

ILLUSTRATION OF THE NAÏVE METHOD

Naïve method: The forecast for next period (period $t+1$) will be equal to this period's actual demand (A_t).

In this illustration we assume that each year (beginning with year 2) we made a forecast, then waited to see what demand unfolded during the year. We then made a forecast for the subsequent year, and so on right through to the forecast for year 7.

Year	Actual Demand (A_t)	Forecast (F_t)	Notes
1	310	--	There was no prior demand data on which to base a forecast for period 1
2	365	310	From this point forward, these forecasts were made on a year-by-year basis.
3	395	365	
4	415	395	
5	450	415	
6	465	450	
7		465	

MEAN (SIMPLE AVERAGE) METHOD

Mean (simple average) method: The forecast for next period (period $t+1$) will be equal to the average of all past historical demands.

In this illustration we assume that a simple average method is being used. We will also assume that, in the absence of data at startup, we made a guess for the year 1 forecast (300). At the end of year 1 we could start using this forecasting method. In this illustration we assume that each year (beginning with year 2) we made a forecast, then waited to see what demand unfolded during the year. We then made a forecast for the subsequent year, and so on right through to the forecast for year 7.

Year	Actual Demand (A_t)	Forecast (F_t)	Notes
1	310	300	This forecast was a guess at the beginning.
2	365	310.000	From this point forward, these forecasts were made on a year-by-year basis using a simple average approach.
3	395	337.500	
4	415	356.667	
5	450	371.250	
6	465	387.000	
7		400.000	

SIMPLE MOVING AVERAGE METHOD

Simple moving average method: The forecast for next period (period $t+1$) will be equal to the average of a specified number of the most recent observations, with each observation receiving the same emphasis (weight).

In this illustration we assume that a 2-year simple moving average is being used. We will also assume that, in the absence of data at startup, we made a guess for the year 1 forecast (300). Then, after year 1 elapsed, we made a forecast for year 2 using a naïve method (310). Beyond that point we had sufficient data to let our 2-year simple moving average forecasts unfold throughout the years.

Year	Actual Demand (A_t)	Forecast (F_t)	Notes
1	310	300	This forecast was a guess at the beginning.
2	365	310	This forecast was made using a naïve approach.
3	395	337.500	From this point forward, these forecasts were made on a year-by-year basis using a 2-yr moving average approach.
4	415	380.000	
5	450	405.000	
6	465	432.500	
7		457.500	

ANOTHER SIMPLE MOVING AVERAGE ILLUSTRATION

In this illustration we assume that a 3-year simple moving average is being used. We will also assume that, in the absence of data at startup, we made a guess for the year 1 forecast (300). Then, after year 1 elapsed, we used a naïve method to make a forecast for year 2 (310) and year 3 (365). Beyond that point we had sufficient data to let our 3-year simple moving average forecasts unfold throughout the years.

Year	Actual Demand (A _t)	Forecast (F _t)	Notes
1	310	300	This forecast was a guess at the beginning.
2	365	310	This forecast was made using a naïve approach.
3	395	365	This forecast was made using a naïve approach.
4	415	356.667	From this point forward, these forecasts were made on a year-by-year basis using a 3-yr moving average approach.
5	450	391.667	
6	465	420.000	
7		433.333	

WEIGHTED MOVING AVERAGE METHOD

Weighted moving average method: The forecast for next period (period t+1) will be equal to a weighted average of a specified number of the most recent observations.

In this illustration we assume that a 3-year weighted moving average is being used. We will also assume that, in the absence of data at startup, we made a guess for the year 1 forecast (300). Then, after year 1 elapsed, we used a naïve method to make a forecast for year 2 (310) and year 3 (365). Beyond that point we had sufficient data to let our 3-year weighted moving average forecasts unfold throughout the years. The weights that were to be used are as follows: Most recent year, .5; year prior to that, .3; year prior to that, .2

Year	Actual Demand (A _t)	Forecast (F _t)	Notes
1	310	300	This forecast was a guess at the beginning.
2	365	310	This forecast was made using a naïve approach.
3	395	365	This forecast was made using a naïve approach.
4	415	369.000	From this point forward, these forecasts were made on a year-by-year basis using a 3-yr wtd. moving avg. approach.
5	450	399.000	
6	465	428.500	
7		450.500	