

ORACLE® CRYSTAL BALL ENTERPRISE
PERFORMANCE MANAGEMENT, FUSION EDITION

RELEASE 11.1.1.3

INTEGRATION GUIDE

ORACLE®
ENTERPRISE PERFORMANCE
MANAGEMENT SYSTEM

Crystal Ball EPM Integration Guide, 11.1.1.3

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Welcome

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Introduction

Oracle Crystal Ball Enterprise Performance Management, Fusion Edition (Crystal Ball EPM) is a graphically-oriented forecasting and risk analysis application that helps reduce the uncertainty of decision-making. Unlike other versions of Oracle Crystal Ball, Crystal Ball EPM includes integration with the following Oracle Hyperion Enterprise Performance Management System components:

- Oracle Essbase and Oracle Hyperion Planning, Fusion Edition, using Oracle Hyperion Smart View for Office, Fusion Edition
- Oracle Hyperion Strategic Finance, Fusion Edition

Through a technique known as Monte Carlo simulation, Crystal Ball EPM forecasts the entire range of results possible for a given situation. It also shows you confidence levels, so you will know the likelihood of any specific event taking place.

Crystal Ball EPM is easy to learn and use. Unlike other forecasting and risk analysis programs, you do not have to learn unfamiliar formats or special modeling languages. You do not need highly advanced statistical or computer knowledge to use Crystal Ball EPM to its full potential. All you need is a basic working knowledge of your personal computer and Crystal Ball EPM, and familiarity with either Strategic Finance or Smart View and one of these compatible products: Essbase or Planning. In fact, if you use the procedures described in [Chapter 3, “Using Crystal Ball EPM Models in Smart View,”](#) you can work with virtually any EPM System product that can have data loaded into a Smart View worksheet.

This Integration Guide explains how to use Crystal Ball EPM with other EPM System products. For basic information about creating spreadsheet models and using Crystal Ball EPM, see the *Oracle Crystal Ball User's Guide*.

What You Will Need

Crystal Ball EPM runs on several versions of Microsoft Windows and Microsoft Excel. For a complete list of required hardware and software, see the *Oracle Crystal Ball Installation and Licensing Guide*.

How This Guide Is Organized


This Guide includes the following additional chapters:

- [Chapter 2, “Overview”](#)—Describes Crystal Ball EPM and compatible Oracle applications.
- [Chapter 3, “Using Crystal Ball EPM Models in Smart View”](#)—Describes how Crystal Ball EPM works within the Smart View spreadsheet interface to share data between compatible applications and Crystal Ball EPM.
- [Chapter 4, “Using the Crystal Ball Enterprise Performance Management Connector in Smart View”](#)—Describes how to define Crystal Ball assumptions, decision variables, and forecasts in Essbase or Planning ad-hoc queries and forms in Smart View, and then run simulations directly on underlying data.
- [Chapter 5, “Using Crystal Ball EPM with Strategic Finance”](#)—Describes how Crystal Ball EPM works with Strategic Finance to allow Monte Carlo analysis of selected accounts from a given Strategic Finance entity.

For information about how to use all the Oracle Crystal Ball, Fusion Edition features, see the *Oracle Crystal Ball User's Guide* and online help.

Getting Help

As you work in Crystal Ball EPM, you can display online help in a variety of ways:

- Click Help in a dialog or wizard panel.
- Click  in the Crystal Ball EPM toolbar in Microsoft Excel.
- In the Excel menu bar, select Help, then Crystal Ball, then Crystal Ball Help.
- In the Distribution Gallery and other dialogs, press F1.

In Excel 2007, click Help at the right end of the Crystal Ball EPM ribbon. If you press F1 in Excel 2007, Excel help appears unless you are viewing the Distribution Gallery or another Crystal Ball dialog.

- ▶ To view a table of contents for Crystal Ball EPM help, click **Contents** at the top of the help window.

Crystal Ball EPM Documentation Set

The extensive Crystal Ball documentation set is installed in HTML format with Crystal Ball EPM.

- ▶ To view a list of available documentation, select **Start**, then **All Programs**, then **Oracle Crystal Ball**, and then **Documentation**. You can also select **Help**, then **Crystal Ball**, then **Crystal Ball Documentation** in Crystal Ball running on Microsoft Excel 2003 or earlier. In Microsoft Excel 2007, select **Resources**, then **Crystal Ball Documentation** in the Help group on the Crystal Ball ribbon.

Documentation is installed in the Docs folder below the main Crystal Ball installation folder (by default, C:\Program Files\Oracle\Crystal Ball).

Crystal Ball EPM documentation in PDF format is available at:

<http://www.oracle.com/technology/documentation/epm.html>

Learning Crystal Ball EPM

Oracle offers a variety of resources to help you learn and use Crystal Ball products. For information about Crystal Ball EPM technical support, training, and other services, see:

<http://www.oracle.com/crystalball>

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Overview

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About Crystal Ball EPM

Spreadsheets have two major limitations:

- You can change only one spreadsheet cell at a time. As a result, exploring the entire range of possible outcomes is next to impossible; you cannot realistically determine the amount of risk that is impacting your bottom line.
- “What-if” analysis always results in single-point estimates which do not indicate the likelihood of achieving any particular outcome. While single-point estimates might tell you what is *possible*, they do not tell you what is *probable*.

