ROBIN SLATER CASE STUDY

Robin Slater, CFA, is a bond portfolio manager. He is concerned about increasing default risk and widening spreads since several of his portfolios are concentrated in only 4 industries. A junior analyst has been asked to assess the relative likelihood of increased default risk. The risk of default is considered in the context of several firm-specific financial ratios used as independent variables in the following multiple-linear regression model.

$$Y = 0.17 + 1.2X_1 + 1.4X_2 + 3.3X_3 + 1.0X_4 + \epsilon$$

The variable Y measures the company's ability to avoid default; i.e., its ability to meet its debt obligations. Therefore, the higher the value of Y, the lower the risk of default. The details for the slope coefficients are:

Independent Variable	Description	Coefficient	Standard Error
X_1	Working Capital/Total Assets ratio	1.2	0.83
X_2	Retained Earnings/Total Assets ratio	1.4	0.27
X_3	EBIT/Total Assets ratio	3.3	0.97
X_4	Sales/Total Assets ratio	1.0	0.45

The error analysis resulting from the regression equation based on the observed sample set is shown below in the analysis of variance table.

EXPLANATION →

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Anova	df	SS	MSS
Regression	4	127.8	31.95
Residual	61	29.5	0.48
Total	65	157.3	
Number of Observations		66	

The most recent analyst estimates for each of the independent variables are shown below:

Working Capital / Total Assets ratio	0.078
Retained Earnings / Total Assets ratio	0.310
EBIT / Total Assets ratio	0.025
Sales / Total Assets ratio	0.820

The following abbreviated statistical tables may be used to test the model.

EXPLANATION →

✗ **Sorry. Your Answer is Incorrect, you scored -0.0**

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Student's t Distribution

One-Tailed Probabilities

df	p = 0.1	p = 0.05	p = 0.025	p = 0.01	p = 0.005
60	1.2958	1.6706	2.0003	2.3901	2.6603
61	1.2956	1.6702	1.9996	2.3890	2.6589
62	1.2954	1.6698	1.9990	2.3880	2.6575
63	1.2951	1.6694	1.9983	2.3870	2.6561
64	1.2949	1.6690	1.9977	2.3860	2.6549
65	1.2947	1.6686	1.9971	2.3851	2.6536
66	1.2945	1.6683	1.9966	2.3842	2.6524
67	1.2943	1.6679	1.9960	2.3833	2.6512
68	1.2941	1.6676	1.9955	2.3824	2.6501

Table of the F-Distribution

df1:	1	2	3	4	5
df2:					
40	4.08	3.23	2.84	2.61	2.45
60	4.00	3.15	2.76	2.53	2.37
120	3.92	3.07	2.68	2.45	2.29

Critical Values for the Durbin-Watson Statistic (α = 0.05)

	K = 3		K = 4		K = 5	
n	d_l	d_u	d_l	d_u	d_l	d_u
55	1.45	1.68	1.41	1.72	1.38	1.77
60	1.48	1.69	1.44	1.73	1.41	1.77
65	1.50	1.70	1.47	1.73	1.44	1.77
70	1.52	1.70	1.49	1.74	1.46	1.77

BASED ON THE INFO PRESENTED IN THIS CASE SCENARIO, ANSWER THE GIVE

QUESTIONS

EXPLANATION →