One-Minute Spotlight

CB Predictor: How to Predict Future Values from Historical Data

CB Predictor is a "time-series" forecasting tool available as part of Oracle's Crystal Ball. It makes quick work of analyzing your historical data and extrapolating values into the future.

Month	Retail Sales	Web Sales
Jan-99	30,330	18,737
Feb-99	28,970	15,388
Mar-99	42,150	23,760
Apr-99	26,440	15,507
May-99	34,230	21,091
Jun-99	33,980	20,517
Jul-99	43,980	26,789
Aug-99	31,550	19,687
Sep-99	43,860	25,826
Oct-99	40,090	24,935
Nov-99	43,730	26,264
Dec-99	57,570	34,274
Jan-00	40,730	23,984
Feb-00	68,190	37,856
Mar-00	47,570	24,364
Apr-00	58,110	35,776
May-00	64,780	34,958
Jun-00	65,080	38,548
Jul-00	67,750	40,493
Aug-00	66,650	37,428

To use CB Predictor, just click on any cell in your historic data, and then start CB Predictor from the Run menu.
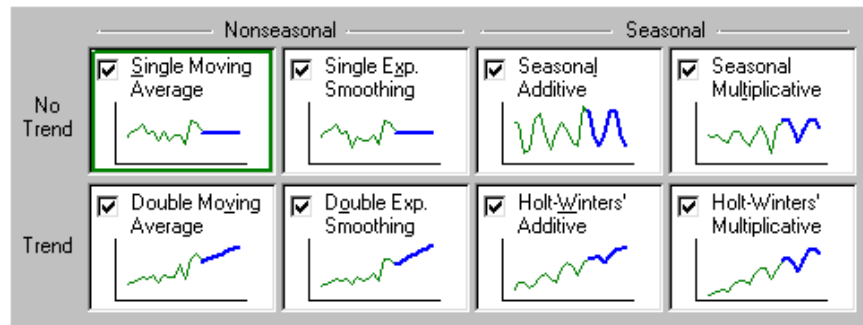
CB Predictor's Intelligent Input feature will automatically detect the bounds of your data, your header information, and the row/column orientation of your data.

Next, choose the forecasting methods to use.

CB Predictor provides eight standard time-series forecasting methods. The goal of each method is to identify the underlying trend or pattern of the data and separate it from the "noise".

This pattern is then projected into the future as the most likely values for the data. If you're not sure which method to use, CB Predictor can automatically try them all and choose the one that best fits your data.

ORACLE

One-Minute Spotlight

Nonseasonal | Seasonal

No Trend
- ☑ Single Moving Average
- ☑ Single Exp. Smoothing
- ☑ Seasonal Additive
- ☑ Seasonal Multiplicative

Trend
- ☑ Double Moving Average
- ☑ Double Exp. Smoothing
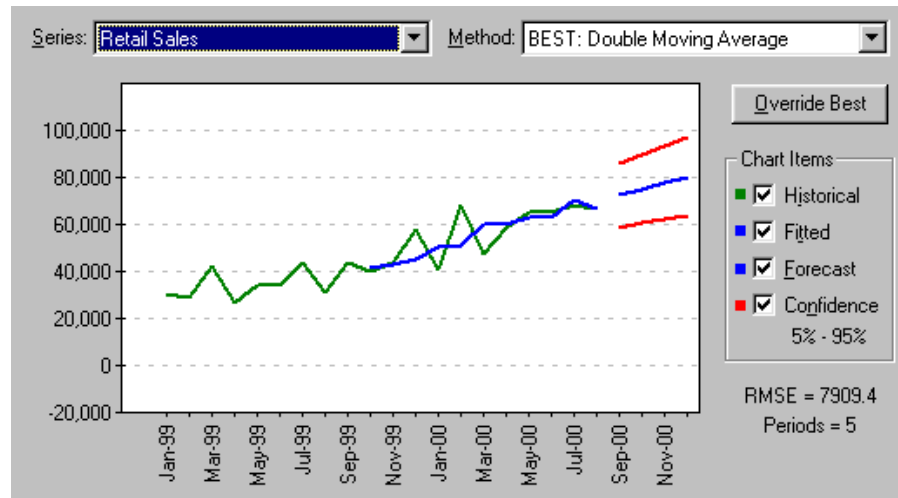- ☑ Holt-Winters' Additive
- ☑ Holt-Winters' Multiplicative

Special seasonal methods are available that handle cyclical or periodic data, e.g., a spike in toy sales during holidays.

If you have some data that you think might be tied to (dependent on) other data, CB Predictor offers several advanced regression techniques. Regression can improve the quality of your forecasts when relationships exist between data.

Next, preview your forecast with one click.

Before CB Predictor creates future values in your spreadsheet, you can preview the forecast graphically:

Series: Retail Sales Method: BEST: Double Moving Average

Override Best

Chart Items
- ☑ Historical
- ☑ Fitted
- ☑ Forecast
- ☑ Confidence 5% - 95%

RMSE = 7909.4
Periods = 5

On the right side of the chart, you can see the forecast (in blue) for the Retail Sales data surrounded by a 90% confidence interval (in red) giving the most likely, worst, and best case scenarios.

You can also click through other data series or see how other forecasting methods compare to the "best" one CB Predictor chose for you.

ORACLE®

Finally, create your forecast.

CB Predictor pastes the forecasted results into your spreadsheet, extending the data and date columns as necessary. The added rows are shown in bold.

Month	Retail Sales	Web Sales
Jan-99	30,330	18,737
Feb-99	28,970	15,388
Mar-99	42,150	23,760
Apr-99	26,440	15,507
May-99	34,230	21,091
Jun-99	33,980	20,517
⋮	⋮	⋮
Jan-00	40,730	23,984
Feb-00	68,190	37,856
Mar-00	47,570	24,364
Apr-00	58,110	35,776
May-00	64,780	34,958
Jun-00	65,080	38,548
Jul-00	67,750	40,493
Aug-00	66,650	37,428
Sep-00	**72,329**	**42,839**
Oct-00	**74,947**	**44,639**
Nov-00	**77,565**	**46,438**
Dec-00	**80,183**	**48,238**

Since there is always some uncertainty when extrapolating historical data into the future, CB Predictor creates Crystal Ball assumptions (shown in green) for the future values. You can then run a Crystal Ball simulation to analyze how the uncertainty in these values affects other aspects of your spreadsheet model.

For more information or to contact us, browse to http://www.oracle.com/crystalball.

3

ORACLE