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Volume Author/Editor: Robert P. Shay

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Chapter Author: Robert P. Shay

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Some Basic Considerations in Automobile Finance

METHOD OF FINANCE

A consumer may finance his purchase of an automobile in two ways. First, he may arrange the terms of his credit contract with the automobile dealer, who normally will sell the contract to a credit agency, which collects the indebtedness. This is called "sales," or "indirect," financing. Second, when the borrower arranges his credit directly with the credit agency which will service the credit contract, the transaction is termed "direct financing," or, in cases involving the loan of money, "direct lending."

Indirect financing.—In sales financing, the dealer makes the preliminary credit appraisal and verifies its acceptibility in accordance with the credit investigation of the agency, which becomes the ultimate credit source after the dealer-customer credit contract has been signed and sold. Legally, the dealer sells the automobile to the auto purchaser at a credit, or time, price that includes the finance charge as an addition to the cash price. The credit contract is then sold to the credit agency. The sales finance transaction is beyond the scope of the usury laws, since, under time-price doctrine, the joint sale of a good and credit is held to be an addition to the cash price for the sale on credit, and not the loan of money. States began to enact laws governing retail instalment sales in 1935, and today most states have statutes covering automobile instalment financing. The resale of the credit contract by the auto dealer to the credit agency is also viewed as a separate transaction.[4] After the credit agency buys the contract, it receives the future payments from the borrower, and the dealer has no further contact with the customer unless he has accepted some liability for the customer's satisfaction of the contract terms. In this event, the dealer may be required to repurchase the note if the credit agency repossesses and returns the automobile, or he may lose a portion of a reserve fund held by the credit agency against his contingent liability. In general, the various types of arrangements concerning dealers' liability for customer credit contracts can be classified into three broad groups. These are full recourse, limited recourse, and non-recourse agreements. As the categories imply, the dealer liability may range from full indorsement of the customer's note to no indorsement whatsoever of the customer obligation as outlined in the credit contract. Even in the latter case,

4. One state, Arkansas, is an exception, holding that sales finance credit transactions come under usury laws providing an effective ceiling rate of 10 per cent per annum. Other states have narrowed the conditions under which sales finance transactions are exempt from usury laws. See Wallace P. Mors, "Consumer Credit Finance Charges: Rate Information and Quotation" (NBER, in preparation).

however, the dealer may incur some liability as seller of a credit contract despite the lack of indorsement.

The rate at which the credit agency discounts when purchasing credit contracts from the dealer in sales financing is normally below the rate charged the auto purchaser, the difference accruing to the dealer. The size of the difference (hereinafter called the "dealer share" of the finance rate) is affected by competitive forces as well as by the extent of the dealer liability for the borrower's repayment.[5] On any given market, the dealer share of the finance rate is larger on recourse contracts than on non-recourse contracts purchased by a credit agency. Although the size of the dealer share of the finance rate is affected by the degree of risk assumed by him, the fact that non-recourse contracts pay a share to the dealer indicates that the payment reflects services other than contingent liability. Since the dealer combines the cost of acquiring credit customers with the costs of acquiring automobile customers, it is likely that a substantial portion of the dealer share of the finance rate may be attributed to the dealer's strategic position as a middleman between the credit buyer and indirect financing agencies. On the other hand, competitive market forces often require that he shift a portion of the price of the automobile to the finance charge, in order to effect the maximum number of credit sales.

The purchaser is usually required to insure the automobile against physical damage during the life of the contract. The dealer frequently acts as an insurance agent for sales finance companies with wholly owned insurance subsidiaries, and, when licensed as an agent, he may receive a commission (currently about 20 per cent of the premium) for providing this service.[6] In cases where dealers are not licensed as agents, the dealers' share of the finance rate will usually be higher when insurance is purchased from the subsidiary than when no insurance is sold with the credit contract. Alternatively, the credit agency may act as agent for an independent insurance company and receive insurance commissions. By 1961, four states had precluded dealers from receiving insurance commissions.[7] In addition to the physical-damage insurance requirement, the pur-

5. The trade name for the dealer share of the finance rate is the "dealer reserve." Part of this dealer finance income is customarily withheld by the credit agency in a dealer account against the dealer's contingent liability under recourse or repurchase indorsement.

6. *Consumer Instalment Credit*, Part I, Vol. I, p. 56, and *Auto Financing Legislation: Hearings before the Antitrust Subcommittee, Committee on the Judiciary, H.R.* (87th Cong., 1st sess.), p. 446.

7. Michigan, New York, Ohio, and Massachusetts (see *Auto Financing Legislation*, p. 1043).

chaser may elect to purchase credit life and, in some cases, disability insurance in amounts related to the outstanding indebtedness over the life of the credit contract. Again, as in the case of physical damage insurance, the dealer may realize some compensation, ranging from 15 to 20 per cent of the premium, for selling credit life insurance.[8] This insurance is sold on either a group or an individual basis, with charges on group policies considerably below those on individual policies. The extent of coverage on the latter is wider, explaining at least part of the differential.

Direct financing.—Institutions that finance borrowers directly normally advertise to attract a large volume of business. A large number of conveniently located branch offices is helpful in direct lending to offset the greater convenience of dealer facilities that offer sales financing services to auto purchasers. In direct financing or lending, the competition for customers necessitates a different form of acquisition expense, since the dealer is an unlikely referral source and alternate means are needed to attract consumers to deal directly with any credit agency. Independent insurance agents often collaborate with direct-lending banks to encourage customers to make their credit arrangements with a banking institution before making their auto purchases. In turn, banks often recommend the agent's automobile insurance to their customers.

