



Trend Index Number & Analysis of Financial Statements

Trend index: An index number for trend analysis is calculated by assigning a value of 100 (or 100%) to a base period (usually the first or oldest period in time). For subsequent periods of time, the index number is determined by dividing the dollar amount for each period by the base dollar amount and multiplying by 100.

Trend index = (Selected period / Base period) x 100

Example 1: Determine the sales revenue index for years 1, 2, and 3 given:

Year	Sales Revenue	Sales Revenue Index
1	\$30,000	
2	\$35,000	
3	\$38,000	

Solution: The first period (year 1) is the base period so its index is 100. For year 2, we take the sales revenue of year 2 divided by sales revenue of year 1 (our base period) and multiply by 100:

Trend index = $(35,000/30,000) \times 100 = 116.7$

Repeat for year 3: Trend index = $(38,000/30,000) \times 100 = 126.7$

We can use these index numbers to compare dollar values in time. As inflation and deflation affect the value of money, we need to convert monetary amounts into current period dollars to provide a more meaningful analysis of changes over time. To convert historic dollars into current dollars, use the following formula:

$$\text{Historic dollars} \times \frac{\text{Index number for current period}}{\text{Index number for historic period}} = \text{Current dollars}$$

This conversion is easy to remember if you can think of it like a single unit conversion where we need the units we start with (historic dollars) to cancel out. To do this, we create a conversion fraction with the unit we want (current dollars) on top, and the unit we want to eliminate (historic dollars) on the bottom.

Example 2: Convert the sales revenue above into current period dollars given the following trend index numbers. Round to the nearest whole dollar.

Solution: The first step is to take the period sales revenue for year 4 (which is the current period) and transfer it to the current dollars column. As this is the period we are in now, the dollar value is as listed.