950-58

| Year | Month | $51 / 2$ Years and Under |  |  | Over $51 / 2$ Years |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Sample Size | High or Good | Fair or Limited | Sample Size | High or Good | Fair or Limited |
| 1950 | July | 154 | 83.1 | 16.9 | 685 | 91.1 | 8.9 |
|  | Nov. | 240 | 85.0 | 15.0 | 556 | 90.6 | 9.4 |
| 1951 | March | 299 | 81.6 | 18.4 | 566 | 90.3 | 9.7 |
|  | July | 350 | 85.1 | 14.9 | 506 | 92.5 | 7.5 |
|  | Nov. | 401 | 79.8 | 20.2 | 540 | 88.1 | 11.9 |
| 1952 | March | 328 | 79.9 | 20.1 | 670 | 87.3 | 12.7 |
|  | July | 344 | 82.8 | 17.2 | 636 | 85.5 | 14.5 |
|  | Nov. | 340 | 78.2 | 21.8 | 636 | 86.0 | 14.0 |
| 1953 | Jan. | 304 | 82.9 | 17.1 | 697 | 84.2 | 15.8 |
|  | March | 274 | 82.8 | 17.2 | 710 | 84.2 | 15.8 |
|  | May | 326 | 76.4 | 23.6 | 822 | 82.2 | 17.8 |
|  | July | 323 | 78.6 | 21.4 | 654 | 87.3 | 12.7 |
|  | Sept. | 322 | 76.1 | 23.9 | 627 | 84.8 | 15.2 |
|  | Nov. | 319 | 79.6 | 20.4 | 635 | 83.0 | 17.0 |
| 1954 | Jan. | 277 | 81.6 | 18.4 | 716 | 84.8 | 15.2 |
|  | March | 251 | 78.6 | 21.5 | 712 | 84.7 | 15.3 |
|  | May | 277 | 81.6 | 18.4 | 692 | 86.4 | 13.6 |
|  | July | 292 | 77.1 | 22.9 | 654 | 87.0 | 13.0 |
|  | Sept. | 296 | 83.4 | 16.6 | 659 | 85.4 | 14.6 |
|  | Nov. | 288 | 78.5 | 21.5 | 646 | 86.2 | 13.8 |
| 1955 | Jan. | 243 | 77.0 | 23.0 | 663 | 83.9 | 16.1 |
|  | March | 253 | 81.4 | 18.6 | 663 | 84.2 | 15.8 |
|  | May | 251 | 79.3 | 20.7 | 666 | 85.0 | 15.0 |
|  | July | 262 | 79.4 | 20.6 | 682 | 84.3 | 15.7 |
|  | Sept. | 272 | 78.7 | 21.3 | 676 | 80.3 | 19.7 |
|  | Nov. | 312 | 74.4 | 25.6 | 651 | 80.8 | 19.2 |

Appendix $C$
TABLE C-3 (concluded)

| Year | Month | 51/2 Years and Under |  |  | Over 51/2 Years |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Sample <br> Size | High or Good | Fair or <br> Limited | Sample Size | High or Good | Fair or Limited |
| 1956 | Jan. | 265 | 75.8 | 24.2 | 692 | 83.5 | 16.5 |
|  | March | 256 | 71.5 | 28.5 | 722 | 84.5 | 15.5 |
|  | May | 259 | 76.8 | 23.2 | 730 | 81.1 | 18.9 |
|  | July | 262 | 71.4 | 28.6 | 704 | 83.7 | 16.3 |
|  | Sept. | 303 | 75.6 | 24.4 | 679 | 79.5 | 20.5 |
|  | Nov. | 275 | 74.5 | 25.5 | 683 | 83.6 | 16.4 |
| 1957 | Jan. | 260 | 69.6 | 30.4 | 674 | 79.1 | 20.9 |
|  | March | 281 | 68.7 | 31.3 | 691 | 81.3 | 18.7 |
|  | May | 244 | 68.9 | 31.1 | 694 | 83.7 | 16.3 |
|  | July | 285 | 66.3 | 33.7 | 686 | 83.8 | 16.2 |
|  | Sept. | 304 | 73.4 | 26.6 | 641 | 78.3 | 21.7 |
|  | Nov. | 245 | 70.2 | 29.8 | 721 | 79.9 | 20.1 |
| 1958 | Jan. | 244 | 71.7 | 28.3 | 678 | 77.9 | 22.1 |
|  | March | 250 | 72.4 | 27.6 | 715 | 78.3 | 21.7 |
|  | May | 266 | 68.4 | 31.6 | 655 | 81.7 | 18.3 |
|  | July | 268 | 69.4 | 30.6 | 657 | 76.3 | 23.7 |

Source: Bi-Monthly Reference Book, Dun \& Bradstreet (Zarnowitz' samples).

