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PeopleSoft

PeopleSoft FSCM 9.2: PeopleSoft Risk Management

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Access to Oracle Support

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Preface

Understanding the PeopleSoft Online Help and PeopleBooks

The PeopleSoft Online Help is a website that enables you to view all help content for PeopleSoft applications and PeopleTools. The help provides standard navigation and full-text searching, as well as context-sensitive online help for PeopleSoft users.

Hosted PeopleSoft Online Help

You can access the hosted PeopleSoft Online Help on the Oracle Help Center. The hosted PeopleSoft Online Help is updated on a regular schedule, ensuring that you have access to the most current documentation. This reduces the need to view separate documentation posts for application maintenance on My Oracle Support. The hosted PeopleSoft Online Help is available in English only.

To configure the context-sensitive help for your PeopleSoft applications to use the Oracle Help Center, see Configuring Context-Sensitive Help Using the Hosted Online Help Website.

Locally Installed PeopleSoft Online Help

If you're setting up an on-premises PeopleSoft environment, and your organization has firewall restrictions that prevent you from using the hosted PeopleSoft Online Help, you can install the online help locally. Installable PeopleSoft Online Help is made available with selected PeopleSoft Update Images and with PeopleTools releases for on-premises installations, through the Oracle Software Delivery Cloud.

Your installation documentation includes a chapter with instructions for how to install the online help for your business environment, and the documentation zip file may contain a README.txt file with additional installation instructions. See *PeopleSoft 9.2 Application Installation* for your database platform, "Installing PeopleSoft Online Help."

To configure the context-sensitive help for your PeopleSoft applications to use a locally installed online help website, see Configuring Context-Sensitive Help Using a Locally Installed Online Help Website.

Downloadable PeopleBook PDF Files

You can access downloadable PDF versions of the help content in the traditional PeopleBook format on the Oracle Help Center. The content in the PeopleBook PDFs is the same as the content in the PeopleSoft Online Help, but it has a different structure and it does not include the interactive navigation features that are available in the online help.

Common Help Documentation

Common help documentation contains information that applies to multiple applications. The two main types of common help are:

- Application Fundamentals

- Using PeopleSoft Applications

Most product families provide a set of application fundamentals help topics that discuss essential information about the setup and design of your system. This information applies to many or all applications in the PeopleSoft product family. Whether you are implementing a single application, some combination of applications within the product family, or the entire product family, you should be familiar with the contents of the appropriate application fundamentals help. They provide the starting points for fundamental implementation tasks.

In addition, the *PeopleTools: Applications User's Guide* introduces you to the various elements of the PeopleSoft Pure Internet Architecture. It also explains how to use the navigational hierarchy, components, and pages to perform basic functions as you navigate through the system. While your application or implementation may differ, the topics in this user's guide provide general information about using PeopleSoft applications.

Field and Control Definitions

PeopleSoft documentation includes definitions for most fields and controls that appear on application pages. These definitions describe how to use a field or control, where populated values come from, the effects of selecting certain values, and so on. If a field or control is not defined, then it either requires no additional explanation or is documented in a common elements section earlier in the documentation. For example, the Date field rarely requires additional explanation and may not be defined in the documentation for some pages.

Typographical Conventions

The following table describes the typographical conventions that are used in the online help.

Typographical Convention	*Description*
Key+Key	Indicates a key combination action. For example, a plus sign (+) between keys means that you must hold down the first key while you press the second key. For **Alt+W,** hold down the **Alt** key while you press the **W** key.
. . . (ellipses)	Indicate that the preceding item or series can be repeated any number of times in PeopleCode syntax.
{ } (curly braces)	Indicate a choice between two options in PeopleCode syntax. Options are separated by a pipe (|).
[ ] (square brackets)	Indicate optional items in PeopleCode syntax.
& (ampersand)	When placed before a parameter in PeopleCode syntax, an ampersand indicates that the parameter is an already instantiated object. Ampersands also precede all PeopleCode variables.

Typographical Convention	Description
⇒	This continuation character has been inserted at the end of a line of code that has been wrapped at the page margin. The code should be viewed or entered as a single, continuous line of code without the continuation character.

ISO Country and Currency Codes

PeopleSoft Online Help topics use International Organization for Standardization (ISO) country and currency codes to identify country-specific information and monetary amounts.

ISO country codes may appear as country identifiers, and ISO currency codes may appear as currency identifiers in your PeopleSoft documentation. Reference to an ISO country code in your documentation does not imply that your application includes every ISO country code. The following example is a country-specific heading: "(FRA) Hiring an Employee."

The PeopleSoft Currency Code table (CURRENCY_CD_TBL) contains sample currency code data. The Currency Code table is based on ISO Standard 4217, "Codes for the representation of currencies," and also relies on ISO country codes in the Country table (COUNTRY_TBL). The navigation to the pages where you maintain currency code and country information depends on which PeopleSoft applications you are using. To access the pages for maintaining the Currency Code and Country tables, consult the online help for your applications for more information.

Region and Industry Identifiers

Information that applies only to a specific region or industry is preceded by a standard identifier in parentheses. This identifier typically appears at the beginning of a section heading, but it may also appear at the beginning of a note or other text.

Example of a region-specific heading: "(Latin America) Setting Up Depreciation"

Region Identifiers

Regions are identified by the region name. The following region identifiers may appear in the PeopleSoft Online Help:

• Asia Pacific

• Europe

• Latin America

• North America

Industry Identifiers

Industries are identified by the industry name or by an abbreviation for that industry. The following industry identifiers may appear in the PeopleSoft Online Help:

• USF (U.S. Federal)

- E&G (Education and Government)

Translations and Embedded Help

PeopleSoft 9.2 software applications include translated embedded help. With the 9.2 release, PeopleSoft aligns with the other Oracle applications by focusing our translation efforts on embedded help. We are not planning to translate our traditional online help and PeopleBooks documentation. Instead we offer very direct translated help at crucial spots within our application through our embedded help widgets. Additionally, we have a one-to-one mapping of application and help translations, meaning that the software and embedded help translation footprint is identical—something we were never able to accomplish in the past.

Using and Managing the PeopleSoft Online Help

Select About This Help in the left navigation panel on any page in the PeopleSoft Online Help to see information on the following topics:

- Using the PeopleSoft Online Help.

- Managing hosted Online Help.

- Managing locally installed PeopleSoft Online Help.

PeopleSoft FSCM Related Links

Oracle Help Center

Hosted Online Help

PeopleSoft Information Portal

My Oracle Support

Financial and Supply Chain Management information for Search Framework search engine can be found in PeopleSoft Application Fundamentals documentation. For application specific information, see the "Understanding Keyword Search within Components " (Application Fundamentals) topic.

PeopleSoft Training from Oracle University

PeopleSoft Video Feature Overviews on YouTube

PeopleSoft Business Process Maps (Microsoft Visio format)

PeopleSoft Spotlight Series

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Chapter 1

Getting Started with PeopleSoft Risk Management

Risk Management Business Processes

Risk Management provides these business processes:

- Risk analysis and hedge determination.

- Position limit notification.

- Hedge transaction compliance using FAS 133 or IAS 39 Accounting standards.

- Hedge and hedge group creation and maintenance.

This documentation covers these business processes in the business process topics.

Risk Management Integrations

Risk Management integrates with these PeopleSoft applications:

- Cash Management

- Deal Management

- General Ledger

This documentation covers integration considerations in the implementation topics.

Supplemental information about third-party application integrations is located on Oracle's My Oracle Support website.

Risk Management Implementation

PeopleSoft Setup Manager enables you to generate a list of setup tasks for your organization based on the features that you are implementing. The setup tasks include the components that you must set up, listed in the order in which you must enter data into the component tables, and links to the corresponding PeopleBook documentation.

Before running Setup Manager to generate a list of PeopleSoft setup tasks, you need to set up PeopleSoft banks functionality, Cash Management, and Deal Management.

Other Sources of Information

In the planning phase of your implementation, take advantage of all PeopleSoft sources of information, including the installation guides, table-loading sequences, data models, and business process maps.

See also the product documentation for *PeopleTools: Setup Manager* and *PeopleTools: Component Interfaces*.

Related Links

"Banks Setup and Processing Overview" (PeopleSoft Banks Setup and Processing)
"Cash Management Implementation" (PeopleSoft Cash Management)
"Deal Management Implementation" (PeopleSoft Deal Management)

Chapter 2

Defining Risk Management Processing Options

Understanding Risk Analytics Setup

This section lists prerequisites and discusses the risk analytics setup process.

Prerequisites for Risk Analytics Setup

Before using Risk Management, you must:

- Set up banks and counterparties.

- Set up the Cash Management and Deal Management products.

