

2) In your position as research assistant to a portfolio manager , you need to analyze the profitability of the companis in the portfolio. Using the data for Oracle Corp. (ORCL)

Fiscal Year	2019	2018	2017	2016	2015
Total Revenue	39506	39831	37728	37047	38226
Net Income	11083	3825	9335	8901	9938
Profit Margin	0.28	0.10	0.25	0.24	0.26
Growth (TR)	-0.82%	5.57%	1.84%	-3.08%	0
Growth (NI)	189.75%	-59.03%	4.88%	-10.43%	0

A

TR (CAGR)	NI (CAGR)
0.83%	2.76%

B

CAGR = $\text{GEOMEAN} (1 + \text{ARRAY}) - 1$
GEOMEAN = $(\text{Product of } x)^{(1/n)}$

Net income is growing faster than total revenue when comparing growth rates. This is positive for our investment because this means cashflow growth which can be used for investment activities and other growth opportunities.

TR (CAGR)	NI (CAGR)
0.88%	31.29%

C

CAGR = $\text{AVG}(\text{C:F})$

This result is less accurate than the last approach because it ignores compounding returns . The return on Net Income using the average is far greater in this model perhaps due to the volatile nature of the returns. GEOMEAN accomplishes what the average ignores, and therefore provides a much more reliable growth rate. With a r more stable growth rate the average could apply more effectively.

D

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Growth (TR)	0.00	-3.08%	1.84%	5.57%	-0.82%
Growth (NI)	0.00	-10.43%	4.88%	-59.03%	189.75%