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rate (an added-to or mark-up charge on the amount of the advance), or as a discount rate on the amount of the advance.<sup>16</sup>

The first of these methods, if used to establish the customer rate, would result in a term structure similar to the 1935 structure. The second would more closely approximate the term structure shown in the years after 1935.

Other writers have commented on the existence of varied methods of charge in instalment credit, but none have identified those used predominantly in automobile financing.<sup>17</sup> E. R. A. Seligman commented on the variety of systems of charge that existed during the 1920's, but the 1935 term structure of finance rates shown in Chart 2 provides the only empirical evidence to support the idea that a predominance of charges were computed in a manner unrelated to length of maturity in new-automobile financing. The 1936-38 term structure resulted from the rate per annum method, noted above, which was required by the Six Per Cent Plan method of computation.

As shown in Chart 2, a relatively flat term structure of finance rates in 1936-38 contrasts sharply with the declining structure in 1935. The lengthening of maturities from 24 to 36 months between 1936-38 and 1954-55 did not sharply alter the term structure. A tendency for rates to increase with length of maturity could be observed for all companies, although not for the four large companies. However, by 1958-59, mean rates for the four large companies rose with longer maturities. Thus it can be concluded that important shifts in the term structure of mean finance rates have occurred since 1935 but that changes since 1936-38 have been moderately in the direction of average rates which rise as contract maturities lengthen.

#### NEW-AUTO FINANCE RATES AND COMMERCIAL BORROWING RATES, 1924-62

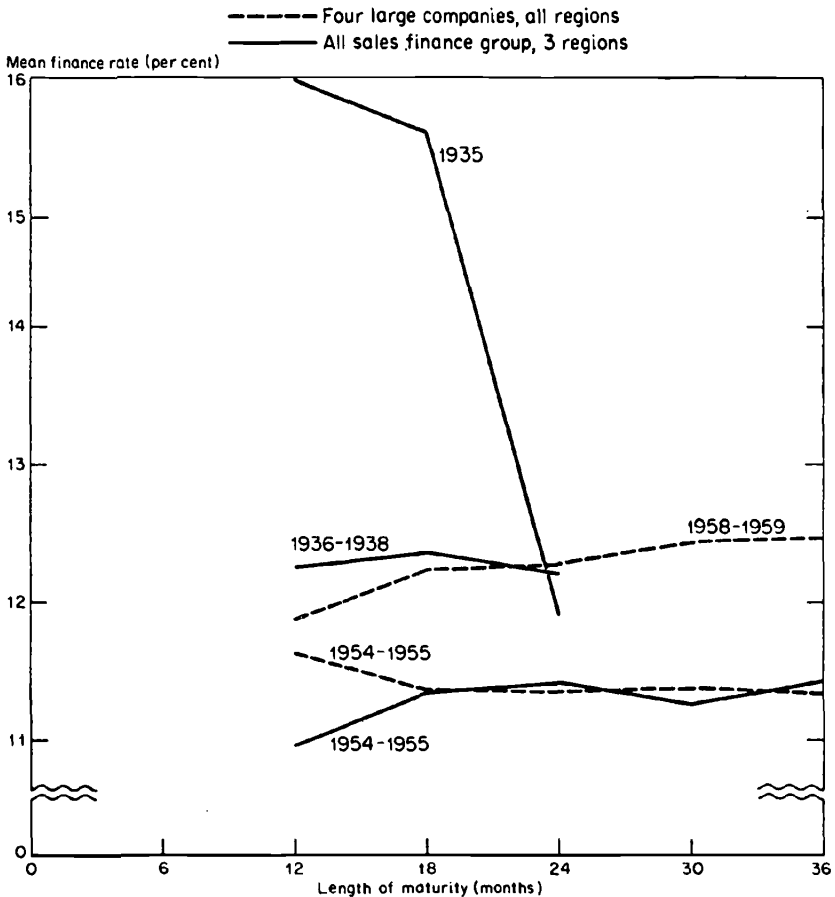
With sample data discussed above as bench marks for further investigation of rate movement, Table 8 presents annual estimates of

16. *Financial Problems of Instalment Selling* (New York: McGraw-Hill Book Co., 1931), p. 93.

17. E. R. A. Seligman, *The Economics of Installment Selling* (New York: Harper & Bros., 1927), I, 288 ff.; William Trufant Foster and H. LeBaron R. Foster, "Rate Aspects of Instalment Legislation," *Law and Contemporary Problems*, April, 1935, pp. 189 f.

auto finance rates for 1924-41 and 1946-62.<sup>18</sup> During this period, the highest rate apparently occurred during the depression years of 1932 and 1933, about 50 per cent higher than in 1954-55. The lowest finance rate shown is in 1951, only 3 per cent below the level in 1954-55. The average finance rate for 1924-35 was 15.33 per cent;

CHART 2  
TERM STRUCTURE OF MEAN FINANCE RATES, BENCH-MARK  
YEARS, SALES FINANCE COMPANY GROUP



Source: 1935, 1936-38 FTC sample; 1954-55 FRS sample; and 1958-59 NBER sample.