- Set up third-party analytics.

Related Links

"Understanding Bank Setup" (PeopleSoft Banks Setup and Processing)
"Understanding External, Internal, and Netting Accounts" (PeopleSoft Banks Setup and Processing)
"Understanding Additional Bank Functionality" (PeopleSoft Banks Setup and Processing)
"Understanding Deal Processing" (PeopleSoft Deal Management)
"Establishing Cash Management Options" (PeopleSoft Cash Management)

Risk Analytics Setup Process

Risk Management is a data-driven application for evaluating risk. You define how the application works with risk data and models it through capture mechanisms. Risk Management can accommodate the models you derive to address the dynamic nature of the market and the varying effects of the types of risk.

This is an overview of the risk analytics setup process:

- Define hedge sources and hedge items.

- Set up risk analytics.

  You can access and communicate with third-party analytics using three methods:

  - Microsoft Excel.

  - Component Object Model (COM) automation.

  - Flat File Export.

Navigating to Risk Management Setup Pages in Treasury Management

This table provides a listing of custom navigation folders in the Treasury Definitions Center that contain pages that are used to set up Risk Management.

Folder Name	Navigation	Usage	Setup Information
Treasury Definitions Center	**Treasury Management Center**	Access primary Risk Management setup pages from a central location. For easier retrieval, you can save this page in the My Favorites folder on the portal navigation menu.	
Analytics	**Click Analytics.**	Access pages to define analytic calculations, functions, and supplier information used in risk analysis.	See Setting Up Risk Analytics.
Hedges	**Click Hedges.**	Access pages to set up hedge groups, item sources, and strategies.	See Setting Up Risk Analytics.

Setting Up Hedges

To define hedge information, use the following components:

*   Hedge Strategies component (HDG_STRATGY_PNG_GBL).

*   Hedge Item Sources component (HDG_SRC_PNG).

This topic discusses how to define hedge strategies, if desired, and define hedge item sources.

Pages Used to Set Up Hedges

Page Name	Definition Name	Usage
Hedge Strategy Page	HDG_STRATEGY_PNL	Record any relevant information that a third-party needs to understand the course of action as purposeful and meriting of IAS 39 or FAS 133 special accounting considerations. You can document qualitative concerns and link them to the quantitative dimensions of the hedging activities.

Page Name	Definition Name	Usage
Hedged Item Source Page	HDG_SRC_PNL	Set up the risk evaluation and accounting of the hedged item.

Hedge Strategy Page

Use the Hedge Strategy page (HDG_STRATEGY_PNL) to record any relevant information that a third-party needs to understand the course of action as purposeful and meriting of IAS 39 or FAS 133 special accounting considerations.

You can document qualitative concerns and link them to the quantitative dimensions of the hedging activities.

Navigation:

Risk Management > **Administer Risk** > **Hedge Strategies** > **Hedge Strategies**

This example illustrates the fields and controls on the Hedge Strategy page. You can find definitions for the fields and controls later on this page.

Field or Control	Description
Description and **Strategy**	Summarize the reasons for your choices. Use the **Strategy** field to detail those reasons.

Note: Paragraph 44 of FAS 133 states: "Qualitative disclosures about an entity's objectives and strategies for using derivative instruments may be more meaningful if such objectives and strategies are described in the context of an entity's overall risk management profile. If appropriate, an entity is encouraged, but not required, to provide such additional qualitative disclosures [44]."

Risks You Can Hedge

According to ¶ 21(a-f), you can hedge only these four risks:

Field or Control	Description
Changes in Overall Fair Value	Select to hedge nonfinancial risks, such as commodities. Selecting this check box automatically clears any other hedged risk options that are selected.
Interest Rate Risk	Select to hedge risk of instability in interest rates.
Foreign Currency Exchange Risk	Select to hedge risk of fluctuation of foreign currency exchange rates.
Credit Risk	Select to hedge risk of credit variability.
Other and **Risk Name**	Enter a name in the **Other** field to designate another type of risk investment to be hedged.
Comments	Click to access the Details page to record details of the hedged risk entered in the **Risk Name** field.

Hedged Item Source Page

Use the Hedged Item Source page (HDG_SRC_PNL) to set up the risk evaluation and accounting of the hedged item.

Navigation:

Risk Management > **Administer Risk** > **Hedged Item Sources** > **Hedged Item Sources**

This example illustrates the fields and controls on the Hedged Item Source page. You can find definitions for the fields and controls later on this page.

Note: The fields available on this page depend on the FAS 133 Hedge Type that you select.

This table shows the association between the selected hedge type and a prompt table:

FAS 133 Hedge Type	Prompt Table
Cash Flow Hedges *FX (foreign exchange) Cash Flow Hedges*	Select a record.
Fair Value Hedge *FX F V (foreign exchange fair value) Available-for-Sale* *FX F V (foreign exchange fair value of Firm Commitment)*	Select a record, and then define both the **Hedged Item Type** and the **Fair Value Adjustment Type.** **Hedged Item Type:** Select *Recognized Asset or Liability, Forecasted Transaction* or *Unrecognized Firm Commitment.* **Fair Value Adjustment Type:** Select *Per Period Fair Value, Cumulative Amortized Cost* or *Cumulative Fair Value.*

Accounting Templates

Field or Control	Description
Do Accounting	Select the checkbox next to the appropriate **Accounting Event Type,** and then select an **Accounting Template.** Available accounting event types depend on the hedge type that you selected.

Hedge Type and Associated Accounting Event Types

This table shows the association between the selected hedge type and an accounting event types:

FAS 133 Hedge Type	*Accounting Event Type*
Cash Flow Hedges *FX Cash Flow Hedges*	*AOCI Adjustment* *AOCI Reclassification* *Will Not Occur- AOCI Reclassify.*
FX F V of Available-for-Sale	*Fair Value Hedged Item G/L* *Amortize Adj of Carrying*
FX F V of Firm Commitment *Fair Value Hedge*	*Fair Value Hedged Item G/L* *Firm Commitment to Carrying* *Amortize Adj of Carrying* *Derecognize Firm Commitment.*

Analytic Calculations

Field or Control	*Description*
Analytics Mode	Enter a mode definition.
Analytics Supplier	Associate an installed third-party analytics supplier and select an associated calculation in the **Calculation** field.

Setting Up Risk Analytics

Pages Used to Set Up Analytics

Page Name	*Definition Name*	*Usage*
Define Structures Page	MTM_STRUCTDEFN_PNL	Define the analytic structures that your organization uses when assigning valuation parameters.
Analytic SQL Page	MTM_SQLCNTRL_PNL	Assign SQL statements to retrieve the discrete deal and market rate information. PeopleSoft tables store this data.

Page Name	Definition Name	Usage
Supplier Information Page	MTM_PRODNM_PNL	Enter general information about third-party analytics suppliers.
Supplier Parameters Page	MTM_PARMNM_PNL	Establish parameters used by functions associated with a specific supplier.
Analytic Functions (Excel) Page	MTM_FUNC_HDR_EXL_P	Map your analytics to Microsoft Excel formatting.
Analytic Functions (Excel) - Parameters Page	MTM_FUNC_DFN_EXL_P	Assign parameters to the Microsoft Excel-based analytics.
Analytic Functions (COM) Page	MTM_FUNC_HDR_COM_P	Set up analytics using the Component Object Model (COM) format.
Analytic Functions (COM) - Parameters Page	MTM_FUNC_DFN_COM_P	Assign parameters to COM-based analytics.
Analytic Functions (File Exp) Page	MTM_FUNC_HDR_FSI_P	Set up analytics using file export. This method uses analytic functions provided by third-party tools. If you specified an interface method of File Export for either supplier, you can add extra functions to apply to the same or different parameters, thereby increasing the complexity of analysis.
Analytic Functions (File Exp) - Parameters Page	MTM_FUNC_DFN_FSI_P	Assign parameters to the analytic functions using file export.
Analytic Calculations - Program Page	MTM_PROGRAM_DEFN	Create arithmetical functions to identify and measure risk as well as conduct macroeconomic analyses. For example, you can create what-if cases for which interest rate changes cause variations in demand.
Analytic Calculations - Steps Page	MTM_PROG_STEPS	Establish instrument to analytic program mapping.
Program Function Details Page	MTM_PROG_FUNC_DETL	Establish evaluation type values for functions.
Instrument Analytics Page	INSTR_MTMDEFN_PNL	Map analytic functions to specific instrument types.

Understanding Analytic Parameters, Analytic Structures, and Interface Methods

To define risk analytics, use the following components:

- Instrument Analytics (INSTR_MTMDEFN_PNL_GBL).

- Analytic Calculations (MTM_PROGRAM_DEFN_GBL).

