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Of concern in this study of automobile credit charges is whether there is, in sales finance transactions, a systematic substitution of dealers' added finance income for income from the price of the auto itself. Furthermore, there may be substitution between insurance and finance income. Preliminary investigation suggests that higher nominal finance rates accompany lower margins above the dealer cost of autos on indirectly financed transactions, particularly among contracts held by sales finance companies. When evidence of this nature was encountered, the reasons for the relation between nominal rates and dealer margins were investigated; no attempt was made to adjust nominal rates. This report confines its attention to nominal rates, postponing attention to their interrelations with other elements of the transaction until cross-section analyses of the structure of rates have been completed.

THE 1954–55 FINANCE RATE STRUCTURE

Finance rates on new auto credit contracts in the United States averaged 10.86 per cent per year during 1954 and 1955. One-fourth of the contracts were at rates below 9.52 per cent, and one-fourth were higher than 11.73 per cent. The data of Table 2 suggest considerable variation in rates.

TYPE OF CREDIT AGENCY AND REGION

Table 2 reveals that customers of sales finance companies in 1954–55 paid 11.37 per cent, on the average, and customers of commercial banks which purchased their notes from dealers paid 10.84 per cent. New automobile purchasers obtaining direct loans at commercial banks paid the lowest average rate shown, 9.48 per cent. The remaining contracts for which rate data were available averaged 10.92 per cent, representing credit contracts held by auto dealers, credit unions, personal finance companies, and others.

Regionally, there were differences in average finance rates paid by new-auto credit purchasers (Table 3). The lowest average rates prevailed in the northeast and north-central regions at levels of 10.65 and 10.70 per cent, respectively. Higher average finance rates were paid in the South (11.04 per cent) and in the West (11.14 per cent).

Some of the differences in regional rate level are attributable to the method of finance and type of credit agency holding the credit contract. In the West, for example, the higher rate is attributable to both a high proportion of indirectly to directly financed credit

TABLE 2*

AVERAGE FINANCE RATES FOR NEW AUTOMOBILE CREDIT PURCHASES, BY TYPE OF CREDIT AGENCY, 1954–55

Type of Credit Agency	Number of Cases†	Average Finance Rate‡ (%)	Coefficient of Variation§ (%)
All credit agencies	6,615	10.86	25
All sales finance companies	3,333	11.37	22
Four large companies	2,678	11.39	21
Other sales finance companies	655	11.32	23
All commercial banks	2,902	10.26	27
Purchased paper	1,505	10.84	22
Direct loans	1,271	9.48	28
Unknown	126	11.25	....
Other credit agencies‖	380	10.92	25

* Source: Federal Reserve sample.

† Number of cases includes replication of contracts to adjust for non-response and varying sampling rates by month. The ratios of total to actual contracts shown for each item in the column are, respectively, 1.72, 1.72, 1.73, 1.70, 1.73, 1.71, 1.74, 1.75 and 1.63.

‡ Per credit contract.

§ The ratio of the standard deviation to the mean; twenty-four contracts with finance rates of 30 per cent or above were eliminated from the computation of the coefficients to remove the influence of extreme cases.

‖ Includes mainly consumer finance companies, automobile dealers, and credit unions.

TABLE 3*

NEW-AUTO FINANCE RATES BY REGION, METHOD OF FINANCE, AND TYPE OF CREDIT AGENCY, 1954–55

Method of Finance and Type of Credit Agency	Northeast		North Central		South		West	
	No. Cases	Fin. Rate	No. Cases	Fin. Rate	No. Cases	Fin. Rate	No. Cases	Fin. Rate
Indirect finance	988	11.02	1,626	10.99	1,307	11.51	917	11.35
Sales finance companies	639	10.92	1,136	11.38	1,125	11.62	433	11.37
Commercial bank purchased paper	349	11.18	490	10.09	182	10.86	484	11.33
Direct finance	415	9.64	539	9.79	462	9.71	235	10.37
Commercial bank direct	358	9.38	407	9.37	348	9.51	158	9.91
Other lenders	57	11.25	132	11.08	114	10.31	77	11.33
Commercial bank unknown	38	12.16	42‡	10.81	20	11.24	24	10.73
Total	1,441†	10.65	2,207†	10.70	1,789†	11.04	1,176†	11.14

* Source: Federal Reserve sample.

† Number of cases includes replication of contracts to adjust for non-response and varying sampling rates by month. The ratios of total to actual contracts shown for each region as a whole are, respectively, Northeast 1.82, North Central 1.67, South 1.79, West 1.60.

‡ Two contracts with finance rates 30 per cent or over were excluded because of the effect on the average rate.

contracts and the fact that bank rates were higher on direct and indirect paper than in other regions. In the Northeast, the greater importance of directly financed bank credit contracts relative to those financed through dealers helps to account for the lower average finance rates in the region.

