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*ISSUES OF FINANCE COMPANIES*

Finance companies are substantially different—almost different in kind—from industrial companies and utilities. Whereas industrial companies and utilities produce and sell physical commodities and therefore hold large portions of their assets in real form, finance companies produce nothing and sell the most fungible of all commodities, money, at a time-price. In the nature of their business therefore, finance companies hold virtually no fixed assets. They hold “inventory” in the form of cash or proximate cash, and they hold notes receivable representing the time-price of the money they have sold.

Whereas the principal assets of an industrial company or a utility (i.e., their real assets) could be liquidated only by selling them (either on the basis of their value as scrap or on the basis of their potential earning power), the principal asset of finance companies, notes receivable, would liquidate itself if the company ceased doing business.<sup>1</sup>

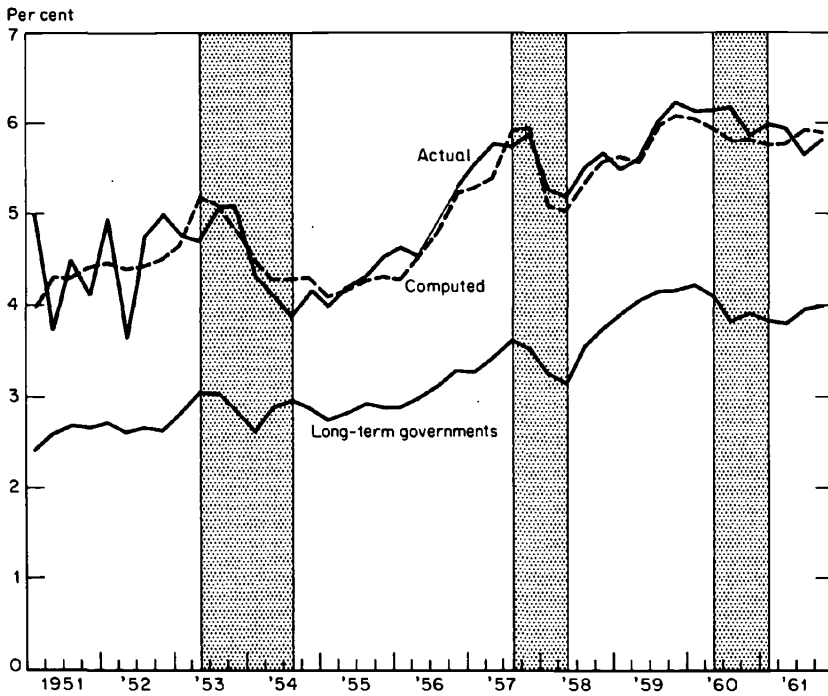
For example, as of September 30, 1962, The First Southern Company, a small personal loan company, held \$18.4 million in net notes receivable (\$21.2 million gross, less unearned finance charges and an allowance for losses). This sum represented about 84 per cent of First Southern’s total assets. On September 30, 1961, and September 30, 1960, net notes receivable represented about 75 per cent and 80 per cent, respectively, of First Southern’s total assets.<sup>2</sup>

<sup>1</sup> This is obviously a matter of degree. The main point, of course, is that a much larger percentage of the assets of finance companies is highly liquid.

<sup>2</sup> At the end of 1962 all manufacturing companies held 29.8 per cent of their assets in liquid or near-liquid form. See FTC-SEC, *Quarterly Financial Report*, 4th Quarter, 1962, Table 6.

CHART 19

*Finance Companies: Actual Average Yields and Computed Yields on Issue of Fixed Characteristics, Compared with Long-Term Governments, Quarterly, 1951-61*



Shaded areas represent business contractions; white areas, expansions.  
 SOURCE: Table 60.

Only two series have been constructed for finance company placements: “actuals,” quarterly, and a computed composite series, based on 1956 mean values for each significant variable (Table 60 and Chart 19).

Cross-classified series, by class, could not be constructed because the total number of observations available was too small.<sup>3</sup> The primary purpose of the procedures used in the chapter has been, therefore, to isolate the significant variables<sup>4</sup> in order to obtain

<sup>3</sup> Less than two hundred for the entire eleven-year period.