- Analytic Functions (COM) (MTM_FUNC_HDR_COM_GBL).

- Analytic Functions (Excel) (MTM_FUNC_HDR_EXL_GBL).

- Analytic Functions (File Exp) (MTM_FUNC_HDR_FLE_GBL).

- Analytic SQL (MTM_SQLCNTRL_PNL_GBL).

- Analytic Structures (MTM_STRUCTDEFN_PNL_GBL).

- Supplier Information (MTM_PRODNM_PNL_GBL).

- Supplier Parameters (MTM_PARMNM_PNL_GBL).

For information about defining deal analytic functions on the Deal Analytics page, see Reevaluating Deals Analytics.

This flowchart illustrates the setup process for enterprise risk management:

Setup Process for Enterprise Risk Management
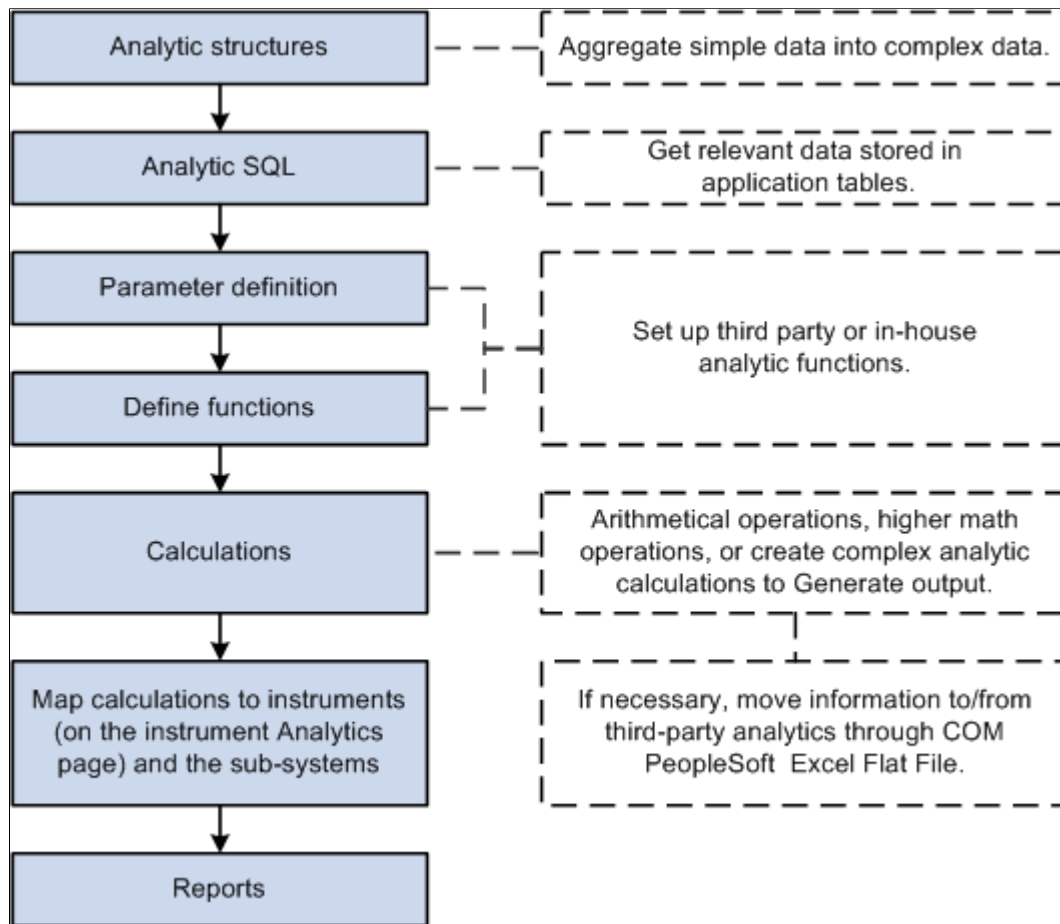
The first step to running analytics is establishing the analytic structures' definitions.

By the time you are ready to perform this step, you may have chosen your analytic solution vendor and gone through supplier-specific functional data requirements. Most analytic functions use structured parameters as inputs.

Analytic Parameters

Analytic parameters can range from generic yield curves with a maturity date and corresponding rate as component fields to complex cash flow sets and supplier-specific structures that have more than three fields as components. For example, a yield curve parameter that is being passed to a function could look like this:

Date	Rate
March 10, 2004	5.60000%
March 11, 2004	5.60043%
April 11, 2004	5.60210%

Date	Rate
July 11, 2004	5.60800%
March 10, 2005	5.61000%
March 10, 2006	5.80000%
March 10, 2007	6.30000%

Analytic Structures

To enable the use of such a parameter, we define it as a structure. Structures enable the definition of complex parameters required by the analytic solution functions in a specific format. PeopleSoft tables store the application and market data as normal fields and not as structures. This step enables you to combine the simple data types stored in the PeopleSoft rate tables and to build the complex data structures required by the analytic supplier that you specify.

In a later step, you can use SQL statements to retrieve complex data parameters from the application tables and incorporate these parameters into their respective functions.

Interface Methods

Set up parameters for communicating with third-party analytics using one of three methods:

- Microsoft Excel.

- Component Object Model (COM).

- Flat File Export.

Related Links
Reevaluating Deals Analytics
"Managing Accounting Entries" (PeopleSoft Cash Management)
"Establishing Accounting Templates" (PeopleSoft Cash Management)

Common Elements Used in Analytics

Field or Control	Description
Sequence	Displays the numerical order in which a process runs.
Character	Enter an alphanumeric character.
Structure	Enter a predefined analytic structure.

Field or Control	Description
Data Type	Select from *Character, Date,* or *Number.* The data type corresponds to the value of the characters in the data tables.
MTM Func Comments (mark-to-market function comments)	Enter comments about parameters, any limitations or exceptions to these parameters, and general comments about functions.

Define Structures Page

Use the Define Structures page (MTM_STRUCTDEFN_PNL) to define the analytic structures that your organization uses when assigning valuation parameters.

Navigation:

Risk Management > **Structure Analytics** > **Analytic Structures** > **Define Structures**

This example illustrates the fields and controls on the Define Structures page. You can find definitions for the fields and controls later on this page.

Field or Control	Description
Field Name	Displays the name associated with the data field extracted from the market rate or deal data tables.
Data Type	Corresponds to the value of the characters in the data tables.

Analytic SQL Page

Use the Analytic SQL page (MTM_SQLCNTRL_PNL) to assign SQL statements to retrieve the discrete deal and market rate information.

PeopleSoft tables store these data.

Navigation:

Risk Management > **Structure Analytics** > **Analytic SQL** > **Analytic SQL**

This example illustrates the fields and controls on the Analytic SQL page. You can find definitions for the fields and controls later on this page.

You need to retrieve specific parameters from the deal and forward these parameters to the analytic function to use the analytic functions. Risk Management delivers a standard set of parameter SQL statements that retrieve the discrete deal and market rate information and store the data in PeopleSoft tables. You can use the SQL statements provided or devise and implement new parameter data, depending on your business requirements.

Field or Control	Description
SQL Type	Select *Select from Database* if you wish to retrieve data from the database, or select *Save to Database* if you are saving data using an Update or Insert statement.
Return Data Type	This field is available only if you are creating a Select from Database SQL statement. Select a *Number, Date, Structure,* or *Char* (character). If you select *Structure,* the **Structure** field becomes available. Enter a structure that you defined on the Analytic Structures page.
SQL Statement	Displays discrete deal and market rate information. You can view and edit this SQL statement, as necessary.

Supplier Information Page

Use the Supplier Information page (MTM_PRODNM_PNL) to enter general information about third-party analytics suppliers.

Navigation:

Risk Management > **Structure Analytics** > **Supplier Information** > **Supplier Information**

This example illustrates the fields and controls on the Supplier Information page. You can find definitions for the fields and controls later on this page.

This table describes the **Interface** methods:

Interface Method	Description	Conditions
COM (Component Object Model)	Creates objects that can be accessed and used by another COM-compliant application. Uses analytic functions provided by third-party tools.	Selecting this option disables the **Valuation Method, Workbook Required,** and **EDI Staging Table** fields.
Excel Add-In	Calculates analytics for the deal using third-party Microsoft Excel calculations.	Selecting this option enables the **Valuation Method** and **Workbook Required** fields and disables the **EDI Staging Table** field. Select a valuation method of either *Function* or *Macro,* and select the **Workbook Required** check box, if applicable. The options you set depend upon the third-party vendor that you are using.
File Format	Provides a staging table location for deal attributes. Risk Management stores the attributes in a staging table and exports them in a flat file. Uses analytic functions provided by third-party tools.	Selecting this option disables **Valuation Method** and **Workbook Required** fields and enables the **EDI Staging Table** field. Identify the location of the EDI staging table where you plan to store the deal data for export.