## The Quality of Trade Credit

TABLE C-4
Percentage of Firms Rated High of Good, by Age of. Firm, Within Net Worth Category, 1950-58

| Year | Month | Under \$2,000 |  | \$2,000 to \$20,000 |  | Over \$20,000 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 5 $1 / 2$ Years and Under 5 | Over $1 / 2$ Years | 5 $1 / 2$ Years and Under | Over 51/2 Years | 5 $1 / 2$ Years and Under | Over 51/2 Years |
| 1950 | July | 88.2 | 89.6 | 82.7 | 91.4 | 81.8 | 91.3 |
|  | Nov. | 81.2 | 90.5 | 84.9 | 90.2 | 87.8 | 91.5 |
| 1951 | March | 81.0 | 91.8 | 83.7 | 89.3 | 76.7 | 91.0 |
|  | July | 76.9 | 81.0 | 86.4 | 91.8 | 85.3 | 96.3 |
|  | Nov. | 72.9 | 78.8 | 80.5 | 87.0 | 81.6 | 91.2 |
| 1952 | March | 72.5 | 88.6 | 78.9 | 86.4 | 87.7 | 88.0 |
|  | July | 78.6 | 79.2 | 84.4 | 84.1 | 81.8 | 88.3 |
|  | Nov. | 61.1 | 74.5 | 80.9 | 85.4 | 77.9 | 88.7 |
| 1953 | Jan. | 70.5 | 66.2 | 84.1 | 84.5 | 88.7 | 88.0 |
|  | March | 69.2 | 72.6 | 83.7 | 83.8 | 85.7 | 87.7 |
|  | May | 60.8 | 74.5 | 78.5 | 80.6 | 81.3 | 85.2 |
|  | July | 68.3 | 74.0 | 78.0 | 89.3 | 85.7 | 87.5 |
|  | Sept. | 60.0 | 84.5 | 76.3 | 83.6 | 85.7 | 86.5 |
|  | Nov. | 68.8 | 74.5 | 78.5 | 83.9 | 90.0 | 83.4 |
| 1954 | Jan. | 69.2 | 75.4 | 80.5 | 82.1 | 91.3 | 89.6 |
|  | March | 54.5 | 63.6 | 79.2 | 82.4 | 88.0 | 90.4 |
|  | May | 68.2 | 85.7 | 82.7 | 84.1 | 82.8 | 89.3 |
|  | July | 48.6 | 82.4 | 80.6 | 85.5 | 83.1 | 89.5 |
|  | Sept. | 75.0 | 75.5 | 83.8 | 86.0 | 84.8 | 86.6 |
|  | Nov. | 68.4 | 83.3 | 76.2 | 83.5 | 86.8 | 89.1 |

(continued)

## Appendix C

TABLE C-4 (concluded)

| Year | Month | Under \$2,000 |  | \$2,000 to \$20,000 |  | Over \$20,000 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 5 $1 / 2$ Years and Under | Over $51 / 2$ Years | 5 $1 / 2$ Years and Under | Over 51/2 Years | 5 $1 / 2$ Years and Under | Over 51/2 Years |
| 1955 | Jan. | 47.4 | 90.0 | 78.9 | 82.8 | 64.2 | 83.9 |
|  | March | 57.9 | 85.4 | 80.1 | 80.9 | 92.1 | 87.5 |
|  | May | 61.9 | 78.0 | 80.5 | 82.2 | 82.0 | 88.1 |
|  | July | 54.2 | 81.0 | 80.1 | 83.6 | 86.6 | 85.4 |
|  | Sept. | 46.2 | 66.7 | 76.2 | 77.7 | 89.7 | 86.2 |
|  | Nov. | 45.8 | 74.5 | 75.0 | 77.3 | 82.4 | 85.2 |
| 1956 | Jan. | 50.0 | 61.8 | 78.1 | 83.8 | 81.4 | 85.6 |
|  | March | 60.0 | 69.2 | 73.4 | 82.1 | 70.4 | 89.0 |
|  | May | 69.2 | 78.1 | 78.1 | 78.3 | 76.4 | 84.5 |
|  | July | 41.7 | 66.7 | 74.4 | 81.9 | 81.0 | 86.9 |
|  | Sept. | 57.7 | 67.6 | 73.4 | 78.4 | 87.8 | 82.2 |
|  | Nov. | 50.0 | 78.4 | 74.9 | 79.6 | 83.3 | 88.0 |
| 1957 | Jan. | 37.0 | 70.3 | 69.9 | 77.0 | 84.7 | 82.7 |
|  | March | 57.7 | 75.8 | 69.7 | 79.3 | 70.1 | 84.0 |
|  | May | 33.3 | 83.9 | 67.1 | 81.7 | 84.7 | 85.9 |
|  | July | 47.1 | 76.7 | 67.0 | 84.3 | 73.6 | 83.9 |
|  | Sept. | 66.7 | 68.7 | 73.4 | 74.3 | 75.6 | 83.9 |
|  | Nov. | 45.0 | 72.7 | 71.8 | 77.8 | 74.5 | 83.1 |
| 1958 | Jan. | 38.1 | 61.8 | 73.4 | 74.8 | 79.6 | 82.7 |
|  | March | 52.2 | 64.3 | 72.0 | 77.3 | 80.0 | 81.3 |
|  | May | 63.0 | 78.1 | 69.0 | 78.7 | 69.1 | 85.1 |
|  | July | 65.0 | 75.0 | 66.7 | 69.3 | 77.5 | 84.6 |