18. The trend of new-auto finance rates shown in Table 8 and Chart 3 differs appreciably from Paul F. Smith's series showing changes in average net rates received on

TABLE 8\*  
INDEX OF NEW-AUTO FINANCE RATE ESTIMATES, ANNUALLY,  
1924-62: 4 LARGE SALES FINANCE COMPANY GROUP

Year	Estimated Average Finance Rate (Per Cent)	NBER Index (1954-55 = 100)	Year	Estimated Average Finance Rate (Per Cent)	NBER Index (1954-55 = 100)
1924	15.23	135	1946	11.20	99
1925	14.09	125	1947	11.20	99
1926	14.09	125	1948	11.98	106
1927	15.09	133	1949	11.76	104
1928	15.23	135	1950	11.09	98
1929	15.23	135	1951	10.98	97
1930	15.23	135	1952	11.09	98
1931	14.95	132	1953	11.20	99
1932	16.94	150	1954	11.20	99
1933	16.94	150	1955	11.42	101
1934	16.51	146	1956	11.90	105
1935	14.40	127	1957	12.35	109
1936	11.74	104	1958	12.36	109
1937	11.74	104	1959	12.41	110
1938	11.63	103	1960	12.46	110
1939	11.63	103	1961	12.44	110
1940	11.63	103	1962	12.15	107
1941	11.63	103			

\* Sources for Table 8:

1924-41.—Rates in 1935 through 1938 were calculated directly from FTC sample of four large company credit contracts. An index of finance charges from one of the four companies applicable to a new Chevrolet financed in Albany, New York, with 33½% down payment and 12-month maturity was taken from worksheets used in preparation of Chart VIII, p. 91, of G. Haberler, *Consumer Instalment Credit and Economic Fluctuations* (NBER, 1942), to extrapolate the average rate level in 1936-38 during 1924-34 and 1939-41. The Haberler index was placed on an annual basis by computing a weighted average of the number of days at each index level based on a 360-day year. The 1936-38 average rate (11.703 per cent) was 0.82215 of the base period (1924-41 = 100) index average. So, solving  $11.703 = 0.82215x$ , the 1924-41 average for the period was 14.2346, and estimates of finance rates were computed by multiplying this figure by the Haberler index as adjusted for each year.

1946-55.—Rates in 1954 and 1955 were calculated directly from Federal Reserve sample of credit contracts in "Financing New Car Purchases," *op. cit.* An index of finance charges paid by purchasers per \$100 of unpaid balance of a 12-month contract maturity written on a low-priced popular model passenger car from a sample of sales finance companies was taken from *Consumer Instalment Credit*, Board of Governors of the Federal Reserve System, Part I, Vol. 1, p. 59, and used to extrapolate the 1954-55 average computed finance rate back to 1946. The 1954-55 average rate (11.31 per cent) was equivalent to the Federal Reserve index average of 101 (1946 = 100) and rates in other years were computed by multiplying 11.31 per cent by  $x/101$ , where  $x$  is any given value of the Federal Reserve index.

1956-57.—Rates were calculated directly from a sample of credit contracts, representing May and September in each year, supplied by one large sales finance company to the National Bureau. The average difference between the single-company rate and the four-company group rate in September, 1955, and May, 1958, was used to adjust the single company's average rates in May and September, 1956 and 1957, to the estimated four-company group level.

1958-59.—Rates were calculated directly from February, May, September, and November sample credit contracts supplied by three large sales finance companies and May and September contracts from one large sales finance company in each year (NBER sample).

1960-62.—Rates were calculated from a distribution of add-on rates charged customers of one large sales finance company, together with the estimated average maturity of contracts purchased in February, May, August, and November in each year. A weighted average (add-on) rate was computed from the distribution and used to compute the effective annual rate equivalent in the following adaptation of the constant-ratio formula:

$$i = F \frac{2(n)}{n+1},$$

where  $F$  is the add-on rate,  $n$  is the average maturity of the credit contracts, and  $i$  is the effective annual finance rate. The resulting single-company rates were adjusted to the four-company level on the basis of the average difference in finance rates for three available 1959 monthly comparisons.

for 1936-41 it was 11.67 per cent; and for 1946-62, 11.72 per cent. In 1948 there was apparently a temporary rise; finance rates then declined to the 1951 low. Since then, there has been a steady upward trend in sales finance company rates to 12.46 per cent in 1960, and a decline thereafter to the 1962 level of 12.15 per cent.

