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Volume Author/Editor: Martin H. Seiden

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Chapter Author: Martin H. Seiden

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Trends and Cycles in Trade Credit Quality

Trend of Quality

All but one of the qualitative measures employed indicate that the underlying quality of trade credit was declining between 1947 and 1957 (Table 43). There was a decline in the ability of firms to repay debt, as indicated by the drop in the firms' financial ratios. Credit standards, as measured by the turnover of trade debt, went down, perhaps as a consequence of the decline in the repayment capacity of business.[1] The rising share of trade debt owed by small unprofitable firms also indicates that a qualitative decline was under way. Only the increase in the average age of firms suggested some improvement in the quality of trade credit, the assumption being that the average age of trade debtor rose with the average age of all firms. The age factor alone, however, cannot account for more than a token offset to the decline in the over-all quality of trade credit. On balance, it may be concluded that the quality of trade credit declined in 1947-57. Supplementary data indicate that this long-run

[1] The turnover of trade debt is used here in place of the turnover of trade credit discussed earlier. The latter suggests changes in credit standards as seen from the trade creditor's viewpoint, while the former looks at credit standards from the recipient's or debtor's viewpoint. In addition, the turnover ratio used here (S/TD) is the reciprocal of the one employed in Chapter 4, so that its change will move in the same direction as changes in credit quality.

TABLE 43

SUMMARY OF CHANGES IN EX ANTE MEASURES OF THE QUALITY OF TRADE DEBT

	Percentage of Total Trade Debt Outstanding, 1957[a] (1)	Percentage Change in Firms Rated "High" or "Good," 1950-58[b] (2)	Average Percentage Change in Four Financial Ratios, 1947-57[c] (3)	Percentage Change in Sales-to-Trade-Debt Ratio, 1947-57[d] (4)	*1947-57 Change in Percentage of Trade Debt Owed by* Small Corps.[e] (5)	Unprofitable Corps.[f] (6)	Small Unprofitable Corps.[e] (7)	Change in Average Age of Firms, 1947-54[g] (years) (8)
					(percentage points)			
All major sectors	78.5	–18.1	–22	– 5	– 1	+ 6	+10	+4.00
Mining	2.3	n.a.	–23	–18	– 5	+15	+22	+2.00
Manufacturing	31.4	– 3	–19	+ 3	– 2	+ 3	+ 6	+4.25
Wholesale	16.0	– 14	–18	–13	+ 2	+ 7	+10	+4.25
Retail	17.6	– 9	–25	– 3	+ 2	+13	+19	+3.75
Services	4.9	– 21	–46	–13	– 4	+ 8	+10	+4.50
Construction	6.3	– 13	–16	– 6	– 3	+ 6	+ 6	+3.50

[a] Based on NBER worksheets.
[b] Table 28.
[c] Table 25.
[d] See footnote 1 in this chapter.
[e] Tables 39 and 40, and Treasury *Source Book*. Column 7 shows change within the small corporate group.
[f] Table 37.
[g] Table 42.

decline has persisted into the 1960's. More research is required to determine the implications of this trend for general business conditions. Some tentative conclusions are cited below.

Ranking the Measures

The several measures of the *ex ante* quality of trade credit are not of equal importance. Since the greater part of the risk inherent in lending to small, young, or unprofitable firms is their chronically poor financial position, the four financial ratios stand out as the most important measures. The distribution of trade debt (Table 43, cols. 1, 5-7) is useful principally for the perspective it provides for judging the relative importance to the economy of changes in the financial position of different groups of firms.

Changes in the turnover of trade debt (Table 43, column 4), used here as a rough measure of changes in credit standards, lie between the financial ratios and the distribution of trade debt in importance for qualitative analysis. Although a tightening of terms or a greater selectivity in the choice of customers could maintain the quality of trade credit despite a decline in the financial position of the universe of firms, if the measure of credit standards (sales/trade debt) declines at about the same rate as the other financial ratios, it may be assumed that the decline in the financial ratios describes the declining repayment capacity of trade debtors.