Field or Control	Description
EDI Staging Table	Used when the File Format Interface method is selected. This is the staging table used to store deal attributes that are to be used to create the file to be exported.
Valuation Method	Used when the Excel Add-In Interface method is selected. Directs the system to either call a specified Macro or built-in Excel function.

Field or Control	Description
File Path	The directory where an exported file will be placed.

Fields in the **Contact Information** group box are optional.

Supplier Parameters Page

Use the Supplier Parameters page (MTM_PARMNM_PNL) to establish parameters used by functions associated with a specific supplier.

Navigation:

Risk Management > **Structure Analytics** > **Supplier Parameters** > **Supplier Parameters**

This example illustrates the fields and controls on the Supplier Parameters page. You can find definitions for the fields and controls later on this page.

The field attributes for this page vary depending on the values you select in the **Data Type** and **Evaluation Type** fields. Use this table as a guide:

Data Type	Evaluation Type	Available Fields
Character	Use Constant.	Constant
(blank)	Use SQL.	Analytic SQL ID, Translate Y/N
Date	Use Constant.	Constant
(blank)	Use SQL.	Analytic SQL ID
Number	Use Constant.	Constant

Data Type	Evaluation Type	Available Fields
(blank)	Use SQL.	Analytic SQL ID, Translate Y/N
Structure	If you select *Structure* as the data type, you cannot select an evaluation type.	Structure, Analytic SQL ID

Field or Control	Description
Use SQL	Select SQL statements in the **Analytic SQL ID** field from those provided by Risk Management or additional statements that you created.
Use Constant	Select a value in the **Constant** field. You can use a constant value not associated with PeopleSoft tables, or use the same value for all deals regardless of the instrument type or any other conditions.
Translate Y/N (translate yes/no)	Select to enable the **Parameter Value X-Ref** group box, which provides a field for PeopleSoft- and Supplier-specific entries. Enter information specific to Risk Management in the **PeopleSoft** field and information provided from the third-party supplier in the **Supplier** field. For example, PeopleSoft tables store an option Buy or Sell as a Purchase (P) or Write (W) XLAT value. Supplier "X" wants to see and use the values as a Buy (B) or Sell (S). The PeopleSoft system translates the stored values (P) or (W) to Supplier "X" accepted values of (B) or (S).
File Export Field	Enter the mapping sequence used to map the parameter to a specific field in the staging table for file exports. This field is available only if you select a supplier with *File Format* as the interface method on the Supplier Information page.

Analytic Functions (Excel) Page

Use the Analytic Functions (Excel) page (MTM_FUNC_HDR_EXL_P) to map your analytics to Microsoft Excel formatting.

Navigation:

Risk Management > **Structure Analytics** > **Analytic Functions (Excel)**

This example illustrates the fields and controls on the Analytic Functions (Excel) page. You can find definitions for the fields and controls later on this page.

If you specified an interface method of *Excel Add-In* for a vendor, you can add extra functions to apply to the same or different parameters, thereby increasing the complexity of analysis.

Field or Control	Description
Return Data Type	Select *Number, Date, Structure,* or *Char* (character). If you select *Structure,* the **Structure** field becomes available. Enter a structure that you defined on the Analytic Structures page.
Addin	Select to incorporate an add-in to the Microsoft Excel third-party analytics. If you selected *Macro* on the Vendor Information page, complete the **Workbook** and **Worksheet** fields. Enter the value of the **Cell Location** field (on the Analytic Functions (Excel) - Parameters page) in the **Output Range** field.

Analytic Functions (Excel) - Parameters Page

Use the Analytic Functions (Excel) - Parameters page (MTM_FUNC_DFN_EXL_P) to assign parameters to the Microsoft Excel-based analytics.

Navigation:

Select the Parameters tab on the Analytic Functions (Excel) page.

This example illustrates the fields and controls on the Analytic Functions (Excel) - Parameters page. You can find definitions for the fields and controls later on this page.

Each third-party analytic function requires parameters to calculate an analytic value for a deal. Suppliers provide functions, and the PeopleSoft system uses the deal attributes stored in tables as parameters.

Specifying Function Calls

Field or Control	Description
Function Call	If a supplier uses functions, you must concatenate &P with the sequential parameter number by separating each parameter with a comma in the **Function Call** field. The function call expands into a Microsoft Excel-compatible function call when you save. For example, if the function call is *Func (&P1, &P2, &P3),* the values in the **Cell Range** field for these parameters are *C1, C2,* and *C3.* Internally, this cell range converts into *Func (R1C3:R1C3, R2C3:R2C3, R3C3:R3C3).* This field is hidden, and Microsoft Excel uses it. The length of the field is equivalent to the maximum permissible character limit allowed for a Microsoft Excel cell (254 characters).
Cell Location	Displays the output sheet name. Enter this value in the **Output Range** field on the Analytic Functions (Excel) page.

Mapping Parameters

Field or Control	Description
Parameter Name	Select a parameter name value associated with the specified function.
Required	Indicates those function parameters that are required. Certain third-party vendor applications fail if you do not export specific required function parameters to their application.
Absolute	Select to convert a signed numeric value to an absolute numeric value.

Analytic Functions (COM) Page

Use the Analytic Functions (COM) page (MTM_FUNC_HDR_COM_P) to set up analytics using the Component Object Model (COM) format.

Navigation:

Risk Management > **Structure Analytics** > **Analytic Functions (COM)**

This example illustrates the fields and controls on the Analytic Functions (COM) page. You can find definitions for the fields and controls later on this page.

This method uses analytic functions provided by third-party tools. If you specified a COM interface method, you can add extra functions to apply to the same or different parameters, thereby increasing the complexity of analysis.

Field or Control	Description
Return Data Type	Select *Number, Date, Structure,* or *Char* (character). If you select *Structure,* the **Structure** field becomes available. Enter a structure that you defined on the Analytic Structures page.

Analytic Functions (COM) - Parameters Page

Use the Analytic Functions (COM) - Parameters page (MTM_FUNC_DFN_COM_P) to assign parameters to COM-based analytics.

Navigation:

Select the Parameters tab on the Analytics Using COM page.

This example illustrates the fields and controls on the Analytic Functions (COM) - Parameters page. You can find definitions for the fields and controls later on this page.

Field or Control	Description
Object Name	Enter the component object model name.
Method/Property	Specify whether to call a method, set or get a property. If you select *Get Property* or *Set Property,* enter the **Property** name. If you select *Method,* enter the **Method** name.

Related Links
Analytic Functions (Excel) - Parameters Page

Analytic Calculations - Steps Page

Use the Analytic Calculations - Steps page (MTM_PROG_STEPS) to establish instrument to analytic program mapping.

Navigation:

Risk Management > **Structure Analytics** > **Analytic Calculations** > **Steps**

This example illustrates the fields and controls on the Analytic Calculations - Steps page. You can find definitions for the fields and controls later on this page.

This page enables you to further define analytic rules for a specific supplier using existing predefined calculations. You can create relationships between mathematical operands using mathematical operators. To do this:

1. Define the step number.

2. Define the variable.

   Variables symbolically refer to figures, which must be generated through calculations. Use of variables improves system performance when rendering complex mathematical operations. The available mathematical operations that you can symbolize through variables are determined by the operands that you select.

3. Select an operand type.

   Operands are the components of mathematical operations. There are four types of operands:

   • *Constant:* Brings a particular figure into the formulations.

   • *Function:* Runs provided functions, such as executing valuation models or setting up yield curves.

     The Function operand can be used only as the first operand, the primary mathematical process, which is then adjusted by given quantities. Selecting *Function* as an operand activates the **Parameter** link, which enables you to edit a provided function according to your business needs.

   • *SQL:* Uses SQL.

   • *Variable:* Uses a specified variable.

4. Define an operator.

   Operators refer to the symbols of mathematical relationships linking operands. In addition to the four standard math operators (**+** = Add, **-** = Subtract, **x** = Multiply, **/** = Divide), five additional operators are provided:

   • *Log:* Any base logs.

   • *Exp:* Enables you to calculate discount rates.

   • *Min:* Lowest operand.

   • *Max:* Creates operand.

- *Return:* Enables you to make the result of that step to return to the underlying calculation (PeopleCode) for further use.

5. Define an operand value.

6. Select the **Save** check box to store that step's data as temporary data in a table.

Program Function Details Page

Use the Program Function Details page (MTM_PROG_FUNC_DETL) to establish evaluation type values for functions.