Crystal Ball overcomes these limitations:

- You can describe a range of possible values for each uncertain cell in your spreadsheet. Everything you know about each assumption is expressed at once. For example, you can define your business phone bill for future months as any value between \$2500 and \$3500, instead of using a single-point estimate of \$3000. Crystal Ball then uses the defined range in a simulation.
- Using a process called Monte Carlo simulation, Crystal Ball displays results in a forecast chart that shows the entire range of possible outcomes and the likelihood of achieving each of them.

In addition, Crystal Ball keeps track of the results of each scenario for you.

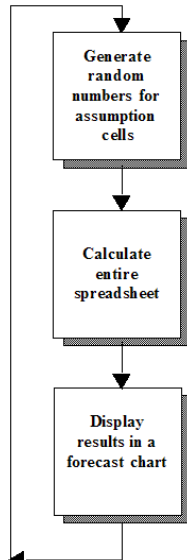
To summarize, Crystal Ball is an analytical tool that helps executives, analysts, and others make decisions by performing simulations on spreadsheet models. The forecasts that result from these simulations help quantify areas of risk so decision-makers can have as much information as possible to support wise decisions.

The basic process for using Crystal Ball is to:

1. Build a model that reflects an uncertain scenario.
2. Run a simulation on it.
3. Analyze the results.

While powerful results appear in Crystal Ball models with virtually no effort, obviously there must be some drivers in the process. Crystal Ball cannot generate the same results for any typical spreadsheet without some help.

The key is using Crystal Ball to define certain input cells of the spreadsheet as assumptions and certain output cells of interest as forecasts.



Once these cells are defined, Crystal Ball uses Monte Carlo simulation to model the complexity of a real-world scenario.

For each trial of a simulation, Crystal Ball repeats the following steps:

1. For every assumption cell, a random number is generated according to the range you defined and then is placed into the spreadsheet.
2. The spreadsheet is recalculated.
3. A value is retrieved from every forecast cell and added to the chart in the forecast windows.

This is an iterative process that continues until either:

- The simulation reaches a stopping criterion
- You stop the simulation manually

The final forecast chart reflects the combined uncertainty of the assumption cells on the model's output. Keep in mind that Monte Carlo simulation can only approximate a real-world situation. When you build and simulate your own spreadsheet models, you need to carefully examine the nature of the problem and continually refine the models.

The best way to quickly understand this process is to work through the tutorials in the *Oracle Crystal Ball User's Guide*. The *Oracle Crystal Ball User's Guide* and other documentation can help you use all available Crystal Ball analytic and predictive features.

Note: Crystal Ball EPM is the only Crystal Ball product that supports integration with the EPM System components described here.

About Smart View

Smart View is a Microsoft Office add-in that uses a Microsoft Excel spreadsheet interface to access data in a variety of EPM System products.

You can use the Smart View Connection Manager (also known as the Data Source Manager) to store Crystal Ball EPM models within a central repository. Then, you can load them into Smart View, access data from other compatible applications within the repository, and—using cell references populate the Crystal Ball models with current EPM data for further analysis. You can also load Essbase ad-hoc queries or Planning forms into Smart View, and then use Crystal Ball EPM to define assumptions, decision variables, and forecasts and run Crystal Ball simulations and optimizations directly on the underlying data.

Two of the applications that can also be accessed from within Smart View's spreadsheet interface are Essbase and Planning.

See [Chapter 3, “Using Crystal Ball EPM Models in Smart View”](#).

About Strategic Finance

Strategic Finance integrates and consolidates financial forecast models among several stakeholder groups within an organization. Strategic Finance reduces time and planning costs while assuring accurate analytics. It is ideal for merger and acquisition analysis, strategic planning, equity analysis, deal underwriting, and portfolio analysis.

If you have Strategic Finance, you can use the Strategic Finance Setup wizard included in Crystal Ball EPM to create a worksheet containing accounts selected from a particular Strategic Finance entity and scenario. Then, you can define the worksheet as a Crystal Ball model and run Monte Carlo simulations to determine the probability of achieving particular outcomes. For more information, see [Chapter 5, “Using Crystal Ball EPM with Strategic Finance”](#).

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Using Crystal Ball EPM Models in Smart View

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About Using Crystal Ball EPM Models in Smart View

This chapter describes how to use Crystal Ball EPM with Smart View and other applications that are compatible with it. This functionality is not available with other versions of Crystal Ball.

You can use Crystal Ball EPM within Smart View to:

- Create and modify Crystal Ball models
- Reference data from Smart View-compatible applications within those models
- Add and delete files within the central repository

Note: Starting with Crystal Ball EPM Release 11.1.1.3.00, you can run Crystal Ball simulations directly on Essbase or Planning data loaded into Smart View. See [Chapter 4, “Using the Crystal Ball Enterprise Performance Management Connector in Smart View.”](#)

Starting Crystal Ball EPM with Excel and Smart View

Note: These instructions assume that you are using version 11.1.x of Smart View and that Smart View is set to load automatically and is enabled as a Microsoft Excel add-in when you start Excel (the default configuration).

Begin by installing Crystal Ball EPM using the instructions in the current *Oracle Crystal Ball Installation and Licensing Guide*.

Then, to start Crystal Ball EPM with Microsoft Excel and Smart View, select Start, then All Programs, then Oracle Crystal Ball, and then Crystal Ball.

By default, Microsoft Excel 2003 or earlier appears with a Hyperion menu and three Crystal Ball menus: Define, Run, and Analyze. The Crystal Ball toolbar also appears.

