Example : The following are the data extracted from the records of the Iraqi National Metallurgical Industries Company:

Total Current Assets   2500

Total Current Liabilities 1500

Total Assets   6000

Total Liabilities   2000

Retained earnings   500

Net operating profit   1200

Sales   5000

Market value of shares   4000

Required: Prepare an analytical study of these data by using the Altman and Mccovgh model to determine the sustainability of the business

solution :

Z = 0.012X1 + 0.014X2 + 0.033X3 + 0.006X4 + 0.010X5

The ratios used in the model are: $X1$ = Net working capital / total assets. $X2$ = Retained Earnings / Total Assets, $X3$ = EBITDA / total assets, $X4$ = Market value of equity / total liabilities, $X5$ = Sales / Total Assets
Z = 0.012 (1000/ 6000) + 0.014 (500/6000) +0.033 (1200/6000) +0.006 (4000/1500) +0.010 (5000/6000)
Z = 0.002 + 0.0012 + 0.0066 + 0.016 + 0.008
Z = 0.0332
we find that the probability of failure of this company is certain since the value of Z is (0.0332) much lower than (1.81).

Example : The following balances appeared in the records of an industrial company:

Total Assets	6,000
Total liabilities	3,600
Sales	10,000
Cash Assets	1,600
Current Liabilities	2,400
Shareholders' Equity	4,000
Net profit after tax	500

Required: prepare an analytical study of these data by using the KIDA model to determine the extent of the entity's ability to continue.

Solution :

$$Z = 1.042X1 + 0.42X2 - 0.461X3 - 0.463X4 + 0.271X5$$

X1 = Net Profit after Tax / Total Assets
X2 = Equity / Total assets
X3 = Current Assets / Current Liabilities
X4 = Sales / Total assets
X5 = Assets Cash / Total Assets

Z = 1.042 (500/ 6000) +0.42 (4000/ 6000) - 0.461 (1600/2400) - 0.463 (10000/6000) +0.271 (1600/ 6000)

$Z = 0.087 + 0.28 – 0.307 – 0.77 + 0.072$

$Z = (0. 638)$

we find that the firm of subject of the study is under the probability of a high failure, this is because the value of (Z) was negative (0. 638).