In order to determine whether finance rate movements are related to general influences upon the cost of money, the annual series developed for new auto finance rates is compared with interest rates on commercial loans from banks and long-term corporate bond yields in Chart 3. The commercial loan interest-rate series reflects all loan sizes between 1924 and 1941, whereas from 1939 to 1959 separate data are available on rates on loans within the \$1-10,000 loan size class. The corporate bond yield series is for high-grade corporate issues with thirty years' maturity. The two series were chosen from a group of series measuring money rates and capital yields because scatter diagrams suggested that these two were more highly correlated with finance rates.<sup>19</sup> Also the two series selected represented sectors important to the sales finance industry as sources of funds, and the bank rate series in the later period reflects rates on relatively small loans.

According to Chart 3, there is an apparent correspondence in the trend of commercial borrowing rates and new-auto rates over the entire period 1924-59. The 1924-32 period was characterized by a roughly stable level of rates, 1932-41 by a downward trend, and 1946-59 by a gently rising trend. Over the entire period the differential between new-auto finance rates and other interest rates seems to have narrowed; automobile credit became cheaper relative to other borrowing. A corollary to the narrowed differential is the fact that the rates paid for borrowed funds by sales finance companies represented a larger portion of the rates charged automobile credit buyers.

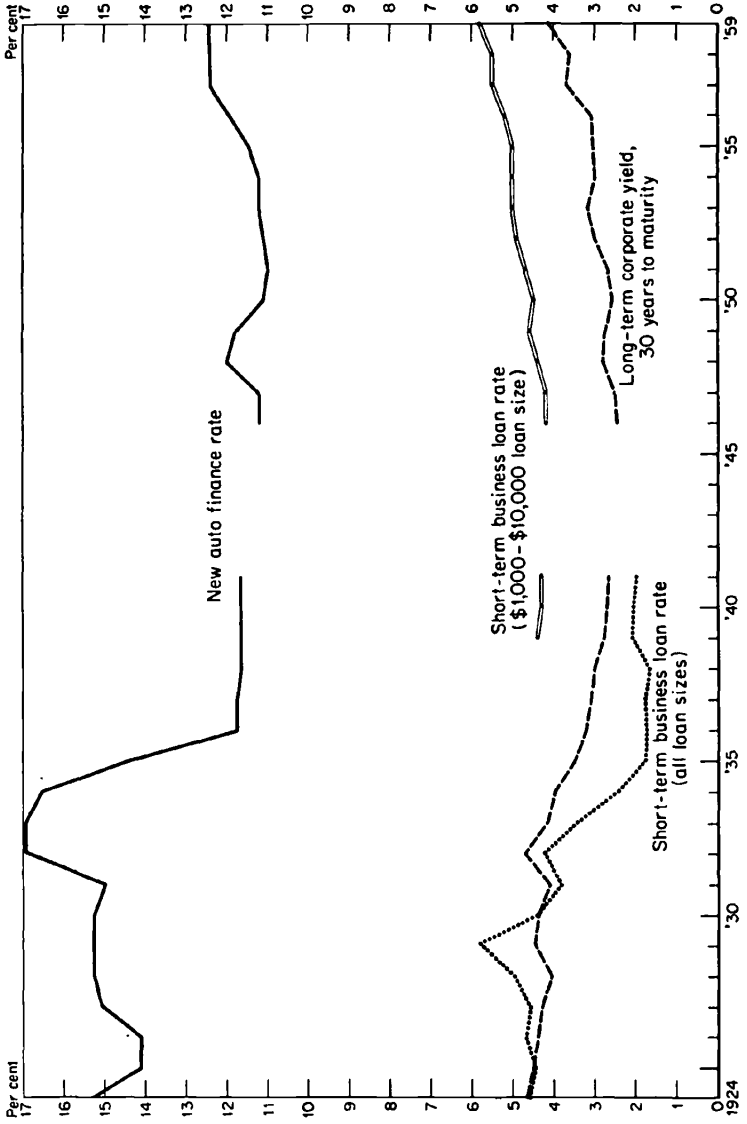
The sharp changes in the level of new-automobile finance rates were larger than corresponding changes in both of the commercial borrowing rate series shown in Chart 3. Particularly apparent are

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new and used automobile receivables held by ten large sales finance companies in "Consumer Credit Costs at Four Major Types of Financial Institutions, 1949-59" (NBER, in preparation). The series are not directly comparable because of differences in scope, coverage, and weighting procedures resulting from Smith's alternate objective of showing rate-cost relationships within an institutional framework in contrast to the measurement and analysis of new-auto finance rates presented here. The differences between the two series will be discussed in greater detail in the Smith manuscript.

19. Other series checked on scatter diagrams were commercial paper rates, call-loan rates, commercial bank prime rates, and long-term U.S. bond yields.

CHART 3  
 NEW-AUTO FINANCE RATES COMPARED WITH COMMERCIAL  
 BORROWING RATES, 1924-41, 1946-59



the sharp rises in rates in 1927 and 1932, which were either counter to or greater than the movements in borrowing rates generally. In both of these years there was a sharp rise in repossession rates on new autos,<sup>20</sup> suggesting that finance rates were adjusted upward to cover the added burden of collection expense (Table 9).