Note: If you are using Microsoft Excel 2007, Hyperion and Crystal Ball appear as tab labels above the Excel ribbon.

If Excel is already running, a new instance opens when you start Crystal Ball.

- To start Crystal Ball automatically each time you start Excel:
 - 1 Select **Start**, then **All Programs**, then **Oracle Crystal Ball**, then **Application Manager**.
 - 2 Check **When starting Microsoft Excel, automatically launch Crystal Ball** and click **OK**.

You can create, open, and modify Crystal Ball models as described in the *Oracle Crystal Ball User's Guide*. Even if you intend to add them to the central repository, save them locally to your hard drive or a network space.

The following section describes how to manage Crystal Ball EPM files in the central repository.

Managing Crystal Ball Files in the Central Repository

From within Smart View, you can connect to the Crystal Ball folder in the central repository. Once there, you can add, open, and delete Crystal Ball files.

Connecting to the Crystal Ball Folder in the Repository

- To open the main Crystal Ball folder in the repository:
 - 1 Within Smart View, select **Hyperion**, then **Data Source Manager**.

2 Click .

3 Select **Simulation & Forecasting Workbooks**.

4 Click .


See if values are entered for URL and Folder. These settings allow access to the Crystal Ball folder in the central repository. If the values are not entered, obtain the correct values from your Enterprise Performance Management System administrator and enter them into the fields.

5 When Options settings are complete, click  to connect to the Crystal Ball data source.


The Crystal Ball data folder opens. With appropriate rights, you can add and delete files within that folder.

6 To ensure that you are viewing the current contents of the folder, click  to update the file list.

Adding Crystal Ball Files to the Repository


- To add a Crystal Ball file to the repository:
 - 1 Access the Crystal Ball repository folder as described in [“Connecting to the Crystal Ball Folder in the Repository” on page 14](#).
 - 2 Click .
 - 3 Browse to the location of the model to add.
 - 4 Select it and click **Open**.

Opening a Crystal Ball File from the Repository

- To open a Crystal Ball file from the repository:
 - 1 Access the Crystal Ball repository folder as described in [“Connecting to the Crystal Ball Folder in the Repository” on page 14](#).
 - 2 Select the file to open.
 - 3 Click  to pull the file out of the repository so you can save it locally (on your hard drive or the network).
 - 4 Browse to a local folder and click **Save**.
 - 5 Open the file within Excel.

You can also double-click a file in the Crystal Ball repository to save the file locally in a TEMP folder and open it in Smart View. You can then use Save As to save the file locally for future use.

Deleting Crystal Ball Files from the Repository

- To delete a Crystal Ball file from the repository:
 - 1 Access the Crystal Ball repository folder as described in [“Connecting to the Crystal Ball Folder in the Repository” on page 14](#).
 - 2 Select the file to delete.
 - 3 Click .
 - 4 Confirm the deletion.

Modifying Crystal Ball Files from the Repository

- To modify a Crystal Ball file from the repository:
 - 1 Get and open the file as described in [“Opening a Crystal Ball File from the Repository” on page 15](#).


- 2 Delete the file within the repository as described in [“Deleting Crystal Ball Files from the Repository”](#) on page 15.
- 3 Edit the file within Smart View and Crystal Ball.
- 4 Save it locally.
- 5 Add the edited version back to the repository as described in [“Adding Crystal Ball Files to the Repository”](#) on page 15.

Note: Beginning with Smart View version 11.1.1.1.00, you can also add and rename folders.

Accessing Data From Other EPM Applications Within Smart View

If you can open an application and view its data within Smart View, you can use that data in a Crystal Ball model.

- To share data with Crystal Ball:

- 1 Within Smart View, click  .
- 2 Select **Common Provider Connections**.
- 3 Click **Connect To Provider Services**.
- 4 Select a service (Essbase or Planning, for example) and open or create a file within Smart View. Modify the view as desired.
- 5 Within Crystal Ball, build a model that references cells within the other application's data view.
- 6 Run the Crystal Ball simulation and analyze it.

When you refresh data in the other application's view, the referenced cells will also update in Crystal Ball.

Smart View Data Linking Example

Suppose you have estimated sales data from Essbase within Smart View on Sheet 1, as shown in [Figure 1](#). You want to know the probability of earning first quarter sales revenue between 36 and 40 million dollars.

Note: In this example, Essbase and Crystal Ball EPM data appear on two different sheets of the same workbook. This is not a requirement; they could be in separate workbooks or even on the same worksheet.

Figure 1 Estimated Quarterly Sales Figures

	A	B	C	D	E	F
1						
2		Estimated Quarterly Sales in Millions				
3						
4						
5		Q1	Q2	Q3	Q4	
6	Region 1	12.185	13.542	11.897	14.972	
7	Region 2	15.231	16.928	14.871	18.715	
8	Region 3	11.576	12.865	11.302	14.223	
9						

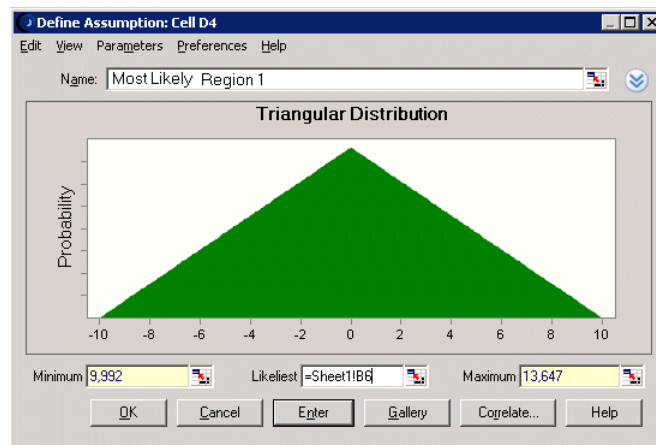
You can create Crystal Ball data on Sheet 2 with worst-case and best-case estimates for the three regions to estimate sales for Q1 of the following year. These estimates are made with formulas that include cell references to the Essbase data on Sheet 1. The most likely column is empty for now (Figure 2).