Source: Bi-Monthly Reference Book, Dun \& Bradstreet (Zarnowitz' samples).

## The Quality of Trade Credit

table C-5
Percentage of Firms Rated High of Good, by Sector, 1952-58

| Year | Month | Manu-facturing | Durables <br> (mfg.) | Nondurables (mfg.) | Wholesale | Retail | Services | Construction |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1952 | Nov. | 81.7 | 77.5 | 84.9 | 88.9 | 80.6 | 86.5 | 80.0 |
| 1953 | Nov. | 79.4 | 71.7 | 88.6 | 86.4 | 80.7 | 81.4 | 80.9 |
| 1954 | Nov. | 84.5 | 87.5 | 82.1 | 83.6 | 82.1 | 83.9 | 81.8 |
| 1955 | July | 74.4 | 82.5 | 65.8 | 86.3 | 83.8 | 78.9 | 77.2 |
|  | Sept. | 82.4 | 79.1 | 88.0 | 78.9 | 79.8 | 75.6 | 74.4 |
|  | Nov. | 77.8 | 80.4 | 74.3 | 86.8 | 77.1 | 74.8 | 81.2 |
| 1956 | Jan. | 84.4 | 83.7 | 85.3 | 85.9 | 79.8 | 77.4 | 82.4 |
|  | March | 79.7 | 80.0 | 79.5 | 82.8 | 81.8 | 81.2 | 71.7 |
|  | May | 82.5 | 85.1 | 78.8 | 78.7 | 78.8 | 84.4 | 74.0 |
|  | July | 68.3 | 62.5 | 73.8 | 88.7 | 81.7 | 76.5 | 70.5 |
|  | Sept. | 80.7 | 78.7 | 83.3 | 73.6 | 79.2 | 76.1 | 68.8 |
|  | Nov. | 77.1 | 72.5 | 84.4 | 86.3 | 80.7 | 75.0 | 74.4 |
| 1957 | Jan. | 71.2 | 67.4 | 77.8 | 75.6 | 77.7 | 71.5 | 71.1 |
|  | March | 70.8 | 68.1 | 76.0 | 77.0 | 77.9 | 72.4 | 78.5 |
|  | May | 76.2 | 71.8 | 80.5 | 86.1 | 80.0 | 75.2 | 73.9 |
|  | July | 72.0 | 70.7 | 73.5 | 75.7 | 78.4 | 78.2 | 83.5 |
|  | Sept. | 70.4 | 68.3 | 72.5 | 83.0 | 77.0 | 70.9 | 71.8 |
|  | Nov. | 76.1 | 82.4 | 67.6 | 72.2 | 78.8 | 73.9 | 74.7 |
| 1958 | Jan. | 80.8 | 90.2 | 68.8 | 83.3 | 74.2 | 72.6 | 81.8 |
|  | March | 81.5 | 88.9 | 72.2 | 80.3 | 75.0 | 76.0 | 71.1 |
|  | May | 69.6 | 67.8 | 72.7 | 85.5 | 77.9 | 77.7 | 72.9 |
|  | July | 79.2 | 77.8 | 81.2 | 76.2 | 73.6 | 68.3 | 69.6 |

Source: Bi-Monthly Reference Book, Dun \& Bradstreet (Zarnowitz' samples). The residuals represent firms rated as fair or limited.

