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ne of the strategic factors influencing the course of business ac-
vity is corporate asset investment. The average rate of dollar
ivestment in new assets — especially inventory and fixed prop-
ty — of our several samples was exceptionally high during the
Vorld War I expansions. The dollar volume of corporate asset
ivestment was greater for manufacturing and trade companies in
920 than in any other war expansion year; yet by the middle of
920 business recession had set in, and by the end of the year a
quidation bordering on panic was in process.

Six factors appear to have been vitally important in the financial
tuation of 1920 — commodity prices, inventory, short-term busi-
ess debt, foreign trade, stringency in the money market, and com-
iitments and cancellations. During the spring of that year, the
rst three were carried to levels substantially higher than those of
Iovember 1918 by what the Federal Reserve Board described as
an unprecedented orgy of extravagances, a mania for speculation,
verextended business in every part of the country, and general
emoralization of the agencies of production and distribution."[61]
Regarding foreign trade, the dollar volume of exports and the bal-
nce of foreign trade attained record levels for the entire period
etween the two World Wars. The dollar value of manufactured
xports in many industrial lines, e. g., automobiles, textiles, ma-
hinery, and the like, was twice as great as it had been in 1918.

Stringency in the money market, the fifth factor, was partly at-
ributable to the sustained outflow of gold that followed the re-
noval, in June 1919, of the wartime embargo on gold exports, and
ontributed to the sharp reduction in reserve ratios of Federal Re-
erve Banks; the stringency was accentuated by heavy demands for
redit to carry speculative positions in primary commodities and
n securities. The last factor, commitments to buy and sell and can-
ellation of orders, was a phenomenon associated with the postwar
rice advance, speculative inventory buying, transportation bottle-
ecks and the unprecedented expansion of foreign trade.[62]

While confidence in continued prosperity dominated the public
tatements of business leaders at the opening of 1920, there were
ome in high financial and business circles who viewed the entire

1 Federal Reserve Board, *Annual Report for 1920*, p. 1.
2 See above, p. 40.

national situation apprehensively, a fact attested by the increase ir the discount rate on commercial paper of the New York Federa Reserve Bank on January 22 from 4.75 to 6 percent. In a numbe of important lines of activity there were signs of extreme tension and misgivings over business prospects were openly expressed.[6 Confidence received a setback in April, when a sensational collaps of prices took place in Japanese markets; again on May 3, wher John Wanamaker offered $20 million of "best merchandise" at 20 percent markdown; and again on May 29, when the New Yorl Federal Reserve Bank rediscount rate was raised to 7 percent, th highest in its entire history. Price recession spread from one are to another, and with price recession there developed a glut of inven tory, an extensive cancellation of orders, a scramble to liquidat current assets, and pressure from short-term creditors for repaymen of debt. Speculative excesses had been widespread, and in certair industries — automobiles, textiles, rubber, paper, retailing anc wholesaling, for example — financial overextensions were numer ous and in some cases conspicuous.

While profitable operations and asset expansion were the rule fo the majority of manufacturing and trade corporations in 1920 widespread losses and contraction characterized 1921, when the ful effect of deflation was recorded in business accounts. The financia history of the year was written large in total asset shrinkage, inven tory liquidation and write-downs, bad debt write-offs, short-tern debt retirement, and operating losses. Industrial production was 1 percent lower in 1921 than in 1920.[64] The index of wholesale com modity prices, which averaged 222 for 1920 as a whole (1915=100) ended the year at 174; in 1921 it averaged 140 and stood at 134 a the year end.

Not only did the drastic fall in prices bring direct operatin losses; responsible concerns assumed additional losses by fulfillin excessive commitments to buy and by accepting cancellations o orders (too often duplicates of orders placed with other companies rather than enforce contracts and run the risk of converting order to sell into bad debts.[65] Cancellation of orders from abroad, and un collectible foreign debts, were especially damaging. One con

63 For an interesting account of the strains characterizing this period see Payne, *op. ci*

64 Babson's index of the physical volume of business activity.

65 See above, p. 40.

emporary commentator estimated the floating debt of Europe to rivate American creditors at $3.5 billion.[66]

The charts previously presented indicate the main features of he 1920-21 financial contraction.

nventory Liquidation and Write-down

ust as the increase in business assets resulting from the inflation of nventory was greater in the wartime expansions for large concerns han for medium and small corporations, so the decrease in assets rom inventory liquidation in the postwar collapse was greater for arge companies, and greater for those in trade than for those in nanufacturing. For three of our industry-size groups, funds obained through the sale of inventory represented a larger proporion of total assets in 1921 than in either of the subsequent peaceime contractions (Table 8); the exception was the medium and small manufacturing group, for which the contraction of 1930-32 was the most severe in its effects on inventory. These funds from sale of inventory, and others obtained from the liquidation of assets, were applied to the financing of losses and the retirement of current debt. Also the total inventory shrinkage through sale and write-down, in relation to beginning-of-year inventory, was higher in 1921 than in either of the later peacetime contractions,[67] the smaller manufacturing corporations again constituting an exception. The 1921 reduction in inventory was especially violent for the large trade companies; in this group the book value of inventory was almost cut in half during that year.