Figure 2 Worst-case, Best-case, and Most Likely Estimates for Q1

	A	B	C	D	E	F
1						
2			Q1			
3			Worst Case	Most Likely	Best Case	
4		Region 1	9.992		13.647	
5		Region 2	12.490		17.059	
6		Region 3	9.492		12.965	
7						

Now, suppose you create Crystal Ball assumptions in cells D4, D5, and D6. You create these using triangular distributions with cell references to columns C and E of Sheet 2 for the Minimum and Maximum parameters and a reference to the Q1 estimate in Essbase on Sheet 1 for the Likeliest parameter value (Figure 3).

Figure 3 Crystal Ball Assumption, Defined with Cell References



In addition to these assumptions, you create a quarterly forecast in cell D8. Its formula is the sum of cells D4 through D6.

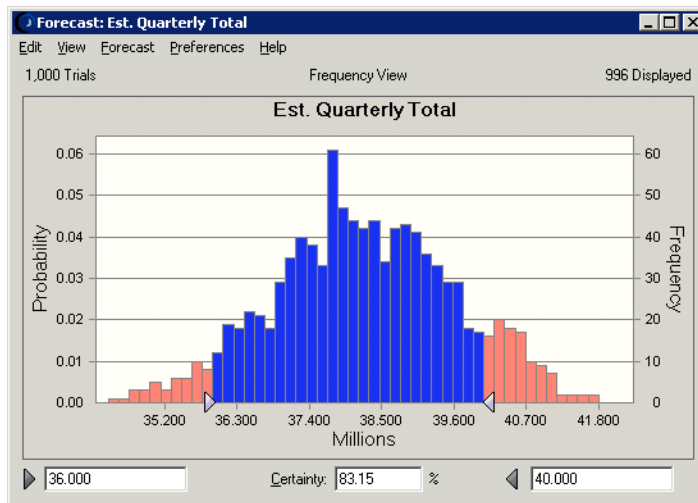
When you run the simulation, all the cell references are used as parameters for the triangular distributions defined in cells D4 through D6. With Crystal Ball cell preferences set to show the mean of the distribution for each assumption, Sheet 2 with Crystal Ball data appears as shown in Figure 4.

Figure 4 Crystal Ball EPM Model with Simulation Data Means

	A	B	C	D	E	F
1						
2			Q1			
3			Worst Case	Most Likely	Best Case	
4		Region 1	9.992	11.941	13.647	
5		Region 2	12.490	14.927	17.059	
6		Region 3	9.492	11.344	12.965	
7						
8		Most likely quarterly total		38,212		
9						

A forecast chart is generated for the forecast defined in cell D8 (Figure 5). It shows that the certainty, or probability, of sales revenue between 36 and 40 million dollars in the first quarter is 83.15%.

Figure 5 First Quarter Revenue Forecast



For a more direct way to perform similar forecasts, see [Chapter 4, “Using the Crystal Ball Enterprise Performance Management Connector in Smart View.”](#)

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Using the Crystal Ball Enterprise Performance Management Connector in Smart View

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About the Crystal Ball Enterprise Performance Management Connector

The Crystal Ball Enterprise Performance Management connector is an analytic feature included in Crystal Ball EPM, starting with version 11.1.1.3.00. If you have installed and licensed Crystal Ball EPM version 11.1.1.3.00 or later and have a compatible version of Smart View, you can use the Crystal Ball Enterprise Performance Management connector within Smart View to define Crystal Ball data cells directly in a compatible application's worksheet. Then, you can use Crystal Ball EPM to run a simulation against the application's database using a calculation script or set of business rules.

Related sections:

- “Compatible Applications” on page 19
- “Important Guidelines for Use” on page 20
- “Using the Crystal Ball Enterprise Performance Management Connector” on page 21
- “Crystal Ball Enterprise Performance Management Connector Example” on page 22

Compatible Applications

The procedures described in this chapter are designed to work in Crystal Ball EPM version 11.1.1.3.00 or later running against Smart View version 11.1.1.3.00 or later. See the *Oracle Crystal Ball Installation and Licensing Guide* and Smart View documentation for information about software and hardware platform requirements.

The current version of Crystal Ball Enterprise Performance Management connector is supported for Essbase ad-hoc queries and Planning forms running in Smart View.

Important Guidelines for Use

Caution! The Crystal Ball Enterprise Performance Management connector submits data from Smart View directly to the underlying Oracle Hyperion Enterprise Performance Management System database. The data is submitted from Smart View during each Crystal Ball EPM trial and is then restored at the end of the simulation. Working in a copy of your production database is highly recommended. Avoid running a simulation on data when other users could be modifying it.