Suppliers of Automobile Credit

Commercial banks provide both direct and indirect financing to automobile purchasers. They extend credit directly to their customers, normally advertising rates of charge through communications media. Banks also compete actively for dealer patronage in indirect financing, providing inducements to dealers competitive with those of sales finance companies. Some banks specialize in one or the other method of finance, but others aggressively solicit consumers using both methods of finance as a means of acquiring a large volume of automobile credit.

Sales finance companies and commercial banks supply the bulk of new automobile financing to credit purchasers. Minor shares accrue to credit unions, personal loan companies, and auto dealers who service their own customers' obligations. Table 1 reveals that the predominance of indirect financing has not changed markedly since 1939, although there has been some tendency for its market share to decline since 1956. In competition for paper originated by

8. *Consumer Instalment Credit,* Part I, Vol. I, p. 56. Dealers do not customarily receive compensation when group credit life insurance policies are included in the credit contract.

automobile dealers, sales finance companies have retained the major share, but commercial banks have made major inroads since 1939. Similarly, commercial banks have made significant gains in the direct-financing segment of the market since 1939. If both bank segments are combined, it is clear that commercial banks by the end of 1958 held the largest share of automobile credit outstanding

TABLE 1*

AMOUNT AND DISTRIBUTION OF AUTOMOBILE INSTALMENT CREDIT OUTSTANDING, BY METHOD OF FINANCE AND CREDIT AGENCY

Year	Total Amount (Billions)	Indirect Finance (Per Cent)			Direct Finance (Per Cent)		
		Total	Sales Finance	Commercial Bank Purchased Paper	Total	Commercial Bank Direct Loans	Other†
1939	$ 1.5	74.5	58.7	15.8	25.5	11.9	13.6
1954	9.8	72.8	49.7	23.1	27.2	17.0	10.2
1955	13.5	75.3	51.2	24.1	24.6	15.3	9.3
1956	14.4	75.4	50.0	25.4	24.6	14.5	10.1
1957	15.3	74.9	47.8	27.1	25.0	14.6	10.4
1958	14.2	72.7	44.0	28.7	27.4	15.5	11.9
1959	16.4	72.8	43.0	29.8	27.2	15.6	11.6
1960	17.7	72.2	41.7	30.5	27.8	16.2	11.6
1961	17.2	70.1	38.8	31.3	29.9	16.9	13.0
1962	19.4	70.3	38.4	31.9	29.7	17.5	12.2

* Source: End of year figures from *Federal Reserve Bulletin*, March, 1963, and Federal Reserve Board release G.22.

† Includes consumer finance companies, auto dealers, credit unions, industrial loan companies, mutual savings banks, savings and loan associations, and others. Since 1955, a further breakdown of the group in percentages is available as follows:

Year	"Other" (Above)	Consumer Finance Companies	Auto Dealers	Credit Unions and Others
1955	9.3	1.1	3.6	4.6
1956	10.1	1.1	3.5	5.5
1957	10.4	1.0	3.1	6.3
1958	11.9	1.0	3.6	7.3
1959	11.6	.9	3.0	7.7
1960	11.6	.7	2.1	8.8
1961	13.0	1.0	2.1	9.9
1962	12.2	1.0	1.5	9.7

among the types of credit agency in the market. Their dominance has increased in succeeding years.

A significant element of growth has occurred in recent years which is apparent in the note to Table 1. If the "other" component is further broken down, there is a strong indication that credit-union activity in automobile financing has increased markedly. Although the data are available only since 1955, after subtracting outstandings held by consumer finance companies and auto dealers, the "other" category shows a growth in market shares held by "credit unions and others" from 4.6 per cent in 1955 to 9.9 per cent in 1961, followed by a slight drop to 9.7 per cent in 1962.

The Finance Rate Concept

BASIS OF MEASUREMENT

The finance rate is the effective annual rate which the credit buyer's finance charges represent on the declining unpaid credit balance of his note during the scheduled period of indebtedness. The basic elements in every credit transaction are the amount of credit, the time schedule for repayment, and the finance charges. Most automobile credit contracts require periodic amortization of the outstanding indebtedness, usually through monthly instalments. A portion of each payment represents the finance charge; the remainder is repayment of principal. At each payment date the ratio of the finance charge to unpaid principal during the period represents the rate of charge for that period, that is, per day, week, month, or year. We have chosen a year as the basic unit of time in which to express the finance rate.

Constant-Ratio Formula

For convenience in calculating finance rates on large numbers of individual credit contracts, we utilized the constant-ratio formula.[9] Its main assumption is that each (equal) monthly payment consists of a constant amount to pay the finance charge and a constant amount to repay the principal; hence, the ratio between them is constant. This results in an approximation of the rate of charge normally used in actuarial computations of interest. The approximation provides reasonably accurate results compared with the conventional practice used to determine interest rates.[10]

RELATION TO INTEREST RATES

Measurement of finance rates on an annual basis corresponds, in principle, to effective annual interest for credit generally. The convention of the year as the unit of time for expression of the cost of money is firmly established and rarely challenged. With respect to instalment credit, however, there is no customary convention for the expression of finance costs as a rate per period of time, except

9. $i = D/[(n + 1)/m] \div P/2 = 2mD/P(n + 1)$, where i is the finance rate, m is the number of payments in one year, n is the number of payments, D is the finance charge in dollars and cents, and P is the principal of the note.

10. For further discussion of rate concepts and comparisons of alternative methods of determining rates of charge see Mors, *op. cit.*