The then prevailing methods of pricing inventory — methods approximating the first-in, first-out procedure in manufacturing and the retail method in trade — had given rise to substantial book profits while prices were rising. When prices collapsed these

66 B. M. Anderson, "Three and a Half Billion Dollar Floating Debt of Europe to Private Creditors in America," *Chase Economic Bulletin* (October 5, 1920).

67 Reduction in the book value of inventory was not only substantial in total amount but also widespread among the individual companies in our samples, both in 1921 and 1922. For 1921 such reductions were reported by 65 out of 82 large manufacturing corporations; by 51 out of 72 medium and small manufacturing corporations; by 7 out of 8 large trade corporations; and by 23 out of 30 medium and small trade corporations. For 1922 the figures are: large manufacturing, 34 out of 81; medium and small manufacturing, 40 out of 73; large trade, 2 out of 8; medium and small trade, 17 out of 30.

TABLE 8—PERCENTAGE DECREASE IN BOOK VALUE OF INVENTORY, AND INVENTORY REDUCTION THROUGH SALE IN PERCENT OF BEGINNING-OF-YEAR TOTAL ASSETS [a]

Industry-Size Group	*World War I Contraction*	*Peacetime Contraction*	
	1921	1930-32	1
MANUFACTURING SAMPLES			
Large companies			
Percentage decrease in book value	22%	13%	1
Reduction through sale, in percent of total assets	5	2	
Medium and small cos. (Wisc.)			
Percentage decrease in book value	4	15	
Reduction through sale, in percent of total assets	1	2	
TRADE SAMPLES			
Large companies			
Percentage decrease in book value	43	13	
Reduction through sale, in percent of total assets	18	4	
Medium and small cos. (Wisc.)			
Percentage decrease in book value	14	10	1
Reduction through sale, in percent of total assets	7	4	

[a] See text footnote 27. Percentage decrease in book value, here computed by the co pound interest rule, refers to decreases due to sale of inventory plus those due writedowns. The figures for 1930-32 represent annual averages. For description the samples see Appendix A.

methods brought about book losses, whether the decline in bo value was recognized separately as a charge to income or surpl or was buried in the cost of goods sold.

In the 1921 deflation inventory write-downs, treated as a separa charge to surplus or to current earnings, were more common amo large than among small companies. Only 2 out of the 103 mediu and small manufacturing and trade concerns in the Wiscons sample reported such revaluations in 1921, and only 3 during t entire three-year period 1920-22.[68] While information on the wri downs of large corporations is available only from scattered sourc and for a small number of companies, it is known that of 64 lar

[68] Whether these small proportions resulted from an absence of inventory specu tion, from a conservative policy of inventory valuation, or from sheer ignorance proper accounting practice, cannot be ascertained from the record. There is reas to believe, however, that the third factor was more operative than the first two.

ompanies (37 of them included in our sample) 49 wrote off $187 nillion in inventory book value during 1921.[69] This huge write-off imounted to 13 percent of the inventory book value of these companies at the beginning of the year, and accounted for nearly onehalf of their total 1921 reduction in inventory book value. Not all nventory write-offs incident to the postwar price deflation were aken in 1921, however; 33 of the 64 companies had taken a total of $122 million in the preceding year, and 9 companies marked off another $35 million in 1922.

Retirement of Short-Term Debt

The crisis in the commodity markets made business creditors anxious to collect debts and debtors anxious about their retirement. Within the single year, 1921, billions of dollars of short-term business debt owed to banks and trade creditors were repaid. The debtor-creditor tension prevailing in that year is evident from Table 9, which shows the short-term debt repayments by our samples in 1921, in comparison with repayments in the two major contractions of the postwar era.

Only one group, medium and small manufacturing companies, failed to repay short-term debt to any significant extent in 1921. Their repayments, however, were merely deferred one year: in 1922 their current debt was reduced by 25 percent, a reduction amounting to 4 percent of total assets. Among the large manufacturing and smaller trade companies the greater part of the short-term debt retirement took place in 1921, but these companies too made further reductions — 17 percent and 4 percent respectively — in 1922. The debt retirement of large trade companies was high in both years — 39 percent in 1921 and 29 percent in 1922.

There are three principal sources of funds for the retirement of short-term business debt: first, cash "throw-off" or funds from current operations, that is, net income before depreciation, depletion and other non-cash charges; second, the liquidation of assets; and third, the sale of stocks and bonds. Operating losses in 1921 greatly reduced the volume of funds from operations: for two of our industry-size groups — medium and small manufacturing compa-

69 This information was obtained from investment manuals, through direct inquiry to companies covered in our large corporation samples, and from the *Hearings* before the Ways and Means Committee of the House of Representatives on the Revenue Revision of 1941 (77th Congress) Vol. 2, p. 1150.