As noted earlier, the sharp drop in new-auto rates shown between 1934 and 1936 began with the Six Per Cent Plan in the autumn of 1935. This plan brought the annual rate for the year 1935 as a whole below the 1934 level. The rate cut at that time, however, became effective much more speedily than indicated by the annual rate series.

A combination of factors can be offered to explain this rate decline. First, there was a decline in interest rates generally dating from 1932 in the two commercial borrowing rate series shown in Chart 3. Second, there was a sharp drop in repossession rates on new cars, beginning in 1933 (Table 9) and continuing through 1936. Third, losses on automobile paper held by sales finance companies had been kept down to 2 per cent or less of the total outstanding (Table 9) during the 1929-32 period, and the record may have encouraged reduction of finance rates. Furthermore, collision insurance was required in 1934, lowering anticipated future losses from damaged collateral security to the credit contact.<sup>21</sup>

It is noteworthy that there was no increase in average new-auto finance rates in 1937 and 1938 despite the sharp rise in repossession and loss rates in those years. By 1938, the repossession rate was higher than in 1932, but the loss rate, on the other hand, was well below the 1932 rate. The data of Table 9 suggest that the maintenance of loss ratios below 1 per cent of total automobile paper outstanding, even in 1938, may have encouraged the large sales financing agencies to continue the lower rates established in 1935. Two of the five sample companies had loss ratios above 4 per cent of outstanding auto paper in 1938, but their experience was counterbalanced by the more favorable experience of the other three companies.<sup>22</sup>

In the thirteen-year period following World War II, new-auto

20. The repossession rate is the ratio of the number of repossessed cars to the number of cars financed during the year. The repossessions include cars financed in earlier years as well as in the current year.

21. J. P. Winchester, *Consumer Instalment Loan Losses and Valuation Reserves* (Cambridge, Mass.: Bankers Publishing Co., 1955), p. 34.

22. *Ibid.*, p. 33. The relationship between repossession and loss rates is affected by the dealer's ability to meet his liability as well as by the type of indorsement.

TABLE 9  
REPOSSESSION AND LOSS RATES ON SALES FINANCE  
COMPANY AUTOMOBILE PAPER, 1925-55  
(In Per Cent)

YEAR	AUTOMOBILE REPOSSESSION RATES		AUTOMOBILE PAPER LOSS RATE		
	New	New and Used	Volume	Outstanding	
	NASCF*		Winchester†		
1925	2.1	n.a.	n.a.	n.a.	
1926	2.4	n.a.	n.a.	n.a.	
1927	2.9	n.a.	n.a.	n.a.	
1928	2.9	4.1	n.a.	n.a.	
1929	3.0	4.2	.62	1.15	
1930	3.7	5.4	1.12	2.08	
1931	4.5	8.5	.86	1.69	
1932	5.7	10.4	.83	1.63	
1933	2.8	5.7	.36	.60	
1934	2.9	5.3	.38	.68	
1935	2.7	7.3	.33	.57	
1936	2.2	5.1	.27	.44	
1937	4.1	9.4	.40	.60	
1938	6.3	15.1	.69	.97	
1939	2.7	7.5	.32	.48	
1940	n.a.	n.a.	.35	.50	
1941	n.a.	n.a.	.33	.50	
	NBER‡		Winchester†		NBER§
1946	.07	n.a.	.11	.20	n.a.
1947	.32	n.a.	.16	.28	n.a.
1948	.74	3.4	.19	.30	.62
1949	1.30	4.8	.34	.50	.71
1950	1.58	5.2	.15	.21	.24
1951	1.25	4.8	.22	.31	.39
1952	1.58	6.1	n.a.	n.a.	.59
1953	2.53	7.1	n.a.	n.a.	.62
1954	5.52	9.3	n.a.	n.a.	.64
1955	4.71	6.8	n.a.	n.a.	.40

\* Number of repossessions during year in per cent of the number of instalment contracts purchased during year. Companies are those supplying data to the National Association of Sales Finance Companies. Repossession rate levels between 1925 and 1939 are not comparable to 1946-55 rates because of differences in the samples.

† New and used auto paper collection losses in per cent of volume and outstandings from five large companies. 1929-1951 data from Winchester, *Consumer Instalment Loan Losses*.

‡ New auto repossession rates are based on one large company's experience, and new and used data are from Moore, Atkinson, and Klein, *Consumer Instalment Credit, op. cit.*, Vol. 2, Part 1, Table 29.

§ Five large companies from NBER, *Consumer Credit Quality Study*.

finance rates moved upward with rising money rates generally, especially after 1951. The temporary rise in rates in 1948 was coincident with rises in commercial borrowing rates, but the increase in new-auto finance rates was much larger. Available statistics on delinquency, repossessions, and loss rates suggest some upward movement in these series, but from levels which were probably well below those considered normal before World War II.