The following guidelines are important to follow as you work with the Crystal Ball Enterprise Performance Management connector:

- The Crystal Ball Enterprise Performance Management connector works on only one workbook at a time.
- The connector supports Crystal Ball EPM optimization (with OptQuest) and forecasting (with Predictor). However, other tools such as Data Analysis and Batch Fit are not currently supported.
- For best results, work in a scenario that contains an updated copy of the database. What If scenarios are frequently created for this purpose. Avoid working directly in the production database.
- Before attempting to add Crystal Ball data to a query or form, be sure you understand the view and what you are updating. You can test this manually. Change data and submit it manually. If you want to include a calculation script in the model, you can run it manually as well. When updates occur as expected, you can define Crystal Ball assumptions and forecasts in place of the manual updates.
- You can pivot views and add to them. However, it is best to make changes before you add Crystal Ball data. If you change views with existing Crystal Ball data, select Define, and then Select to synchronize the Crystal Ball cell colors. Data synchronization occurs when you run a simulation.
- If two simulations run simultaneously against the same database, unexpected results can occur.
- If the view has duplicate members defined as assumptions—for example, you show data for January through March twice—only the values from the last occurrence will be submitted. Avoid defining duplicate data as Crystal Ball data cells.
- Crystal Ball Enterprise Performance Management connector supports the following Crystal Ball EPM commands: Define Assumption, Define Decision Variable, Define Forecast, Simulation Start/Continue/Single Step, and—in OptQuest—Start/Continue. You can also perform a Reset.
- You can clear Crystal Ball data but you cannot cut or paste it.

- If you have a license for Oracle Crystal Ball Decision Optimizer, Fusion Edition as well as Crystal Ball EPM, simulations and optimizations in Smart View run at Normal speed, although Extreme speed is the default with your license. This is also true if you are using Crystal Ball EPM Crystal Ball EPM and Decision Optimizer with Strategic Finance, as described in [Chapter 5, “Using Crystal Ball EPM with Strategic Finance.”](#)

Using the Crystal Ball Enterprise Performance Management Connector

- To use the Crystal Ball Enterprise Performance Management connector:
- 1 Start Crystal Ball EPM and Smart View following the instructions in [“Starting Crystal Ball EPM with Excel and Smart View” on page 13.](#)
 - 2 In Crystal Ball EPM, select **Tools**, and **More Tools**, and **Integration Tools**, and then **Enterprise Performance Management**.
 - 3 In the **Enterprise Performance Management – Preferences** dialog, click **Options**.
 - 4 Select **Enable Smart View integration** and **Preserve Crystal Ball highlighting**.
 - 5 **Optionally:** Click **Calculations** and select a calculation script.
 - 6 Within Smart View, select **Hyperion**, then **Options**.
 - 7 From the **Display** tab, select **UI Colors**, **Use Excel Formatting**, and **Retain Numeric Formatting**, and then click **OK**.
 - 8 Within Smart View, select **Hyperion**, and then **Data Source Manager**. (In Microsoft Excel 2007, click **Connect** on the Hyperion ribbon.)
 - 9 Connect to a data source and open an Essbase ad-hoc analysis query or a Oracle Hyperion Planning, Fusion Edition form as usual.
 - 10 Arrange the view to suit your analysis, and then use the Crystal Ball toolbar and menus to create Crystal Ball assumptions, forecasts, and decision variables if required. See the *Oracle Crystal Ball User's Guide*.
 - 11 Use the Crystal Ball toolbar and menus to run a simulation, optimization, or time-series forecast.
 - 12 View the resulting charts and tables to analyze the results as described in the *Oracle Crystal Ball User's Guide* and related documentation for OptQuest and Predictor.

For an example, see [“Crystal Ball Enterprise Performance Management Connector Example” on page 22.](#)

For related sections, see [“About the Crystal Ball Enterprise Performance Management Connector” on page 19.](#)

Crystal Ball Enterprise Performance Management Connector Example

Figure 6 shows a Smart View worksheet with monthly sales figures for four sales regions. The figures are loaded from an Essbase database. Crystal Ball assumptions have been defined for the monthly figures. Crystal Ball forecasts have been defined for the quarterly and yearly totals. This worksheet includes no formulas. Totals come from scripts and underlying logic. At the beginning of the simulation, Crystal Ball EPM stores existing data values, and then changes them according to the Crystal Ball assumptions defined in Oracle Hyperion Smart View for Office, Fusion Edition. The forecast data changes to reflect the changing data for January, February, and March. When the simulation ends, Crystal Ball EPM restores original values to Oracle Essbase. The generated distribution of values is retained for each forecast. These can be viewed and analyzed as described in “Smart View Data Linking Example” on page 16.

Figure 6 Smart View Worksheet with Essbase Data

	A	B	C	D	E	F	G
1			Scenario	Scenario	Scenario	Scenario	
2			East	West	South	Central	
3			Product	Product	Product	Product	
4			Sales	Sales	Sales	Sales	
5	Years	Jan	5555	10436	3976	10346	
6	Years	Feb	6920	10564	4082	10503	
7	Years	Mar	6921	10674	4055	10563	
8	Years	Qtr1	20621	31674	12113	31412	
9	Years	Periods	87398	132931	50846	129680	
10							
11							

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Using Crystal Ball EPM with Strategic Finance

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Introduction

This chapter describes how to use Crystal Ball EPM and the Strategic Finance Setup wizard to analyze Strategic Finance account data. This functionality is not available with other versions of Crystal Ball.