## Appendix C

## table C-6

Changes in Credit Rating and in Net Worth, Five Samples for Selected Periods, 1953-58

| Type of Change in Net Wortha | Total | Number of Concerns with Credit Ratingb |  |  | Percentage of Concerns with Credit Ratingc |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | $\underset{\text { proved }}{ }$ | Worsenedd | $\begin{gathered} \text { Un- } \\ \text { changed } \end{gathered}$ | $\begin{gathered} \text { Im- } \\ \text { provedd } \end{gathered}$ | Worsened ${ }^{\text {d }}$ | $\begin{gathered} \text { Un- } \\ \text { changed } \end{gathered}$ |
|  | jandary-march 1953 |  |  |  |  |  |  |
| Increase | 56 | 7 | 2 | 47 | 12 | 4 | 84 |
| Decrease | 14 | 2 | 3 | 9 | 14 | 21 | 64 |
| No change | 22 | 14 | 8 | - | 64 | 36 | - |
| Total | 92 | 23 | 13 | 56 | 25 | 14 | 61 |
|  | SEPTEMBER-NOVEMBER 1954 |  |  |  |  |  |  |
| Increase | 46 | 10 | 5 | 31 | 22 | 11 | 67 |
| Decrease | 13 | 2 | 2 | 9 | 15 | 15 | 69 |
| No change | 24 | 10 | 14 | - | 42 | 58 | - |
| Total | 83 | 22 | 21 | 40 | 26 | 25 | 48 |
|  | Jandary-march 1955 |  |  |  |  |  |  |
| Increase | 64 | 11 | 9 | 44 | 17 | 14 | 69 |
| Decrease | 22 | 2 | 5 | 15 | 9 | 23 | 68 |
| No change | 17 | 8 | 9 | - | 47 | 53 | - |
| Total | 103 | 21 | 23 | 59 | 20 | 22 | 57 |
|  | july-September 1957 |  |  |  |  |  |  |
| Increase | 74 | 8 | 3 | 63 | 11 | 4 | 85 |
| Decrease | 22 | 5 | 2 | 15 | 23 | 9 | 68 |
| No change | 36 | 14 | 22 | - | 39 | 61 | - |
| Total | 132 | 27 | 27 | 78 | 20 | 20 | 59 |
|  | Jandary-march 1958 |  |  |  |  |  |  |
| Increase | 51 | 5 | 8 | 38 | 10 | 16 | 74 |
| Decrease | 18 | 2 | 3 | 13 | 11 | 17 | 72 |
| No change | 22 | 9 | 13 | - | 41 | 59 | - |
| Total | 91 | 16 | 24 | 51 | 18 | 26 | 56 |

## The Quality of Trade Credit

## Notes to Table C-6

Source: Based on Zarnowitz' samples of Dun \& Bradstreet ratings.
${ }^{\text {a }}$ Any shift to a higher (lower) net worth group within the detailed (sixteengroup) classification of Dun \& Bradstreet is counted as an increase (decrease) in net worth. "No change" means that the firm remained in the same group over the period in question.
b Based on samples of those concerns which in the Reference Books for March 1953, Nov. 1954, March 1955, Sept. 1957, and March 1958 were marked by the letter $C$ (for a change in the listing). Covers only those of the sampled concerns that experienced specific changes in both their credit ratings and net worth during the given period. The totals of the omitted concerns were as follows:

|  | Change to or from a "No Rating" Classification (1) | Other Changes Not Sufficiently Specified (involving "blanks," etc.) (2) | Total Omitted (1) $+(2)$ (3) | Total Sampled (including nos. in table) <br> (4) |
| :---: | :---: | :---: | :---: | :---: |
| Jan.-Mar. 1953 | 30 | 43 | 73 | 165 |
| Sept.-Nov. 1954 | 34 | 49 | 83 | 166 |
| Jan.-Mar. 1955 | 50 | 38 | 88 | 191 |
| July-Sept. 1957 | 57 | 27 | 84 | 216 |
| Jan.-Mar. 1958 | 47 | 12 | 59 | 150 |

c Based on rated firms.
dAny shift to a higher rating was included, but a great majority of the recorded shifts were to the next higher rating category. Similarly, any shift to a lower rating was included but a great majority of the recorded shifts were to the next lower rating category.