Perhaps the 1948 rise in auto finance rates came in expectation of higher repossession and loss rates from the movement to easier terms which followed the expiration of federal consumer credit control (Regulation W) on November 1, 1947. At that time consumer credit regulation had been in existence six years. New-auto minimum down payment had been  $33\frac{1}{3}$  per cent and the maximum maturity 15 months. In the period after regulation, with new automobiles still in short supply, typical down payments remained at  $33\frac{1}{3}$  per cent, but some contracts with down payments of 25 per cent were occasionally allowed.<sup>23</sup> The typical maturity moved from 15 to 18 months, with occasional longer contracts up to 24 months.<sup>24</sup> One large sales finance company's repossession rate, shown in Table 9, indicates a rising trend between 1947 and 1950. Quarterly data during the same period for the same company suggest that the repossession rates rose fairly consistently. When Regulation W was temporarily reimposed on September 1, 1948, required terms were not as stringent as those required before the previous regulation expired. With the 1949 recession, permissible terms were eased twice and the temporary regulation expired on June 30, 1949. During the reimposition of regulation, repossession rates rose steadily as a result of the adverse employment situation, despite the regulation of credit terms.

The expiration of consumer credit regulation in 1947 after six years of continuous existence may have played a part, together with rising short-term money rates and expectation of increased repossession and loss rates, in the 1948 finance rate increase. As the second column of Table 9 indicates, these expectations were realized. Yet the extent to which losses were held down despite rising repossession rates, as in 1938, may have been a favorable cost factor permitting the later decline in finance rates after 1948. In any event, it is evident that some combination of actual cost factors, expectations, and the special factor of direct credit regulation combined to in-

23. "Consumer Credit Trends," *Federal Reserve Bulletin*, August, 1948, p. 902.

24. *Ibid.*

duce the temporary rise and subsequent reversal of new-auto finance rates in the 1947-50 period.

The remainder of the period shown in Chart 3, from 1951 through 1959, shows new-auto finance rates moving upward to about the same extent as the long-term corporate bond yield series, and somewhat more than the rise in small-sized, short-term business loan rates. The change in the all-size business loan rate series, not shown after 1941, exceeded the rise in new-auto finance rates. During this period substantially heavier reliance upon long-term financing developed among the large sales finance companies, and it is likely that rate policies were more closely related to changes in the yields on long-term corporate securities, within the term structure of general interest-rate movements, than was true during earlier years.