TABLE 4*

NEW-AUTO AVERAGE FINANCE RATES BY STATE LEGAL CEILING AND REGION, 1954–55

Rate-Ceiling Categories†	National		Northeast		North Central		South		West	
	No. Cases‡	Fin. Rate (Per Cent)	No. Cases	Fin. Rate (Per Cent)	No. Cases	Fin. Rate (Per Cent)	No. Cases	Fin. Rate (Per Cent)	No. Cases	Fin. Rate (Per Cent)
1 (6% add-on)	1,352	10.19	629	10.22	698	10.17	25	9.96	.....	......
2 (7% add-on)	46	11.60	.....	....	46§	11.60	......	......	.....	......
4 (9–10% add-on)	748	10.89	.....	....	564	11.09	184	10.26	.....	......
5 (12% add-on)	562	11.61	.....	....	.....	....	......	......	562	11.61
6 (no ceiling)	3,905	10.95	812	10.98	897	10.75	1,580	11.15	616	10.71

* Source: Federal Reserve sample.

† The ceiling categories are expressed in annual "add-on" groups because most state legal-rate ceilings governing retail instalment sales take this form. Under the annual add-on method of computing charges on instalment contracts, the add-on percentage is applied to the initial amount borrowed and multiplied by the number of years (and fractional parts) to calculate the finance charge. The finance charge is added to the amount borrowed, and the total represents the face of the note, which is normally repaid in equal instalments.

Equivalent finance-rate ranges for add-on rate-ceiling categories between 12- and 36-month contract maturities are listed below (constant-ratio formula):

Annual Add-on Rate (Per Cent)	Finance-Rate Range (Per Cent) 12 Month	36 Month
6	11.08	11.68
7	12.92	13.62
9	16.62	17.51
10	18.46	19.46
12	22.15	23.35

States represented in each group are 1: Michigan, Pennsylvania, and Arkansas (10 per cent simple interest usury ceiling); 2: Wisconsin; 4: Indiana, Maryland, and Ohio; 5: California; 6: all other sample states.

‡ Number of cases includes replication of contracts to adjust for non-response and varying sampling rates by month. The ratios of total to actual contracts shown in each legal ceiling category are, respectively, 1, 1.71; 2, 1.85; 4, 1.74; 5, 1.61; 6, 1.73.

§ Two contracts with finance rates 30 per cent or over were excluded because of the effect on the average rate.

In 1954–55, eight states had enacted legal rate ceilings governing new automobile financing. Among them, only those three (Pennsylvania, Michigan, and Arkansas) in the 6 per cent add-on–ceiling (or less) category[13] show average rates appreciably below those in no-ceiling and other-ceiling categories. To some extent, rate ceilings lower average rates by cutting off above-ceiling rate contracts. There

13. Arkansas' 10 per cent simple-interest usury ceiling is appreciably lower than the 6 per cent add-on equivalent simple-interest ceiling of 11.68 per cent for 36-month contracts.

may be other effects which pull average rates in either direction. On balance, only the 6 per cent add-on category indicates a probable downward influence. Among the three states in the low ceiling category, Pennsylvania and Michigan are populous states located in the northeast and north-central regions, respectively, which helps to explain the lower average rate levels in those regions (Table 4).

THE TERM STRUCTURE

When average finance rates are computed by duration of credit contract in standard maturity lengths (12, 18, 24, 30, and 36 months), certain differences appear among the credit agency categories (Table 5). The four large sales finance companies operating across the nation tend to have finance rates virtually constant as contract length rises. Other sales finance companies and indirect banks, whose operations are predominantly regional and local, have rates that show greater variation and tend to rise as duration of contract lengthens. Alternatively, among the direct financing agencies, the commercial banks tend to charge finance rates that decline, on the average, as maturity lengthens. The rates of the other credit agencies rise with contract length. It is likely that dealers selling credit contracts to the four large sales finance companies and direct-lending banks allocate credit risk somewhat differently among their customers with respect to the average of finance rates charged. Direct-lending banks apparently extend more liberal maturities and lower finance rates to their better credit risks, while restricting poorer credit risks to shorter contract lengths. Sales finance companies apparently tend to average out credit risks among all maturities in purchasing paper from dealers, since these companies, for the most part, do not control the finance rates charged by dealers to individual auto purchasers.

The fact of less variation among finance rates in indirect financing than in direct financing may stem from more standardized rate policies among credit agencies purchasing new-automobile credit contracts from dealers. The size of the standard deviation of finance rates as a percentage of the mean (the coefficient of variation) for credit agencies purchasing paper is appreciably less than that for agencies financing directly (see Table 2). As this is true of both commercial banks purchasing paper and sales finance companies, it is more likely that the result can be attributed to method of finance than to differences in the rate policies among the types of credit agency.