<sup>4</sup> From among those checked in column 3 of Table 13.

TABLE 52

*Finance Companies: Seven Regressions, Yield on  
Seventeen Variables, R<sup>2</sup>, F, Probability of F,  
Degrees of Freedom, Semiannually, 1955, 1959, 1960*

	R <sup>2</sup>	F	P F < $\bar{\alpha}$	Degrees of Freedom
1955				
1	.949	7.4	.01	6
2	.939	8.33	.01	8
1959				
1	.817	0.30	—	1
2	.924	6.47	.01	8
1960				
1	.640	1.42	.10	12
2	.966	1.93	—	1
Total	.465	6.72	.01	116

regression equations which would include them alone. These regression equations (Table 55) can be used, of course, to compute yields on an issue of any desired characteristics.<sup>5</sup>

### *Preliminary Regressions*

Only a small number of observations were available and therefore only six semiannual cross sections could be run on the seventeen initial variables,<sup>6</sup> and two of the cross sections had just one degree of freedom. Table 52 gives results (R<sup>2</sup>, F, etc.) for these six cross sections. The R<sup>2</sup> for both halves of 1955 and for the second half of 1959 are very high and the corresponding F's significant at less than .01. The other three R<sup>2</sup>'s are not significant. These cross sections

<sup>5</sup> Within the range of the observations from which the regression coefficients have been derived.

<sup>6</sup> See column 3 of Table 10.

TABLE 53

*Finance Companies: Six Semiannual Regressions, Number of Plus and Minus Signs Obtained on Partial Regression Coefficients and Binomial Probability of Obtaining at Least Larger Number if Actual Probability Is .50*

Coefficient		No. of Plus Signs	No. of Minus Signs	$P_{B \leq \bar{B}}$
b <sub>2</sub>	Total capital	3	3	.656
b <sub>3</sub>	Average term	3	3	.656
b <sub>4</sub>	Times charges earned	1	5	.109
b <sub>5</sub>	Type of security	4	2	.344
b <sub>6</sub>	Industrial class	3	3	.656
b <sub>8</sub>	Size of issue	1	5	.109
b <sub>9</sub>	EBIT, trend	2	4	.344
b <sub>12</sub>	EBIT	4	2	.344
b <sub>13</sub>	Maturity	5	1	.109
b <sub>17</sub>	EBIT--coefficient of variation	5	1	.109
b <sub>20</sub>	Net receivables/EBIT	3	3	.656
b <sub>21</sub>	Net receivables/EBIT: trend	1	5	.109
b <sub>22</sub>	Cash and receivables/total debt	3	3	.656
b <sub>23</sub>	EBIT/net worth	1	5	.109
b <sub>24</sub>	Net worth/senior long-term debt	2	4	.344
b <sub>25</sub>	Net receivables/EBIT: coefficient of variation	0	6	.016

were run primarily to ascertain how much variation all variables together would explain when time was held approximately constant.

Next, all the observations out of the six cross sections were thrown together and one regression run on them. The R<sup>2</sup> (Table 52) was low largely because time was not held constant or even approximately so, but F was highly significant. All the variables which had

shown significance by the sign test over the six cross sections, also showed significance when all the observations were thrown together.<sup>7</sup>

Of the seventeen variables tested in these initial runs, five failed to show any significance either by the sign test or by the distribution of *t*'s test.<sup>8</sup> These five variables were eliminated from further consideration. They were: average term ( $X_3$ ), industrial class ( $X_6$ ), the ratio of cash plus receivables to total debt ( $X_{22}$ ), total capital ( $X_2$ ), and the ratio of net receivables to EBIT ( $X_{25}$ ).

The eleven-year period was then divided into three subperiods ("cross sections"): 1951–54, 1955–57, and 1958–61. The monthly yield on Aaa corporates (Moody's) was added as a variable, in order to hold the level of interest rates constant, and four regressions were run on the remaining variables<sup>9</sup>—one for each of the above subperiods and one for the entire eleven-year period.