Navigation:

Click the **Function Details/Parameters** link on the Analytic Calculations - Steps page.

This example illustrates the fields and controls on the Program Function Details page. You can find definitions for the fields and controls later on this page.

Field or Control	Description
Evaluation Type	You can edit the evaluation type of a function's sub-function parameters, according to your business needs. • *Use Constant:* Select to specify a constant value. • *Use SQL:* Select to specify a constant value. • *Use Variable:* Select to specify a variable.

Instrument Analytics Page

Use the Instrument Analytics page (INSTR_MTMDEFN_PNL) to map analytic functions to specific instrument types.

Navigation:

Risk Management > **Structure Analytics** > **Instrument Analytics** > **Instrument Analytics**

This example illustrates the fields and controls on the Instrument Analytics page. You can find definitions for the fields and controls later on this page.

Field or Control	Description
Fair Value Adjustment Type	Select the fair value adjustment type to be used for each instrument type. Values are: • *Cumulative Amortized Cost* • *Cumulative Fair Value* • *Per Period Fair Value* If the instrument requires a cumulative fair value adjustment, the system determines whether accounting reversals are needed for rows that have an associated accounting event. For more information, see Reevaluating Deals Analytics and "Understanding Reverse Accounting" (PeopleSoft Cash Management).
VaR Export SQL	This is the SQL used to generate the VaR export file. The results of the SQL are used to create a comma delimited file to be used by the VaR process to calculate VaR.

Details

Field or Control	Description
Function Usage	Select the function usage for this instrument. If you have more than one function sequence, the sequences must be from the same vendor. Select from the following: *Convexity:* Represents the amount that an instrument's price sensitivity differs from that implied by the instrument's duration. Mathematically, it is the second derivative of price with respect to yield. For a bond, it measures the curvature of the price/yield relationship of a bond's cash flows. *Credit Risk:* Describes the credit risk associated with an instrument. *Delta:* Describes an option premium's sensitivity to changes in the price of the underlying asset. It is the amount of the underlying necessary to hedge small changes in the option price for small movements. *Duration:* Represents the average life of the present values of future cash flows from an instrument. Mathematically, it is the first derivative of price with respect to yield. *File Export:* Processes deal attributes into a flat file for use by third-party applications. If you select *File Export,* the fields in the **Rate/Index Type** group box are unavailable. *MTM* (mark-to-market): Calculates the value of the financial instrument based on the current market price of the underlying asset. *MTM-A* (mark-to-market accounting): Calculates the clean value of the financial instrument based on the current market price of the underlying asset for accounting purposes. This value does not contain any accrued interest. *Pricing:* Values an instrument to observe and analyzes its worth. This may or may not involve using current market prices. *Market Risk:* Analyzes the impact of changes in market conditions on the firm.

Field or Control	Description
	Operational Risk: Measures the risk arising out of operational conditions and human interaction. *Other:* Indicates any other type of risk; for example, legal, political, and so on.
Calculation	Specify an analytic calculation.

Rate/Index Type

Field or Control	Description
Data Purpose	Select *Cmdty* (commodity), *Credit, FX* (foreign exchange), *Other, Price, VO* (volatility), or *Yield.*
Market Rate Index and Rate Type	Specify options for these fields to dictate the mapping of market rates to the instrument types.

Chapter 3

Understanding Hedge Analytics and Accounting

Understanding Hedge Analytics and Hedge Accounting

Every enterprise's assets and liabilities are exposed to fluctuations in interest rates, exchange rates, or commodity prices. An enterprise will always have natural hedges, but in most cases it is necessary to manage risk proactively by taking a position in a derivatives contract, insurance, and so on. Not entering into such contracts actually increases overall risk.

Derivatives, such as foreign exchange forward and future contracts, options, or currency swaps can reduce deviations from expected earnings, but the enterprise needs to implement risk management systems and procedures to manage those transactions.

Risk Management provides the IAS 39 and FAS 133 Hedge Accounting features to address your organization's economic realities and the regulatory requirements associated with derivative instruments.

FAS 133 provides accounting standards for working with hedge transactions and requires certain compliance elements that provide stakeholders with windows into the workings and financial progress of the enterprise's risk management. Under FAS 133, you use special accounting for hedged transactions, decreasing the income statement volatility otherwise introduced by mark-to-market accounting.

Since PeopleSoft 8.0, Treasury has provided a hedge accounting solution based on FAS 133 guidelines, which focuses on accounting for derivatives and hedging activities. IAS 39 takes a broader view on accounting for financial instruments in general, and extends the areas addressed in FAS 133. There are, however, some differences that have a significant impact on reported performance.

IAS 39 imposes strict regulations on the use of hedge accounting, even for hedges that are economically effective. IAS 39 also imposes requirements for a wide range of instruments, including all derivatives, an enterprise's investments in debt and equity securities, financial assets and liabilities held for trading, and a company's own debt. It also covers short-term instruments such as trade receivables and payables.

Whether an organization complies with FAS 133 or IAS 39 regulations, PeopleSoft provides the ability to review investment and hedging strategies, and implement accounting systems to meet the processes and documentation requirements.

Related Links

Understanding Hedge Analytics and Hedge Accounting
Creating Hedges
Maintaining Hedges
Accounting Treatments for Complying with IAS 39

Risk Management and Hedge Accounting

This section discusses:

- FAS 133 Documentation requirements.

- Periodic effectiveness assessment for FAS 133.

- Hedge de-designation.

FAS 133 Documentation Requirements

Risk Management enables you to systemically meet and capture most hedge accounting requirements around documentation for FAS 133 and IAS 39.

There are, however, certain documentation issues in the FAS 133/IAS 39 standard that fall outside of the scope of database features, and these may or may not apply to your organization and its risk management strategy. PeopleSoft discloses and documents these context-sensitive areas during the course of this documentation.

Periodic Effectiveness Assessment for FAS 133

Effectiveness tests provide a means for an organization, its stakeholders, and external auditors to evaluate whether risk management strategies are on track. The tests also evaluate whether hedges are working or are likely to work as planned, and thus remain within bounds for special accounting.

Note: The paragraphs below are purely from FAS 133 documentation provided at the time of issue. The Financial Accounting Standards Board (FASB), however, regularly updates and appends some of the content through amendments or through feedback from Derivatives Implementation Group (DIG) commentaries. PeopleSoft does not take responsibility for such changes and modifications and expects the users to be familiar with the changes recommended by FASB in regards to FAS 133/138 accounting standards.

Examining the value of derivative instruments at given points in time, per paragraph 20(b), 28(b), determines whether they have experienced gains and losses on a derivative. When you set up a transaction, its correspondent hedged deal, and the link between the two and document it for FAS 133, you must also define and document tests or methodologies to assess hedge effectiveness.

Effectiveness Assessment at Inception

FAS 133 requires that you define tests of effectiveness assessment at the inception of the hedge, not retroactively or during the hedge's life span. Identifying and recording a derivative's value at predetermined points in time creates an audit trail.

Note: Regarding fair value hedges, ¶ 20(b) states: Both at inception of the hedge and on an ongoing basis, the hedging relationship is expected to be highly effective in achieving offsetting changes in fair value attributable to the hedged risk during the period that the hedge is designated. An assessment of effectiveness is required whenever financial statements or earnings are reported and at least every three months [¶ 20(b)]. Regarding cash flow hedges, ¶ 28(b) states: Both at inception of the hedge and on an ongoing basis, the hedging relationship is expected to be highly effective in achieving offsetting cash flows attributable to the hedged risk during the term of the hedge, except as indicated in paragraph 28(d) below. An assessment of effectiveness is required whenever financial statements or earnings are reported, and at least every three months [¶ 28(b)].

Hedge De-Designation

When your hedge transaction criteria are not met, including failed effectiveness assessment tests, you must de-designate the hedges, unwind their components, and apply mark-to-market accounting back to the last recorded date that the hedge passed effectiveness assessment. If a fundamental change in nature has occurred to the criteria you are hedging, FAS 133 accounting ends. For example, if you sell the recognized asset/liability, it expires, or the once firm commitment is terminated, FAS 133 accounting no longer holds.

Whenever deals meet documentation and effectiveness assessment testing requirements, you can use FAS 133's special accounting and benefit from decreased income statement volatility.

