HW - Chapter 3 - Ratios - Q4

Ratios	2018-19	2019-20	2020-21
Current ratio (Current Assets/ Current Liabilities)	6,30,000 ÷ 5,30,000 = 1.19	7,60,000 ÷ 6,10,000 = 1.25	8,95,000 ÷ 7,45,000 = 1.20
Acid-test ratio (Quick Assets / Current Liabilities)	2,30,000 ÷ 5,30,000 = 0.43	2,80,000 ÷ 6,10,000 = 0.46	2,95,000 ÷ 7,45,000 = 0.40
DTR = (Sales/ Average Receivables) (Refer Working Notes)	40,00,000 ÷ 2,00,000 = 20	43,00,000 ÷ 2,30,000 = 18.70	38,00,000 ÷ 2,75,000 = 13.82
Average collection period (365 / DTR)	365/20 = 18.25	365/18.70 = 19.52	365/13.82 = 26.41
Inventory turnover ratio (COGS / Average Inventory) (Refer Working Notes)	32,00,000 ÷ 4,00,000 = 8 times	36,00,000 ÷ 4,40,000 = 8.18 times	33,00,000 ÷ 5,40,000 = 6.11 times
Total debt to net worth (Short term + Long term Debt) / (Common stock + Retained earnings)	8,30,000 ÷ 6,00,000 = 1.38	9,10,000 ÷ 6,50,000 = 1.40	10,45,000 ÷ 6,50,000 = 1.61
Long-term debt to total capitalization	3,00,000 ÷ 9,00,000 = 0.33	3,00,000 ÷ 9,50,000 = 0.32	3,00,000 ÷ 9,50,000 = 0.32
Gross profit margin (Gross Profit / Sales) {Gross profit = Sales – Cost of Goods sold}	8,00,000 ÷ 40,00,000 = 0.20	7,00,000 ÷ 43,00,000 = 0.16	5,00,000 ÷ 38,00,000 = 0.13
Net profit margin (Net Profit / Sales)	3,00,000 ÷ 40,00,000 = 0.075	2,00,000 ÷ 43,00,000 = 0.047	1,00,000 ÷ 38,00,000 = 0.026
Total Asset turnover (Sales / Total Assets)	40,00,000 ÷ 14,30,000 = 2.80	43,00,000 ÷ 15,60,000 = 2.76	38,00,000 ö ÷ 16,95,000 = 2.24
Return on assets (Net profit / Total Assets)	3,00,000 ÷ 14,30,000 = 0.21	2,00,000 ÷ 15,60,000 = 0.13	1,00,000 ÷ 16,95,000 = 0.06
Working Notes			
Average receivables {(Opening + closing)/2}	(2,00,000+2,00,000) /2 = 2,00,000	(2,00,000+2,60,000)/2 = 2,30,000	(2,60,000+2,90,000) /2 = 2,75,000
Average Inventory {(Opening + closing)/2}	(4,00,000+4,00,000) /2 = 4,00,000	(4,00,000+4,80,000)/2 = 4,40,000	(4,80,000+6,00,000) /2 = 5,40,000

Analysis:

Working Capital

The current ratio and quick ratio are less than the ideal ratio (2:1 and 1:1 respectively) indicating that the company is not having enough resources to meet its current obligations. Receivables are growing slower, although the average collection period is still very reasonable relative to the terms given. Inventory turnover is slowing as well, indicating a relative build-up in inventories. The increase in receivables and inventories, coupled with the fact that net worth has increased very little, has resulted in the total debt-to-net worth ratio increasing to what would have to be regarded on an absolute basis as a high level.

Long Term Solvency

Long-term debt to total capitalization has not changed relatively coupled with the fact that retained earnings of only Rs. 50,000 are made in the year 2019-20, and there is no issuance of new long-term debt in the years 2019-20 and 2020-21.

Profitability

Both the gross profit and net profit margins have declined substantially. The relationship between the two suggests that the company has incurred more relative expenses. The build-up in inventories and receivables has resulted in a decline in the asset turnover ratio, and this, coupled with the decline in profitability, has resulted in a sharp decrease in the return on assets ratio.