TABLE 9—PERCENTAGE DECREASE IN BOOK VALUE OF SHORT-TERM DEBT, AND SHORT-TERM DEBT LIQUIDATION IN PERCENT OF BEGINNING-OF-YEAR TOTAL ASSETS [a]

Industry-Size Group	*World War I Contraction*	*Peacetime Contractions*	
	1921	1930-32	19
MANUFACTURING SAMPLES			
Large companies			
Percentage decrease in book value	39%	22%	20
Liquidation in percent of total assets	4	2	2
Medium and small cos. (Wisc.)			
Percentage decrease in book value	b	7	7
Liquidation in percent of total assets	b	1	1
TRADE SAMPLES			
Large companies			
Percentage decrease in book value	39	10	c
Liquidation in percent of total assets	8	2	b
Medium and small cos. (Wisc.)			
Percentage decrease in book value	17	12	5
Liquidation in percent of total assets	6	3	1

[a] See text footnote 27. Percentage decrease in book value is here computed by th compound interest rule. The figures for 1930-32 represent annual averages. For de scription of the samples see Appendix A.
[b] Increase of 1 percent or less.
[c] Increase of 4 percent.

nies and large trade companies — funds from operations were nega tive in that year. Even among the companies that reported ne profits, not all of the funds from operations were available for deb retirement, since corporate managements continued, for one reaso or another, to pay cash dividends to stockholders; after the pay ment of such dividends even the large manufacturing and smalle trade groups had little or nothing left for debt retirement. Th burden of short-term debt retirement therefore fell largely upo asset liquidation and new security sales. And since capital marke conditions were not favorable to the sale of corporate investmen and fixed property, or to security sales except by companies of th highest investment standing, most debt retirement came from liqu dation of current assets. All our groups of concerns liquidated suc assets in order to repay debt, a necessary procedure in the circum stances, but one that somewhat depleted working capital.

The process of debt retirement in the World War I liquidatio is detailed in Table 10, which also gives comparable data for th

TABLE 10—SOURCES OF FUNDS FOR THE RETIREMENT OF SHORT-TERM DEBT, IN PERCENT OF BEGINNING-OF-YEAR TOTAL ASSETS[a]

Industry-Size Group	World War I Contraction		Peacetime Contractions			
	1921		1930-32[b]		1938	
MANUFACTURING SAMPLES						
Large companies						
Funds from operations	5%		6%		7%	
Less: Cash dividends	3		4		3	
Retained funds		2		2		4
Current asset liquidation		6		4		c
Security sales		2		c		2
Medium and small cos. (Wisc.)						
Funds from operations	–1		1		3	
Less: Cash dividends	2		3		2	
Retained funds		–3		–2		1
Current asset liquidation		7		4		2
Security sales		c		c		–1
TRADE SAMPLES						
Large companies						
Funds from operations	–1		8		11	
Less: Cash dividends	2		5		6	
Retained funds		–3		3		5
Current asset liquidation		–3		–5		–2
Security sales		16		c		c
Medium and small cos. (Wisc.)						
Funds from operations	3		2		1	
Less: Cash dividends	4		2		2	
Retained funds		–1		..		–1
Current asset liquidation		7		5		4
Security sales		1		c		–2

[a] See text footnote 27. For description of the samples see Appendix A.
[b] Annual average.
[c] Less than 0.5 percent.

two peacetime contractions of the '30s. The table highlights the part played by current asset liquidation in the 1921 debt retirement. In 1921 (and also, on the whole, in the later contractions) more funds were made available from this and other sources than were actually used for the reduction of short-term debt shown in Table 9. This suggests that before the contractions set in, our sample companies had made commitments for fixed property outlays; also, it may be that even during the contraction periods invest-

ments and other assets were acquired by the more aggressive and farsighted concerns.

The acuteness of the short-term debt problem that confronted manufacturing and trade enterprise during 1921, and the need to solve it by liquidating current assets, are further illustrated by the fact that at the end of 1920 about half of the concerns represented in our samples had short-term indebtedness that exceeded, in some cases very substantially, the highest amount of "cash throw-off" from operations of any single year during the entire period 1915-20.[70] This condition, it should be emphasized, refers to surviving companies, for all but one of these concerns weathered not only the liquidation of 1921 but also the prolonged depression of 1930-32 and the sharp contraction of 1938. Since these concerns were among the more conservatively financed, the current debt position of the less conservatively financed companies, with smaller or less consistent earning capacity, must have been critical indeed. Apparently many business debtors had depended on future sales transactions at inflated price levels, rather than on cash funds from earnings and other operating sources, to liquidate current debt. When these expectations could not be realized, debtors had practically no choice but to dispose of inventory, accelerate the collection of receivables, sell marketable securities, and draw down cash balances. The necessity in some cases, and the desirability in others, of liquidating current assets in order to retire current debt, in all likelihood contributed greatly to the demoralization of commodity markets and to the sharp deflation of prices that occurred between mid-1920 and mid-1921.

70 In the large corporation sample, 39 out of 82 manufacturing and 4 out of 8 trade companies had outstanding current debt commitments at the end of 1920 that exceeded the highest amount of cash funds provided through operations in any one year, 1915-20, and in some cases the excess was as much as three or four hundred percent. For the medium and small corporation samples, the proportions of such companies were 36 out of 71 and 20 out of 29 respectively for the period 1917-20.