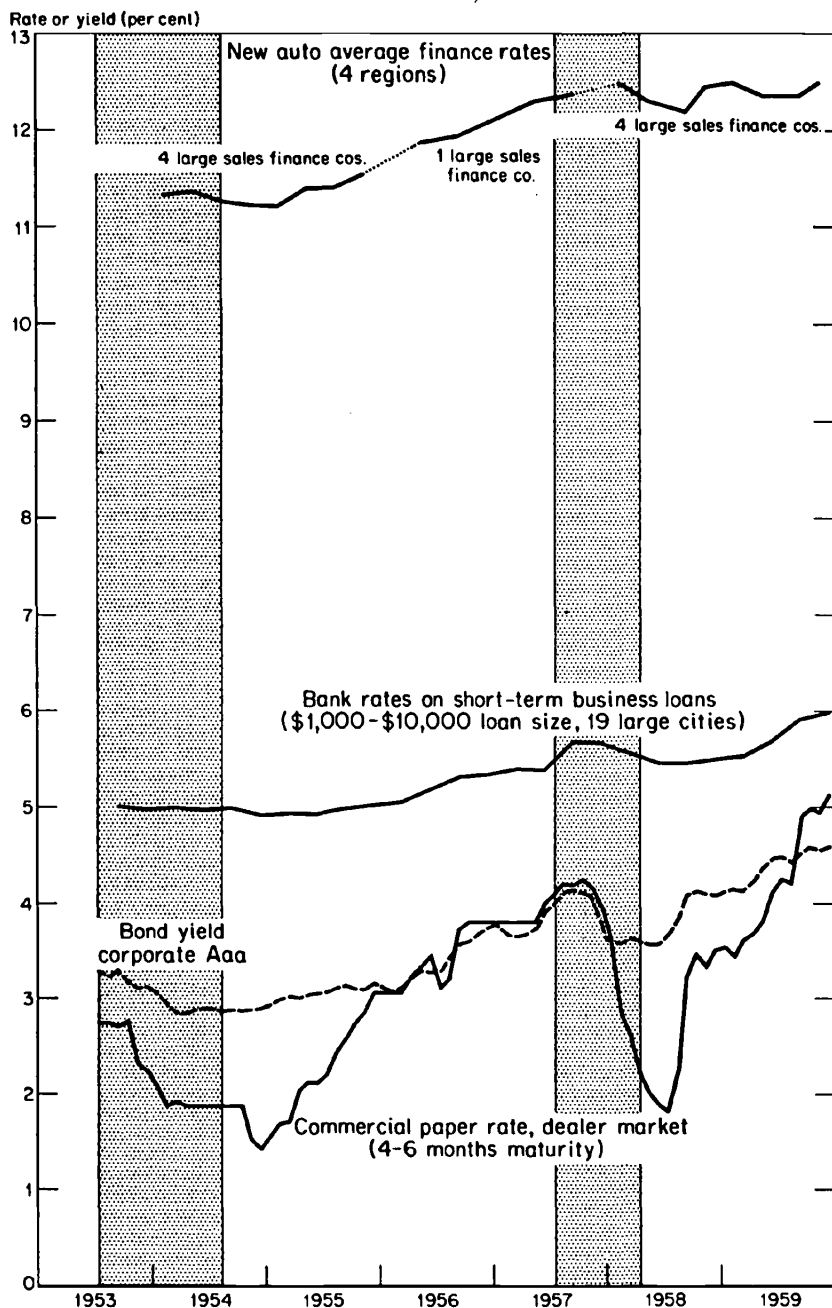
#### SHORT-RUN MOVEMENTS IN NEW-AUTO FINANCE RATES AND RELATED SERIES, 1953-59

In Chart 4, unadjusted monthly and quarterly commercial borrowing rates are compared with quarterly and semiannual new-auto finance rates between 1953 and 1959. As noted earlier, the trend of rates was upward, reflecting the generally tighter monetary conditions that have existed, except during recession, since 1951. Chart 4 uses monthly commercial paper rates (dealer market) to exemplify short-term rate movements, Aaa corporate bond yields to portray long-term rate behavior, and the \$1-10,000 loan size commercial loan rates to typify the closest commercial loan size counterpart to the consumer new-automobile finance rate series.

Since 1953, the changes in new-auto finance rates were somewhat greater in percentage points than in either the small-size business loan or corporate bond yield series. On the other hand, the commercial paper rate series, reflecting the wide variation in short-term interest rates characteristic of the period, showed even greater changes. The movement of the new-auto finance rate series resembles the movement of either the Aaa corporate bond yield or the short-term, small-size business loan rate series. It does not have the wide swings characteristic of open-market short-term rates. Its behavior could be interpreted as that of an intermediate-term rate reacting to changes in both the level and term structure of open-market rates generally. Such an interpretation suggests that auto finance rates move with all open-market rates, somewhat less than short-term rates, and more than long-term rates.

The data in Chart 4 cover three National Bureau turning points:

CHART 4  
 NEW-AUTO FINANCE RATES COMPARED WITH COMMERCIAL  
 BORROWING RATES, 1953-59

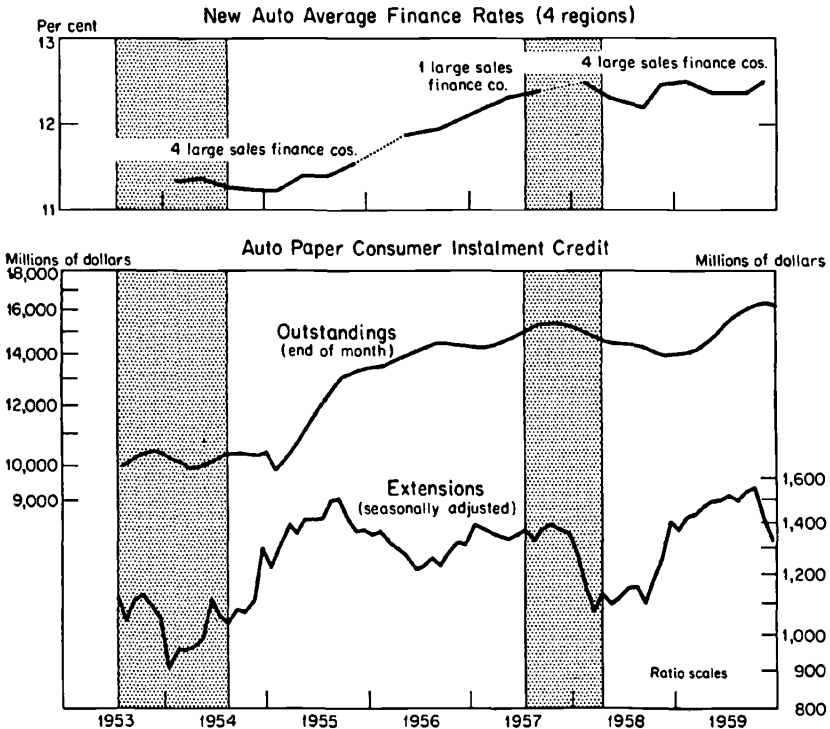


Shaded areas represent business cycle contractions. New-auto average finance rate data for 1956 through 1959 are for contracts with standard maturities only. 1954-55 are quarterly data, 4th quarter 1955 to February 1958 is an extrapolation derived from one large sales finance company, and 1958-59 are data for February, May, September, and November.