Running Crystal Ball EPM and the Strategic Finance Setup Wizard

Begin by installing Crystal Ball EPM version 11.1.1.1.00 or later using the instructions in the current *Oracle Crystal Ball Installation and Licensing Guide*. Follow the instructions to activate a license that is valid for Oracle Crystal Ball Enterprise Performance Management, Fusion Edition. A supported version of Microsoft Excel must also be installed on your computer.

Starting Crystal Ball

- To start Crystal Ball, select **Start**, then **All Programs**, then **Oracle Crystal Ball**, then **Crystal Ball**.

By default, Microsoft Excel 2003 or earlier appears with three Crystal Ball menus: Define, Run, and Analyze. The Crystal Ball toolbar also appears.

Note: If you are using Microsoft Excel 2007, Crystal Ball appears as a tab label above the Excel ribbon.

If Excel is already running, a new instance opens when you start Crystal Ball.

- To start Crystal Ball automatically each time you start Excel:
 - 1 Select **Start**, then **All Programs**, then **Oracle Crystal Ball**, then **Application Manager**.
 - 2 Check **When starting Microsoft Excel, automatically launch Crystal Ball**.
 - 3 Click **OK**.

Running the Strategic Finance Setup Wizard

- To start and use the Strategic Finance Setup wizard from within Crystal Ball:
 - 1 Select **Run**, then **Tools**, then **Strategic Finance Setup**.

The Strategic Finance Setup wizard opens.

 - 2 Complete the settings on each panel of the wizard to select an entity, a scenario, time periods, input assumptions, and output forecasts.
 - 3 When settings are complete, click **Finish**.

A Strategic Finance worksheet appears with the Crystal Ball toolbar. You can define Crystal Ball assumptions and forecasts, and then run simulations against the data.

As you work, you can click Help to display context-sensitive help for each wizard panel. On the Summary panel, you can check **Guide me through creating assumptions and forecasts** to display guide-card help that describes the main Crystal Ball procedures. You can click Help in any Crystal Ball dialog for more information, or choose Help, then Crystal Ball, then Crystal Ball Help. See the *Oracle Crystal Ball User's Guide* for detailed instructions.

For an example, see [“Strategic Finance Integration Example” on page 24](#).

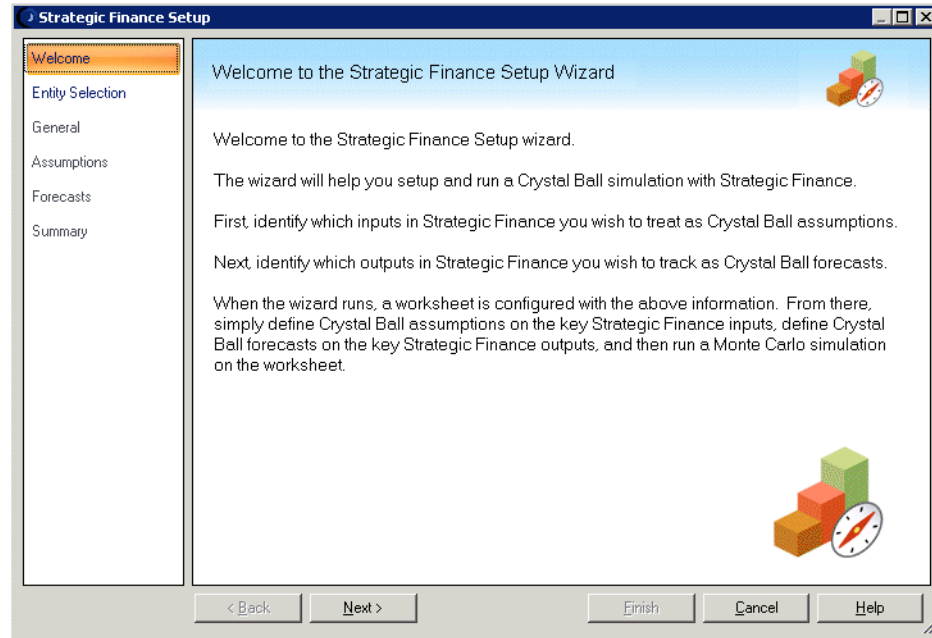
Strategic Finance Integration Example

Suppose you have a Strategic Finance entity with revenue and cost accounts projected out for a number of years beyond 2008. You can choose several accounts and years and estimate the probability of earning certain net incomes in a particular year. In this case, you want to analyze Unit Volume, Product Price, and Cost of Goods Sold for the years 2008, 2009, and 2010. You want to determine the probability of obtaining several ranges of net income.

- To perform these estimates:
 - 1 Start Crystal Ball and run the Strategic Finance Setup wizard ([“Running the Strategic Finance Setup Wizard” on page 24](#)).

If this is the first time you run the wizard, the Welcome panel opens ([Figure 7](#)).

Figure 7 Welcome Panel, Strategic Finance Setup Wizard



- 2 If the Welcome panel is displayed, click **Next** to display the Entity Selection panel, complete its settings, and then click **Next** to move to the next panel.

For this example, you make the following settings:

- On the Entity Selection panel, you can select a Strategic Finance entity, either on a local disk or a server. You select `sample.alc` on your computer.
 - On the General panel, you select the Base scenario and the years 2008, 2009, and 2010.
 - On the Assumptions panel, you can select input assumptions, variables you can't control. You select two accounts related to revenue, Unit Volume and Product Price, and one cost account, Cost of Goods Sold.
 - On the Forecasts panel, you select Net Income as the output forecast to investigate.
- 3 Click **Finish** to produce the Strategic Finance Worksheet (Figure 8). It shows the selected entity, scenario, and accounts.