This flowchart provides an overview of FAS 133 hedge accounting.
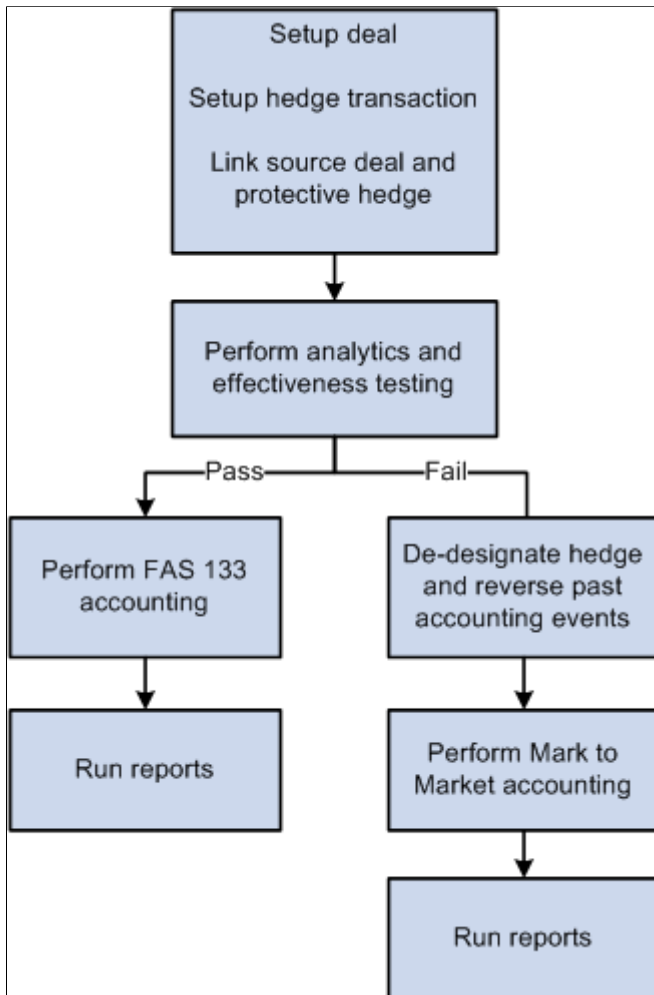
Ineligible and Eligible Hedge Scenarios

These types of hedge scenarios are ineligible under FAS 133:

- Liquidity

- Theft

- Weather

- Competition

- Seasonality

- Political

- Operational

These types of hedge changes are eligible under FAS 133:

- Fair value of entire financial instrument.

- Percentage of entire fair value of the financial instrument.

- Fair value attributable to changes in interest (including prepayment as a separate component of interest rate risk).

- Fair value attributable to changes in foreign currency exchange rates.

- Fair value attributable to changes in the obligator's creditworthiness.

Understanding Hedge Types

FAS 133 standardizes accounting for derivative instruments. It requires you to recognize derivative instruments as assets and liabilities in their statements of financial position and then to measure them at fair value. If certain conditions are met, your organization can designate a derivative instrument as a fair value hedge, cash flow hedge, or foreign currency hedge.

This section discusses:

- Risk Management and hedges.

- Fair value hedges.

- Cash flow hedges.

- Foreign currency hedges.

Risk Management and Hedges

This diagram shows how PeopleSoft Risk Management handles hedges.
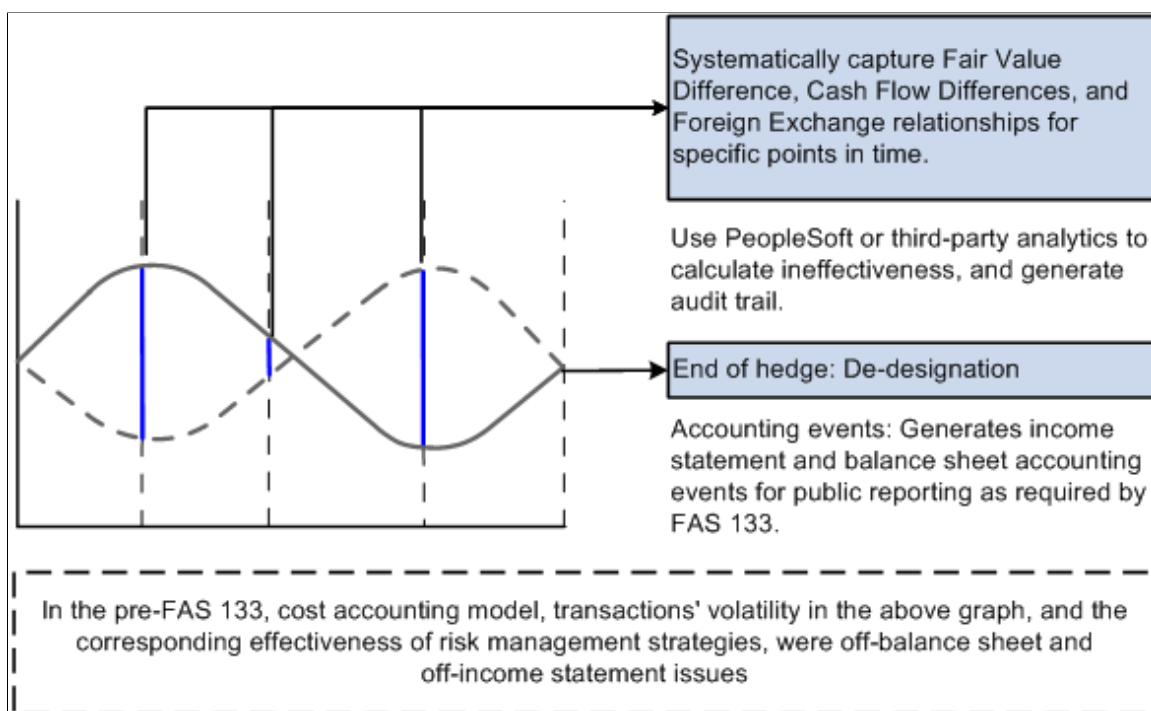
This table shows the types of hedges that are available with particular kinds of instruments:

Instrument	Interest Rate	F/X	Fair Value	Cash Flow	Other
Swap	XXX		XXX	XXX	
Forward		XXX	XXX		XXX
Option		XXX		XXX	

Fair Value Hedges

Fair value hedges are hedges against exposure to changes (that are attributable to a particular risk) in the fair value of either of the following:

- Recognized assets or liabilities on your balance sheet.

- Unrecognized firm commitment and specific business commitments having significant financial relevance to your organization, but whose quantitative value does not go to your general ledger.

Firm Commitments

You hedge firm commitments in fair value hedges and in foreign currency cash flow hedges.

See "Fair Value Hedges: Firm Commitments—Statutory Remedies for Default Constituting a Disincentive for Nonperformance" published by Rutgers University.

Note: 540 defines a Firm Commitment as the following: "An agreement with an unrelated party, binding on both parties and usually legally enforceable, with the following characteristics: (a) The agreement specifies all significant terms, including the quantity to be exchanged, the fixed price, and the timing of the transaction. The fixed price may be expressed as a specified amount of an entity's functional currency or of a foreign currency. It may also be expressed as a specified interest rate or specified effective yield. (b) The agreement includes a disincentive for nonperformance that is sufficiently large to make performance probable."

Under FAS 133, gains and losses on qualifying fair value hedges should follow these accounting guidelines:

- They must recognize the hedging instrument's gain or loss in current earnings.

- The gain or loss (that is, the change in fair value) on the hedged item attributable to the hedged risk must adjust the carrying amount of the hedged item and be recognized in current earnings.

Note: From ¶ 19 of FAS 133: "The change in fair value of an entire financial asset or liability for a period refers to the difference between its fair value at the beginning of the period (or acquisition date) and the end of the period, adjusted to exclude (a) changes in fair value due to the passage of time and changes in fair value related to any payments received or made, such as in partially recovering the asset or partially settling the liability."

Here is an example of how this works:

With regression testing of a fair value hedge, the hedge is considered effective if its period ratio is between 80 and 125 basis points (0.8 to 1.25).

Period ratio equals the difference between the fair value change of hedging instrument (change in swap value) and the fair value change of hedged item (change in debt value).

	Period 1	*Period 2*	*Net Difference*
Change in swap value (hedging instrument)	10	-7	17
Change in debt value (hedged item)	-9	5	14
Difference in fair value	1	-2	3
Period ratio	-1.11 passes regression test ratio is within 0.8 to 1.25	-1.4 fails regression test terminate hedge	

Note: *DIG's Fair Value Hedges:* Basing the Expectation of Highly Effective Offset on a Shorter Period Than the Life of the Derivative states: "In documenting its risk management strategy for a fair value hedge, an entity may specify an intent to consider the possible changes (that is, not limited to the likely or expected changes) in value of the hedging derivative and the hedged item only over a shorter period than the derivative's remaining life in formulating its expectation that the hedging relationship will be highly effective in achieving offsetting changes in fair value for the risk being hedged. The entity does not need to contemplate the offsetting effect for the entire term of the hedging instrument."

The functionality of Risk Management is not intended for formulating the prospective consideration that a hedge will be effective.