TABLE 5

TERM STRUCTURE OF NEW-AUTO AVERAGE FINANCE RATES BY TYPE OF CREDIT AGENCY, 1954–55

Standard Contract Maturities	All Credit Agencies		Sales Finance Companies				Commercial Banks				Other Agencies	
			Four Large		Other		Purchased Paper		Direct			
	No. Cases*	Fin. Rate (Per Cent)	No. Cases	Fin. Rate (Per Cent)	No. Cases	Fin. Rate (Per Cent)	No. Cases	Fin. Rate (Per Cent)	No. Cases	Fin. Rate (Per Cent)	No. Cases	Fin. Rate (Per Cent)
All regions, all maturities	6,303	10.71	2,585	11.37	632	11.21	1,435	10.62	1,200	9.14	336	10.69
12 months	325	10.48	109	11.62	31	9.77	74	9.66	70	10.02	26	9.30
18 months	418	10.59	136	11.36	26	11.14	72	10.53	141	9.35	35	11.41
24 months	2,122	10.41	729	11.35	191	11.53	396	10.15	649	9.16	113	10.45
30 months	2,469	10.91	1,161	11.36	281	10.98	620	10.94	262	8.97	114	10.79
36 months	969	10.98	450	11.34	103	11.73	273	10.84	81	8.45	48	11.22

* All credit agency cases exceed sum of cases in credit agency groups shown because of 115 commercial bank contracts with unknown method of finance. Number of cases includes replication of contracts to adjust for non-response and varying sampling rates by month.

TABLE 6

BASIC FEATURES OF NEW-AUTO FINANCE RATE SAMPLES

Sample Characteristics	Federal Trade Commission Sample 1935–38	Federal Reserve Sample 1954–55	NBER Sample 1958–59
1. Sampling method.......	Requested factory-related sales finance companies for credit data on 3 new cars per month on each make of the popular priced cars and fewer cars per month of the more expensive makes. Requested independent sales finance companies for credit data on 2 new cars per month of the respective makes financed by them. Data were obtained for 6-, 12-, 18-, and 24-month contracts.	Basic sample of 13,000 new auto registrants, drawn by random methods from 112 sample counties located in 41 states, including District of Columbia	Random drawing from four companies; request based on distribution of credit contracts used in Federal Reserve Sample, adjusted by proportionate change in registrations in each year in each state
2. Geographic coverage....	Eastern half of U.S., representing portions of 3 of 4 U.S. census regions, excluding the West	Entire U.S., divided into 4 U.S. census regions	Entire U.S., divided into 4 U.S. census regions
3. Sample size by year.....	Number of credit contracts: 1935— 5,939 1936— 8,205 1937—11,055 1938— 7,895	Number of credit contracts: 1954—2,557 1955—4,058 Total of 6,615 contracts is replicated 1.72 times.	Number of credit contracts: 1958—2,379 1959—3,078
4. Institutions covered.....	Sales finance companies: *a*) Factory-controlled 1. G.M.A.C. *b*) Factory-preferred 1. Universal Credit Corp. 2. C.I.T. 3. C.C.C. *c*) Independent companies	All types of consumer credit agencies: *a*) Sales finance companies 1. Four large—G.M.A.C., C.I.T., C.C.C., and Associates Investment 2. Other *b*) Commercial banks *c*) Auto dealers, credit unions, personal loan companies, and others	Four large sales finance companies: *a*) G.M.A.C. *b*) C.I.T. *c*) Associates Investment Company *d*) Pacific Finance Company

The differences among average finance rates charged new auto purchasers classified by type of credit agency, legal rate-ceiling categories, and by contract length as well as the wide differences in rates within these categories, suggest that the automobile credit market, although highly competitive, is also imperfectly competitive. Among the sales finance companies, only the four largest companies could be said to operate nationally in 1954–55. Among commercial banks, only in branch-banking states and where bank holding companies are important can bank policies be standardized through ownership control over appreciable market areas. Differences in state laws governing credit practices as well as the differences in creditworthiness of borrowers in different market areas also help to explain the diversity of the finance rate structure.

Further attention will be given to factors affecting finance rate levels on the basis of cross-section data in a monograph now in preparation. The question to be considered here is the movement of average finance rates before and after 1954–55. Because of data limitations, it is necessary to confine attention to the sales finance segment of new-auto financing, particularly to the four large sales finance companies whose operations are national in scope.

Sales Finance Company Rates, 1935–59

THE GENERAL COURSE OF FINANCE RATES

Average rates in the sales finance segment declined between 1935–38 and 1954–55, then rose to 1958–59 (Chart 1). After 1960 rates declined in subsequent years (Table 8). The characteristics of the samples from which the data come are summarized in Table 6. Average finance rates paid by customers of the four large sales finance companies declined from 14.92 per cent during the first nine months of 1935[14] to 11.74 per cent in 1936 and 1937, and to 11.63 per cent in 1938 (Table 7). The 1954 and 1955 finance rates were still lower, averaging 11.26 and 11.44 per cent, and the four large-company rate averages in 1958 and 1959 rose to 12.29 and 12.26 per cent, respectively. Other data show a subsequent decline after 1960 to 12.15 per cent in 1962 (Table 8).

The sharp decline in finance rates between 1935 and 1936 came about in response to a rate cut in November, 1935, by the General Motors Acceptance Corporation in connection with the introduction of a new "Six Per Cent Plan," designed to make customers aware

14. The first 9-month period is used instead of the year because of the sharp reduction of rates which took place late in 1935.