Of the twelve variables, six showed strong significance (at .01 or less) in at least one "cross section" and *all* showed significance in the over-all regression. These six variables are: monthly yield on Aaa corporates ( $X_1$ ), size of issue ( $X_8$ ), coefficient of variation of EBIT ( $X_{17}$ ), ratio of net worth to senior long-term debt ( $X_{24}$ ), type of security ( $X_5$ ), and EBIT ( $X_{12}$ ).

The four regressions were then rerun on these six variables, with the results given in Tables 54, 55, and 56.<sup>10</sup> These three tables indicate:

1.  $R^2$  is reasonable satisfactory except for the 1958–61 cross section (Table 54).
2. The *F*'s are high and highly significant (Table 54).
3. With the exception of the intercept and of  $b_{12}$  in 1951–54, all the cross-section coefficients decline over time (Table 55).
4. All signs, with the exception of  $b_5$  in the 1955–57 cross section, are consistently in the expected direction (Table 56).

<sup>7</sup> By the *t* test at .05 or less.

<sup>8</sup> By "significance" is meant either four (of a possible six) signs in the same direction or one showing (of a possible six) of significance at .01 or less.

<sup>9</sup> Twelve variables all together, including the yield on Aaa corporates.

<sup>10</sup> The  $R^2$  showed virtually no deterioration when the regressions were run on six, instead of twelve variables. See Table 57.

TABLE 54

*Finance Companies: Four Regressions, Yield on Seven Variables, R<sup>2</sup>, F, Probability of F, Degrees of Freedom, by Period, 1951-61*

	R <sup>2</sup>	F	P <sub>F</sub> < $\bar{=}$	Degrees of Freedom
1951-54	.706	16.4	.01	41
1955-57	.857	68.7	.01	69
1958-61	.570	15.7	.01	71
1951-61	.792	124.3	.01	195

TABLE 55

*Finance Companies: Regression Coefficients and Standard Errors, Four Regressions, by Period, 1951-61*

Coefficient	1951-54	1955-57	1958-61	1951-61
Intercept	1.4849 (.4963)	.9569 (.1401)	1.1356 (.1953)	1.3482 (.1018)
b <sub>1</sub>	+1.3502 (.3773)	+1.1803 (.0767)	+ .7573 (.1166)	+ .8143 (.0378)
b <sub>8</sub>	- .1003 (.0276)	- .0320 (.0111)	- .0186 (.0084)	- .0307 (.0085)
b <sub>17</sub>	+ .0635 (.0350)	- .0280 (.0175)	+ .0183 (.0111)	+ .0278 (.0107)
b <sub>24</sub>	- .0716 (.0334)	- .0339 (.0147)	- .0140 (.0170)	- .0217 (.0128)
b <sub>5</sub>	+ .0450 (.0157)	+ .0251 (.0087)	+ .0172 (.0094)	+ .0307 (.0072)
b <sub>12</sub>	- .0015 (.0209)	- .0327 (.0092)	- .0158 (.0071)	- .0248 (.0069)

TABLE 56

*Finance Companies: Expected Sign and Actual Sign, Four Regressions, by Period, 1951-61*

Coefficient	Expected Sign	Actual Sign			
		1951-54	1955-57	1958-61	1951-61
b <sub>1</sub>	+	+	+	+	+
b <sub>8</sub>	-	-	-	-	-
b <sub>17</sub>	+	+	-	+	+
b <sub>24</sub>	-	-	-	-	-
b <sub>5</sub>	+	+	+	+	+
b <sub>12</sub>	-	-	-	-	-

TABLE 57

*Finance Companies: Four Regressions; R<sup>2</sup> with Six Variables Compared with R<sup>2</sup> with Twelve Variables, by Period*

No. of Variables	1951-54	1955-57	1958-61	1951-61
6	.706	.857	.570	.792
12	.726	.870	.615	.797

The importance of each coefficient was assessed by multiplying it by the standard deviation of the associated variable (Table 58). For this purpose, the coefficients and standard deviations given by the over-all regression were used.<sup>11</sup>

<sup>11</sup> The standard deviation of  $X_1$  over the period as a whole is substantially larger than it is within any of the three cross sections. This is, of course, not true of the other variables. See Table 59.