This illustration shows the fair value hedge in time.
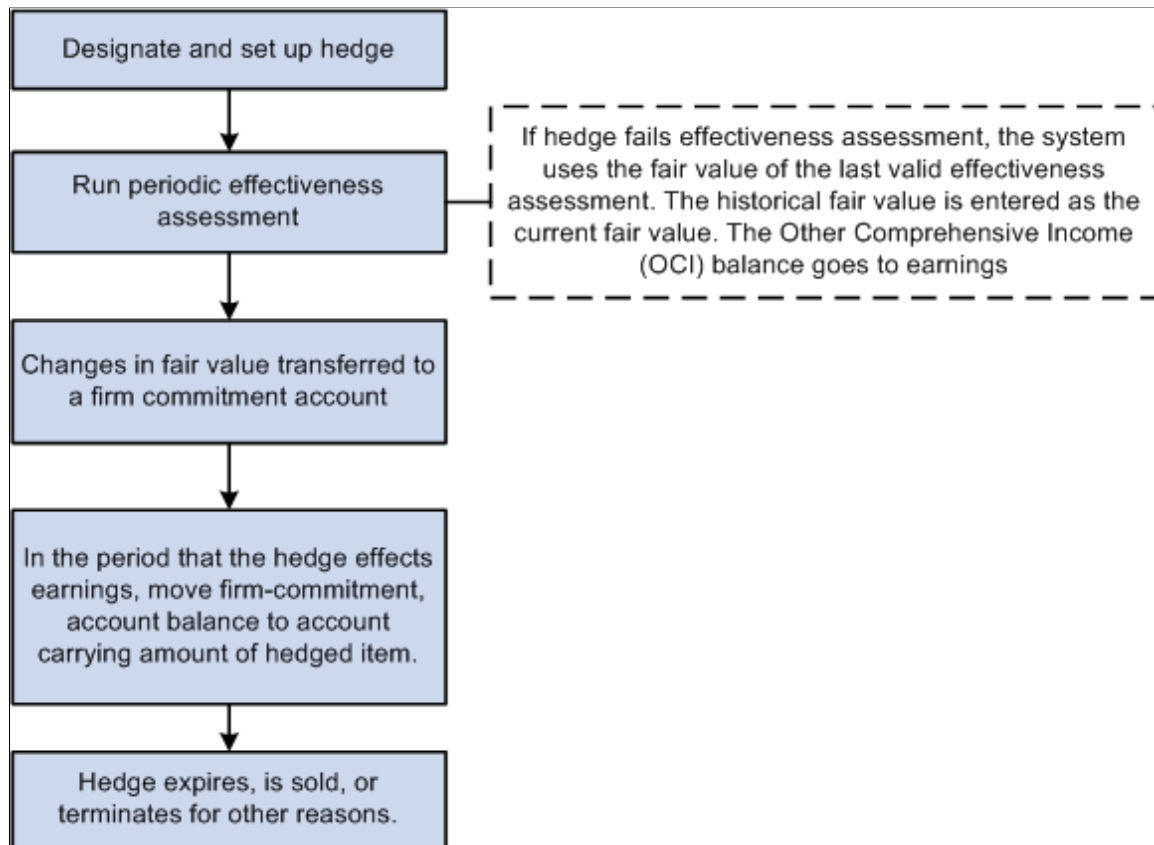
This illustration shows the life of an unrecognized firm commitment set up as a fair value hedge.

```
┌─────────────────────────────┐
│   Designate and set up hedge. │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐      ┌─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┐
│      Run periodic            │      │ If hedge fails effectiveness assessment, the system uses │
│   effectiveness assessment   │──────│ the fair value of the last valid effectiveness assessment. │
└─────────────────────────────┘      │                                            │
              │                       │   The historical fair value is entered as the current fair │
              ▼                       │   value. The OCI balance goes to earnings   │
┌─────────────────────────────┐      └─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ─ ┘
│  Changes in fair value go to firm │
│     commitment account       │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│ In the period that the hedge affects │
│ earnings, move firm-commitment │
│    account balance to account  │
│  carrying amount of hedged item. │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│ System changes the unrecognized │
│ firm commitment to a recognized │
│   asset or liability state.    │
└─────────────────────────────┘
              │
              ▼
┌─────────────────────────────┐
│ Terminate the original hedge, and │
│   begin a recognized asset or  │
│      liability hedge.         │
└─────────────────────────────┘
```

Cash Flow Hedges

Cash flow hedges are hedges against exposure to volatility (that are attributable to particular risks) in the cash flows of either:

• Recognized assets or liabilities.

• Forecasted transactions.

The main purpose of a cash flow hedge is to link a hedging instrument and a hedged item in situations where you expect changes in cash flows to offset one another. Under FAS 133, to achieve this offsetting of cash flows, changes in the fair value of a derivative instrument that is designated and effective as a cash flow hedge must be:

• Initially reported as a component of Other Comprehensive Income (OCI) outside earnings.

• Later reclassified as earnings in the same periods during which the hedged transaction affects earnings (for example, when a forecasted sale actually happens).

Capture changes in the derivative instrument's fair value using effectiveness testing, which creates OCI accounting events. These events, in turn, generate an audit trail and become available for public reporting. Report OCI in the equity section of the balance sheet.

This flowchart shows the cash flow hedge occurring in time.
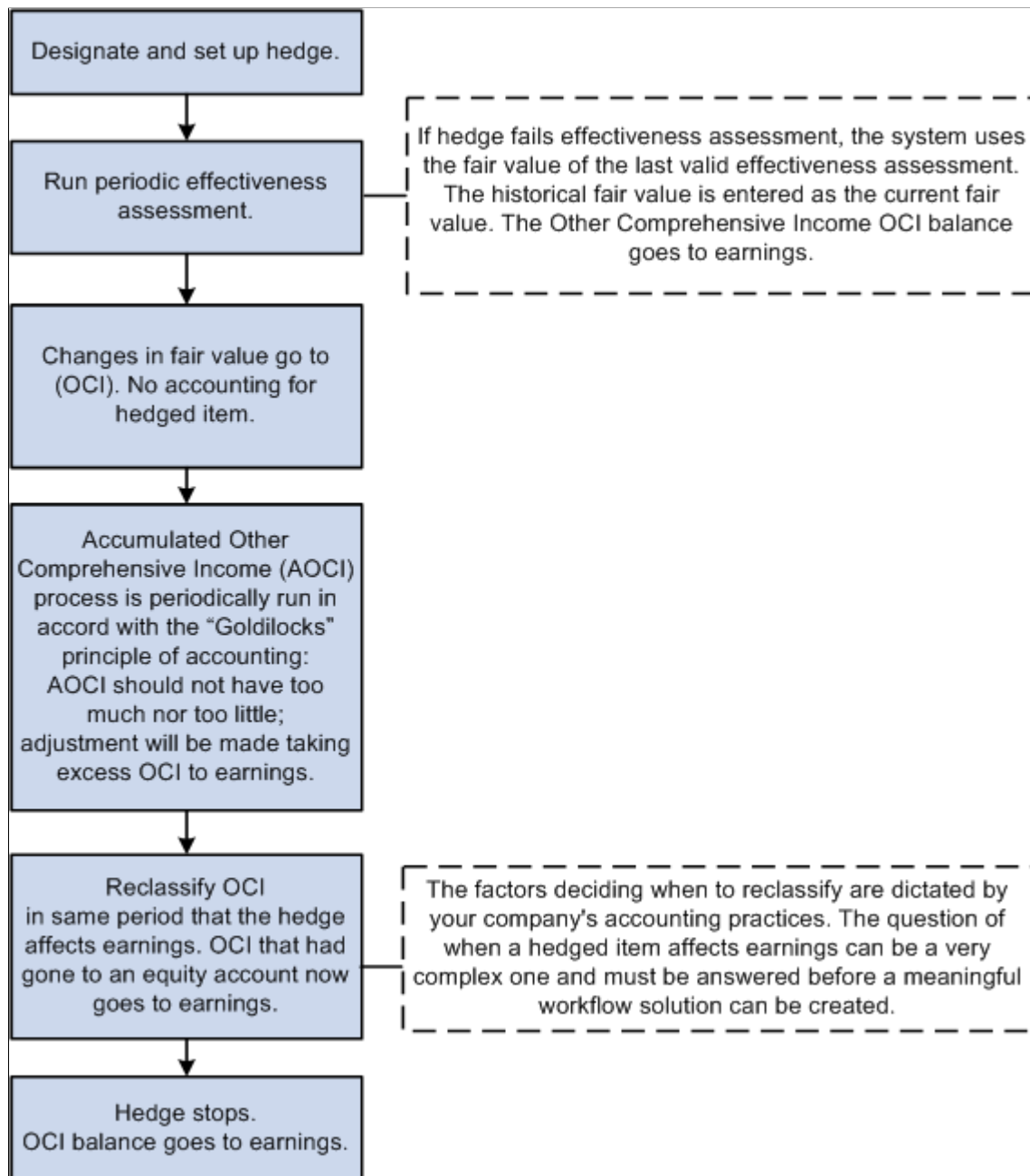
Derivatives Implementation Group Issues

When calculating the amount of ineffectiveness of a cash flow hedge according to ¶ 30(b), the guidance in Derivatives Implementation Group (DIG) Issue G7 applies.