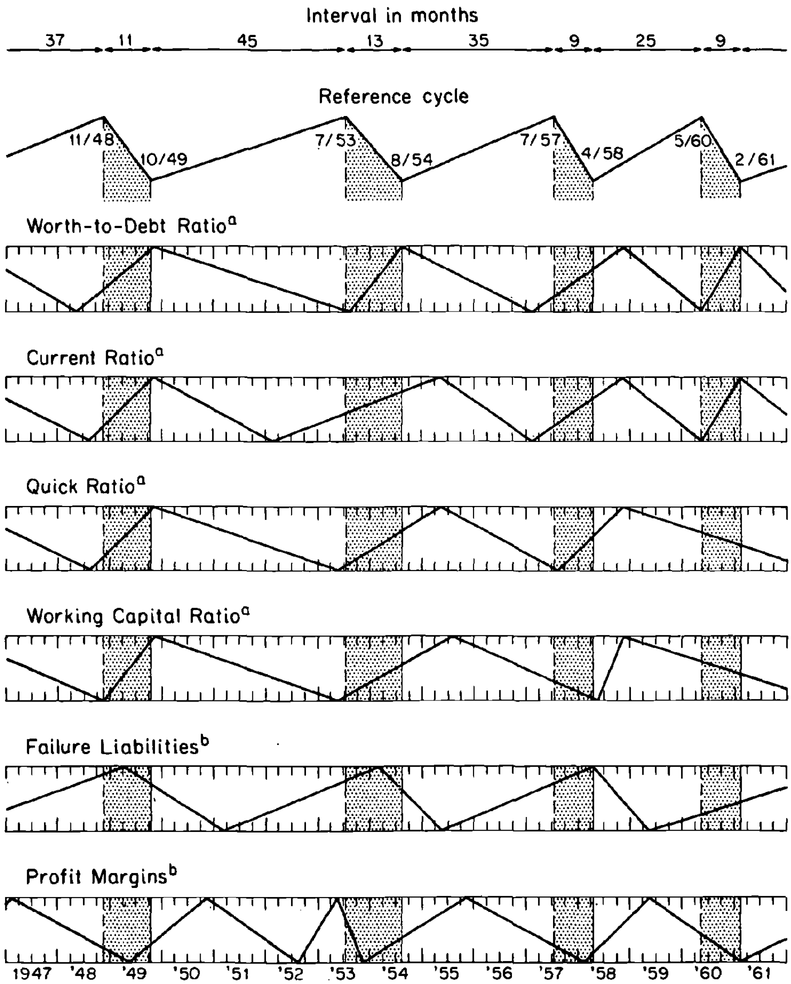
Turning Points in Trade Credit Quality

Trade credit quality, as defined by the four financial ratios (see Chart 13), improves in business contractions and deteriorates in expansions. The quality of trade credit, a function of the ability to repay debt, is inversely related to the degree of indebtedness measured by the financial ratios. Thus credit quality is at its lowest at or near the peak of business activity, when the degree of indebtedness is highest, and at its height at or near the trough of business activity, when the degree of business indebtedness is lowest.[2]

[2] Indebtedness and liquidity are not alternatives. A firm may have zero debt and yet not be liquid. Conversely, a firm may be greatly in debt but be highly liquid, as may be the case if the borrowed funds are held in the form of demand deposits or government securities.

CHART 13

Turning Points in Financial Ratios and Related Series, 1947-61 (seasonally adjusted)



[a] FTC-SEC *Quarterly Financial Report for Manufacturing Corporations.*

[b] Geoffrey H. Moore (ed.), *Business Cycle Indicators,* Princeton for NBER, 1961, Vol. I, Appendix B.

Shaded areas represent business contractions; unshaded areas, expansions.

The sequence of change in some of the measures of *ex ante* and *ex post* quality can be seen in relation to one another and to general business conditions in Chart 13, which shows the turning points of each of the four financial ratios. These ratios are for manufacturing corporations and are computed from seasonally adjusted quarterly data published jointly by the Federal Trade Commission and the Securities and Exchange Commission.[3] Also shown are the turning points in failure liabilities for all nonfinancial firms and a series measuring the profit margins of manufacturing corporations.

The four financial ratios are all inversely related to general business conditions, although their turning points have not always coincided closely with opposite turns in the business cycle.[4]

Failure liabilities are inversely related to the financial ratios, usually with a lag. This suggests that the least-liquid firms tend to be eliminated with the increasing indebtedness associated with periods of prosperity. Profit margins (ratio of profits to sales) are shown to decline before the peak of the general business cycle, but after the peaks in the financial ratios. The decline in profit margins adds to the pressure of the mounting debt burden during the business expansion, and contributes to the rise in failures. Similar relationships appear to hold during the business contraction. Hence these variables are related to one another in a fashion that suggests a fairly cohesive system.

The Cycle of Credit Quality: A Hypothesis

Although the data analyzed in this study permit only tentative generalizations, a hypothesis about the cycle of trade credit quality may be formulated.

Apparently the sensitivity of the business sector to a decline or even to a stabilization of demand and profit margins increases with the increased indebtedness of the business sector accompanying general economic expansions. Thus, while prosperity is still under way, illiquidity

[3] See Appendix Table B-7.

[4] The turnover of trade debt (not shown in the chart) does not conform to general business conditions. It had only two turning points in 1947-60, and the variations were slight: a peak in the second quarter of 1950 and a trough in the third quarter of 1952. Otherwise the sales-to-trade-debt ratio, though possessing a negative trend, was comparatively stable from 1952 through 1960. As noted in Chapter 4, this ratio or its alternative, the collection period, is useful only as a guide to long-run, not to short-run, changes in credit standards.

and potential insolvency begin to grip an increasing proportion of business. As profit margins decline in the late stages of the boom, further increases in indebtedness are discouraged, thereby halting the deterioration in the quality of credit. The decline in sales, which begins at the peak of the general business cycle and continues throughout the contraction, contributes to the elimination of the least liquid firms whose solvency was based on the cash flow generated by the high sales volume of the expansion. The process of improvement in the quality of credit follows.

It has been found that, during the downturn in general business conditions, the cutback in production and the reduction in inventories and outstanding receivables yield excess receipts on operations.[5] The sharper the downturn and the higher the preceding level of indebtedness, the greater the accumulation of excess receipts. As a result, the need for new credit is reduced and a reversal of the credit flow is facilitated.

Thus during the downturn the reduction in debt accumulation and the partial liquidation of outstanding debt bring about an improvement in the quality of current and potential credit. The stage is set for the next business expansion.

[5] Wilson F. Payne, *Industrial Demands Upon the Money Market, 1919-1957: A Study in Fund-Flow Analysis*, NBER Technical Paper 14, New York, 1961, p. 10. Thomas M. Stanback, Jr., *Postwar Cycles in Manufacturers' Inventories*, Princeton for NBER, 1962.