Source: Bond yield (corporate Aaa) is from *Survey of Current Business*. Commercial paper rate is computed from weekly data in *Bank and Quotation Record (Commercial and Financial Chronicle)*. Short-term business loan rate is for March, June, September, and December from *Federal Reserve Bulletins*. New-auto finance rates are from the Federal Reserve and National Bureau samples.

the August, 1954, trough, the July, 1957, peak, and the April, 1958, trough. The new-auto finance rate series lagged the turning points consistently. So did the small-size commercial bank loan rate and the commercial paper rate, although the lags in the latter were shorter than in the other two series. The turns in bond yields came still earlier. In short, as one might expect, the two open-market rate series moved more promptly at business-cycle turns than new-auto finance rates. But the data are not sufficiently numerous to permit generalization beyond this point.

CHART 5  
NEW-AUTO AVERAGE FINANCE RATES COMPARED WITH AUTOMOBILE CREDIT EXTENSIONS AND OUTSTANDINGS, 1953-59



Shaded areas represent business cycle contractions. Arithmetic scale showing finance rates is used to highlight cyclical pattern and is not comparable with other series on log scale. Rate data for 1956 through 1959 are for contracts with standard maturities only. 1954-55 are quarterly data. 4th quarter 1955 to February 1958 is an extrapolation derived from one large sales finance company, and 1958-59 are data for February, May, September, and November.

Source: New-auto finance rates are from the Federal Reserve and National Bureau samples. Instalment credit extensions and outstandings are from *Federal Reserve Bulletins*.

The movements of new-automobile finance rates between 1953 and 1959 should also be viewed in relation to automobile credit extensions and outstandings. Chart 5 suggests that the movements among all three series are similar in general direction, but with a rough correspondence in timing. The turns in automobile credit extensions clearly precede those in the level both of outstandings and of finance rates. The latter two series, on the other hand, seem to be approximately coincident with each other, both lagging behind business-cycle turns by 5 or 6 months, on the average (Table 10).

TABLE 10\*

LEADS AND LAGS IN SELECTED CONSUMER AND COMMERCIAL BORROWING SERIES AT THREE BUSINESS CYCLE TURNING POINTS, 1954-58  
(Months)

BORROWING SERIES	LEAD (-), COINCIDENCE (0), OR LAG (+) AT			AVERAGE FOR THREE TURNING POINTS
	Trough, August 1954	Peak, July 1957	Trough, April 1958	
New-auto finance rate.....	+ 7	+7	+5	+6 $\frac{1}{3}$
Commercial bank (\$1-10,000) loan rate.....	+10	+2	+5	+5 $\frac{2}{3}$
Commercial paper rate, 4-6 months, dealer market.....	+ 4	+3	+3	+3 $\frac{1}{3}$
Corporate bond yield, Aaa.....	- 4	+2	+2	0
Auto paper outstanding.....	+ 5	+3	+7	+5
Auto paper extended.....	- 7	+3†	-1	-1 $\frac{2}{3}$

\* Source: See source notes for Charts 4 and 5.

† September, 1955, peak (-22) regarded as a separate cycle independent of 1957 turning point.

These observations support the inference that the effects of restrictive credit policy are transmitted to new-automobile credit buyers with some delay. Further, the coincidence in timing of changes in finance rates with those in outstanding credit (instead of with credit extended) suggests that the effects of more costly funds to sales finance companies must become appreciable in relation to the amount of paper held before rate increases occur.

#### SUMMARY AND EVALUATION OF MAJOR FINDINGS

New-auto finance rates in the United States averaged 10.86 per cent during 1954 and 1955. The rates on individual credit contracts varied widely. Rates were found to vary by type of lender, region, and state legal-rate ceiling categories. Sales finance company rates in 1954-55 averaged 11.37 per cent, indirectly financed commercial

bank rates 10.84 per cent, and directly financed bank rates 9.48 per cent per annum. The northeast and north-central regions were low-rate regions, and the South and West showed higher average rates. States with the lowest legal ceilings on rates had lower average rates (10.19 per cent) than the remaining groups (10.89-11.61 per cent), but all the average rates were well below permissible legal ceilings.

The remainder of the investigation of finance rates concentrated upon sales finance company data, because of the limited availability of commercial bank figures. A newly constructed series, based on data from large sales finance companies, indicated that new-automobile finance rates varied markedly between 1924 and 1959 from a high of 16.94 per cent in 1932 to a low of 10.98 per cent in 1951. Average finance rates in the 1920's varied around 15 per cent, rising abruptly to the 1932 high in that year. The largest decline in finance rates occurred in November, 1935, when General Motors Acceptance Corporation introduced its "Six Per Cent Plan," which appears to have reduced finance rates about one-fifth below the preceding level of almost 15 per cent. Despite the fact that the Six Per Cent Plan's advertising was later prohibited, rates remained at the lower level (11.63 per cent) until World War II and rose temporarily in 1948 before the 1951 low. After 1951, new-auto finance rates rose gradually to the 1960 level of 12.46 per cent per annum before declining to 12.15 per cent in 1962.