Figure 8 Strategic Finance Worksheet

Strategic Finance Worksheet				
(For best results, do not modify the structure of this worksheet)				
Description:				
Entity:	C:\Hyperion\StrategicFinance\Client\Sample.alc			
Scenario:	Base			
Units:	Millions of Dollars			
Store folder:	C:\Documents and Settings\Administrator\My Documents			
Assumptions (Strategic Finance inputs)				
	2008	2009	2010	
300.00.000: Unit Volume	7	6	5	
305.00.000: Product Price	36.6	39.25	40	
1040.00.000: Cost of Goods Sold	74	72.5	72	
Forecasts (Strategic Finance outputs)				
	2008	2009	2010	
1750.00.000: Net Income	254.1163	160.0534	168.1336	

- You decide to define all the cells in the Assumptions group as Crystal Ball assumptions using the normal distribution and default mean and standard deviation.

The mean is the original cell value and the standard deviation is a tenth of that value.

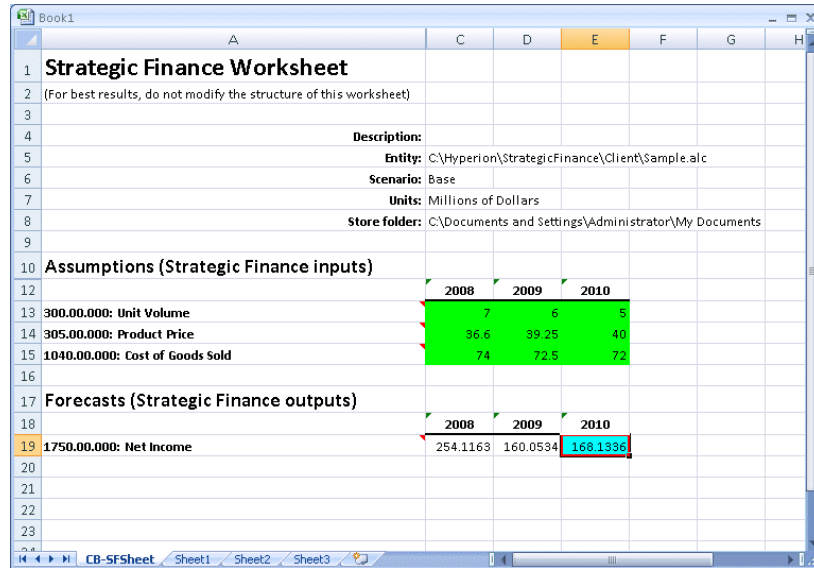
Note: Although this example uses the normal distribution, you will probably want to choose another distribution that is more appropriate for your data, or use the triangular distribution since it suits a variety of situations.

- Because you are only interested in Net Income for the year 2010, you select cell E19 and define it as a Crystal Ball forecast.

This works because it is related to at least some of the assumption cells.

Your Crystal Ball model is now complete. The assumption cells are green and the forecast cell is blue (Figure 9).

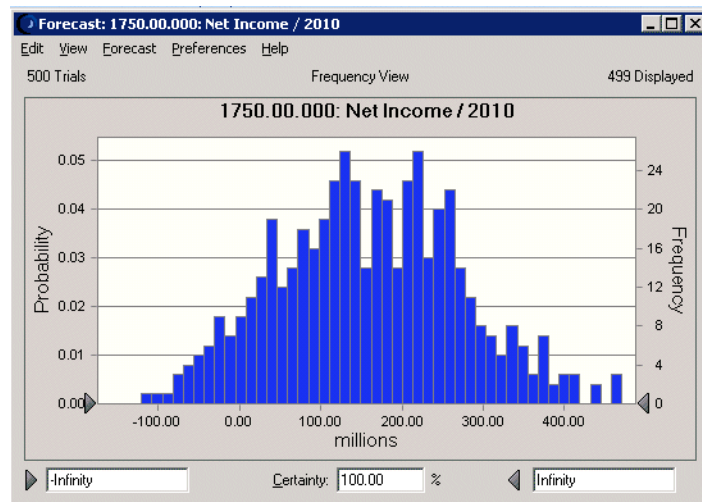
Figure 9 Strategic Finance Worksheet with Crystal Ball Data Cells



6 Now you can run a Crystal Ball simulation against the model.

You run 500 trials. A forecast chart appears for 2010 Net Income (Figure 10).

Figure 10 Crystal Ball Forecast Chart for 2010 Net Income



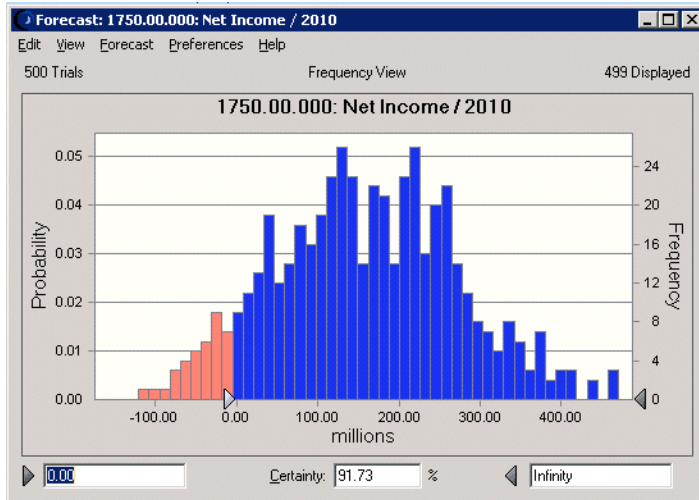
7 You type different values into the forecast chart to explore the probability of different events occurring.