TABLE 58

*Finance Companies: Percentage Impact of Each Variable on Yield When that Variable Increased by One Standard Deviation*

Variable	$b_i$ (1)	$\sigma_{x_i}$ (2)	$b_i \sigma_{x_i}$ (3)	Antilog of Col. 3 <sup>a</sup> (4)
X <sub>1</sub>	+ .8143	.1689	+ .1375	1.12
X <sub>8</sub>	- .0307	1.2821	- .0394	1.04
X <sub>17</sub>	+ .0278	.5663	+ .0157	1.01
X <sub>24</sub>	- .0217	.5232	- .0135	1.01
X <sub>5</sub>	+ .0307	.8947	+ .0275	1.03
X <sub>12</sub>	- .0248	1.5344	- .0381	1.04

<sup>a</sup>Signs ignored.

TABLE 59

*Finance Companies: Standard Deviations of Significant Variables, by Period, 1951-61*

	1951-54	1955-57	1958-61	1951-61
X <sub>1</sub>	.0425	.1028	.0581	.1689
X <sub>8</sub>	1.2968	1.3427	1.2094	1.2821
X <sub>17</sub>	.4539	.4455	.6207	.5663
X <sub>24</sub>	.5376	.5868	.4007	.5232
X <sub>5</sub>	.9785	.9809	.7462	.8947
X <sub>12</sub>	1.7174	1.5216	1.4404	1.5344

TABLE 60

*Finance Companies: Actual Average Yields in Sample  
Compared with Computed Composite Yields,  
Quarterly, 1951-61*

Year and Quarter	Actual	Computed
1951		
1	5.00	3.97
2	3.71	4.33
3	4.50	4.30
4	4.10	4.43
1952		
1	4.95	4.45
2	3.62	4.39
3	4.75	4.43
4	4.99	4.51
1953		
1	4.75	4.67
2	4.70	5.19
3	5.07	5.09
4	5.06	4.79
1954		
1	4.31	4.45
2	4.10	4.29
3	3.88	4.29
4	4.17	4.30
1955		
1	3.97	4.09
2	4.18	4.17
3	4.29	4.28
4	4.53	4.31
1956		
1	4.62	4.28
2	4.53	4.54
3	--	4.81
4	5.27	5.22

(continued)

TABLE 60 (concluded)

Year and Quarter	Actual	Computed
1957		
1	5.53	5.27
2	5.75	5.39
3	5.72	5.90
4	5.89	5.92
1958		
1	5.25	5.07
2	5.17	5.03
3	5.50	5.34
4	5.66	5.57
1959		
1	5.49	5.61
2	5.59	5.56
3	6.00	5.96
4	6.22	6.06
1960		
1	6.13	6.03
2	6.13	5.93
3	6.16	5.79
4	5.84	5.80
1961		
1	5.98	5.75
2	5.93	5.76
3	5.63	5.93
4	5.81	5.89

*The Yield Series*

No satisfactory cross-classified series could be obtained for finance company issues simply because not enough observations were available. Therefore, only two series were constructed as follows:

1. Average actual yields, quarterly, on all issues in the sample.
2. Computed yields, using average values for the X's over the whole period and the b's given by the subperiod regressions.

These two series are given in Table 60 and in Chart 19. The X values used to obtain the computed series are given in Table 61.

TABLE 61

*Finance Companies: Mean Values Used to  
Obtain Computed Composite Series*

Variable		Values
X <sub>8</sub>	Size of Issue (million dollars)	2.9
X <sub>17</sub>	Coefficient of variation of EBIT	.23
X <sub>24</sub>	Net worth/senior long-term debt	.68
X <sub>5</sub>	Type of security	2.6 <sup>a</sup>
X <sub>12</sub>	EBIT (million dollars)	2.6

<sup>a</sup>See note a, Table 29.