The magnitude and extent of these rate movements disprove the widely held view that automobile finance rates are stable. The range of variation over time is large and is similar in direction to changes in money costs (interest rates). Viewed annually, movement of new-automobile finance rates has been closely related to money costs, and in two instances (1929 to 1936 and 1948 to 1950) showed rate movements larger than those observed in commercial borrowing rates. In both instances, special cost factors involving collection expense and losses, seem to explain these movements beyond those indicated by changes in money costs generally.

There are indications that new-auto finance rate movements lag behind movements in open-market short- and long-term money rates. Although rate data on a quarterly or semiannual basis were sufficiently sparse to limit observations to three business cycle turning points (1954, 1957, and 1958), there was a consistent lag of new-auto finance rates behind each turning point in business, as well as behind turning points in commercial paper rates and corporate bond yields. New-auto finance rates moved about as promptly as

bank rates on small-size loans to business. New-auto finance rates lagged auto credit extensions, but their timing was similar to that of automobile credit outstanding.

The over-all evidence suggests that factors affecting money costs do govern the movement of new-auto finance rates, but with an appreciable lag behind business cycle turning points and open-market borrowing rates. The implications of this evidence, admittedly fragmentary, for central bank credit policy refute previous hypotheses that changes in credit policy do not reach consumer credit because of the insensitivity of finance rates. The credit policy issue posed by these data is narrowed to questions of the length of time for monetary policy measures to be transmitted and the degree to which inelasticity of demand makes the new-automobile credit sector unresponsive to changes in finance rates.

Analysis of new-automobile finance rate changes reveals that the cost of this financing has become lower relative to commercial borrowing costs and money rates over the years since 1924. That is to say, the differential between new-auto finance rates and both short- and long-term interest rates has become narrower. One of the reasons is the decline of losses in percentage of credit outstanding among the large sales finance companies. In the mid-1930's, after collision insurance was required of borrowers, losses in percentage of new-auto credit outstanding dropped by one-third to one-half of 1929-32 levels and did not rise appreciably despite adverse repossession experience in 1938, 1949, and 1954. Comparable data were not available to evaluate repossession rates and losses during the 1958 recession.<sup>25</sup>

There are other reasons why auto credit costs have declined in the long run. Rising levels of income and asset accumulation have made auto credit purchasers better risks. Larger loan sizes and longer maturities have lessened the share of acquisition and service costs in relation to the average amount of automobile credit outstanding. Lenders have standardized procedures and acquired experience in evaluating the risks inherent in the purchase of credit contracts from dealers. In addition, buying rates for new-auto paper have dropped under pressures engendered by increased competition from banks for the purchase of dealer paper and by the low direct-lending rates of banks and credit unions.

25. Analysis of the over-all losses experienced by a sample of ten large sales finance companies that depended heavily upon auto financing reveal that the 1958 losses, at 1.8 per cent of credit outstanding, were the highest of the 1949-59 period (see Paul Smith, *Consumer Credit Costs*).

The increase in new-auto finance rates between 1936-38 and 1959 would presumably have been negligible if the automobile dealers' share of the finance rate had not risen. The net rates to the large sales finance companies in 1958 and 1959 did not differ appreciably from the relatively low 1936-38 average level. As it is, the bulk of the increase in rates charged consumers between the two benchmark periods appears to have been attributable to a rising dealer share of the finance rate. But some variation in the division of the finance rate between dealers and credit agencies may have occurred in the intervening period. Moreover, the entire question concerning short-term changes in these finance rate components remains unsettled. Dealer reserve payments are reported to have originated in 1924, but their magnitude before 1935 remains unreported.<sup>26</sup>

Important shifts have occurred in the term (maturity) structure of finance rates during the period under review. The major change came between 1935 and 1936. Prior to that time, finance rates on new automobile credit had tended to decline with length and maturity, since charges were computed predominantly on the basis of a flat percentage of the amount borrowed. By 1936-38 the per annum method of computing charges had apparently replaced the flat charge, and average rates were approximately the same at all maturities. In 1954-55 a tendency for rates to increase with length of maturity could be observed for all sales finance companies, although average rates paid by consumers whose obligations were held by the four large companies showed virtually no change with maturity. By 1958-59, the four large companies' average rates were somewhat higher on longer-term contracts than on shorter contracts. As a result of these shifts, the changes in rates on credit contracts of a given maturity may be said to differ from those in any average of finance rates for all maturities. After 1935 these differences were moderate.

26. *Consumer Instalment Credit*, Part I, Vol. I, p. 27.