As illustrated in the following steps, when you type values into the certainty minimum, certainty maximum, and the certainty value fields, you can determine the probability of achieving a value between the certainty minimum and maximum.

8 You learn the answers to several questions.

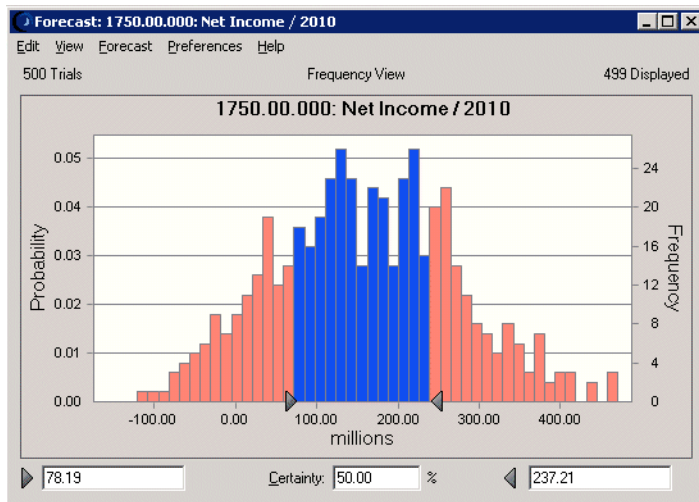
There is about a 92 percent probability of breaking even, achieving Net Income greater than 0 (Figure 11).

Figure 11 Forecast Chart for 2010 Net Income Greater than \$0



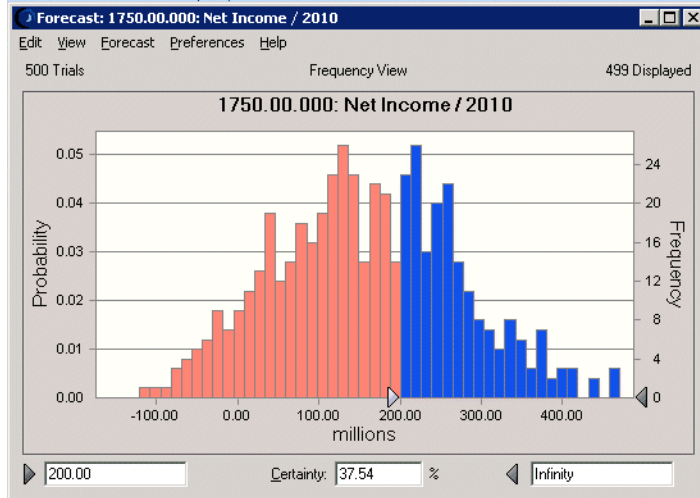
There is a 50% probability of earning Net Income between about 78 and 237 million dollars (Figure 12).

Figure 12 Forecast Chart for the Middle 50% of 2010 Net Income



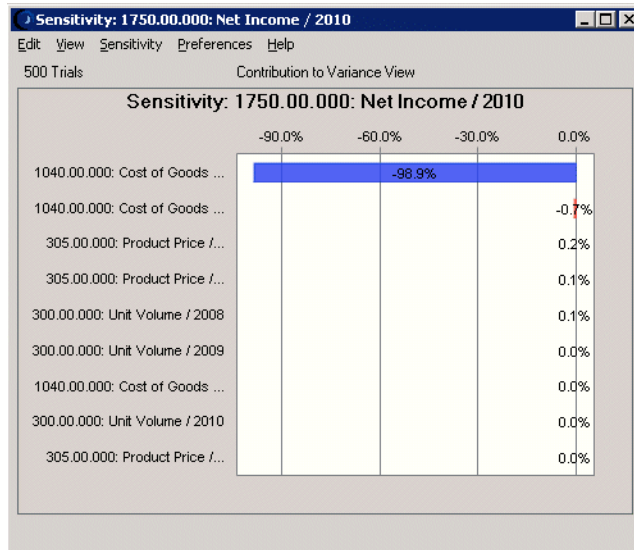
You determine that the probability of earning Net Income greater than 200 million dollars is just under 38% (Figure 13).

Figure 13 Forecast Chart for 2010 Net Income Greater than \$200 Million



Finally, you generate a sensitivity chart of all defined assumptions against the 2010 Net Income forecast (Figure 14). You see that 2010 Cost of Goods is responsible for over 98% of the variance in 2010 Net Income. You decide to focus efforts on reducing those costs.

Figure 14 Sensitivity Chart for 2010 Net Income



9 You close the Strategic Finance Worksheet and all the charts.

The selected Strategic Finance entity is now open. The next time you want to review the worksheet or charts, you can simply open Oracle Hyperion Strategic Finance, Fusion Edition and select Analysis, then What If Analysis, then Crystal Ball. You can then select Models to open a worksheet and Results to open the charts for further analysis of the simulation results. Each time you use the wizard to set up an Oracle Crystal Ball, Fusion Edition model and then run a simulation against that model, the results and the model are stored for future use.

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