See *G7 - Cash Flow Hedges: Measuring the Ineffectiveness of a Cash Flow Hedge of Interest Rate Risk, When the Shortcut Method Is Not Applied,* published by Rutgers University.

The issue lists three methods. Risk Management supports only the calculations of Methods 2 and 3.

Method 1: The Change in Variable Cash Flows method involves the following amounts that need to be calculated using an analytic:

* Cumulative change in fair value of the swap.

* Present value of the cumulative change in the cash flow on the floating leg of the swap.

* Present value of the cumulative change in the expected future interest cash flows on the floating rate debt.

Method 2: The Hypothetical Derivative method involves the following amounts that must be calculated using an analytic:

* Cumulative change in fair value of the actual swap.

* Cumulative change in fair value "hypothetical" swap that mirrors the floating rate debt.

    The change in the fair value of the "perfect" hypothetical swap can be regarded as a proxy for the present value of the cumulative change in expected future cash flows on the hedged transaction, as described in ¶ 30(b)(2).

    With the analytic used to value the forecasted transaction, you calculate the second amount in the previous list: the cumulative change in fair value "hypothetical" swap that mirrors the floating rate debt.

Method 3: Change in Fair Value method involves the following amounts that must be calculated using an analytic:

* Cumulative change in fair value of the actual swap.

* Present value of the cumulative change in the expected future interest cash flows on the floating rate debt.

Foreign Currency Hedges

Foreign currency hedges are hedges against foreign currency exposure to any of the following:

* Unrecognized firm commitments (fair value).

* Available-for-sale securities (fair value).

* Forecasted transactions (cash flow).

* Net investments in a foreign operation.

Unrecognized Firm Commitments

See Firm Commitments.

Available-for-Sale Securities

You can hedge the change in fair value of an available-for-sale debt security (or a specific portion) from changes in foreign currency exchange rates.

You can also hedge available-for-sale equity securities if changes in fair value come from changes in foreign currency under certain conditions. First, the security cannot be traded on an exchange (or another established marketplace) where trades are denominated in your functional currency. Second, dividends, or other cash flows, to the security's holders' must be denominated in the same foreign currency that you expect to receive when the security is sold.

Forecasted Transactions/Recognized Firm Commitments

You can hedge foreign currency exposure to variability in the functional-currency-equivalent cash flows from foreign-currency-denominated forecasted transactions and foreign-currency-denominated intercompany transactions.

Net Investment in a Foreign Operation

The complexity of a foreign operation extends beyond the scope of cash flow and fair value hedges, which address the risks of specific financial components. Net investment in foreign operation hedges are not supported in Risk Management.

Understanding Embedded Derivatives

The FAS 133 Hedge Accounting feature in Risk Management enables you to record and account for embedded derivatives in the following two ways:

- You enter two separate Risk Management deals: one for the host contract and one for the embedded derivative.

- You enter the hybrid deal as a single deal using multiple detail lines/instrument base types if needed, and select the *Embedded* option on the Instrument Information component.

Note: The latter method is allowable only when the hybrid deal is not remeasured at fair value with changes in fair value reported in any account (such as earnings or OCI or any other account). If the hybrid deal is remeasured at fair value with changes in fair value reported in earnings as they occur, then the embedded derivative is not separated from the host contract (according to the guidance in ¶ 12(b). If the hybrid deal is remeasured at fair value with changes in fair value reported in any other account, then method (1) (separate deals) must be used to enter the hybrid instrument. This is because the system does not allow separate calculations to be made for the fair value of the host contract and the fair value of the embedded derivative.

You must examine specific contracts and ask if they contain an embedded derivative, determine how to split the embedded derivative from the host contract, and determine how best to use the Instrument Base Type architecture in PeopleSoft to split the hybrid contract into a host contract and a separated derivative.

Accounting Treatments for Complying with IAS 39

Once determined, the accounting treatment is entered on the Instrument Detail page.

Use this diagram as an aid to determining the accounting treatment for complying with IAS 39 standards.
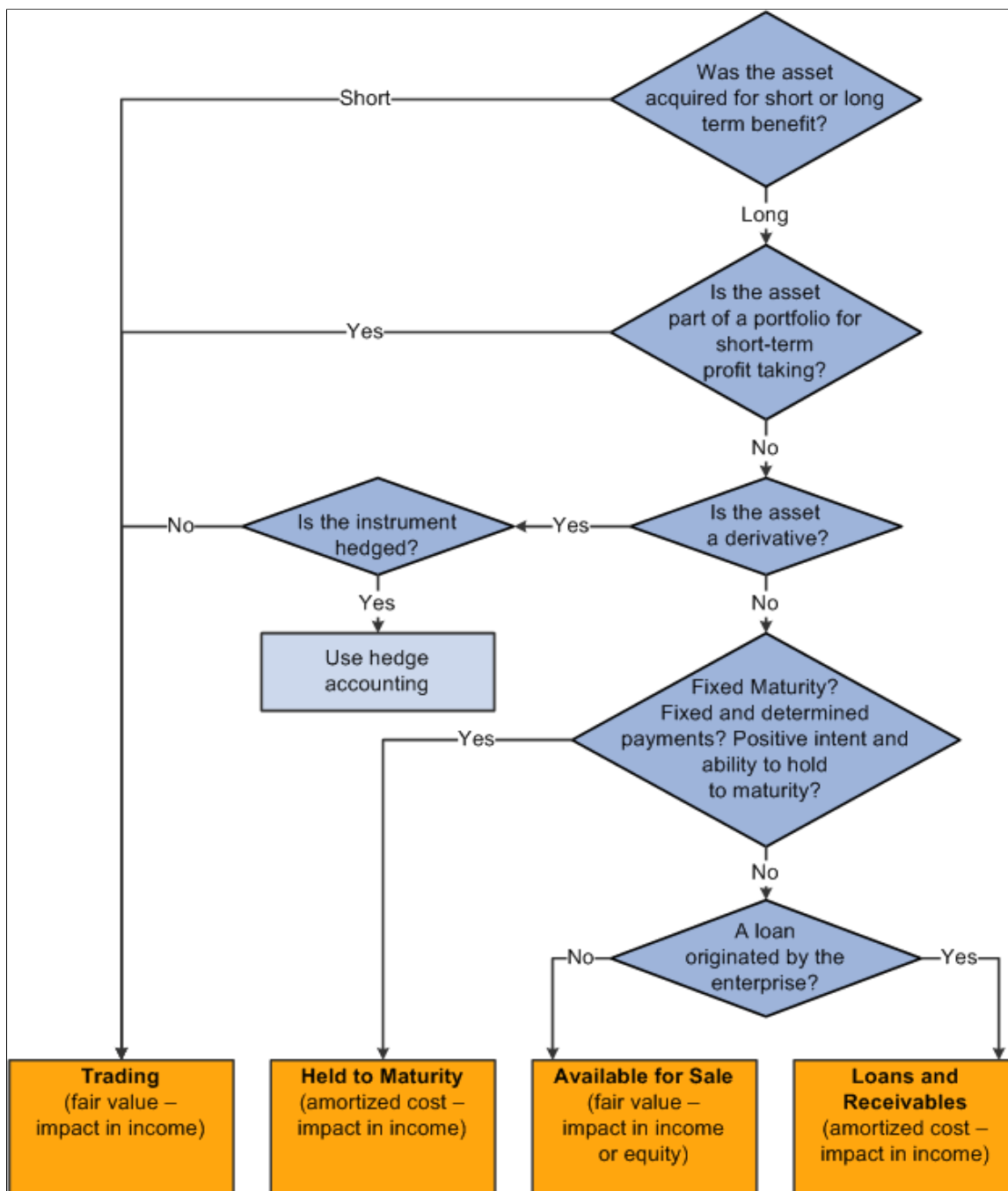
Chapter 4

Analyzing Risk

Understanding the Risk Analysis Process

This topic includes:

- Prerequisites.

- Common elements used in the risk analysis process.

- Provided valuation functions.

Prerequisites

You must first define risk analytics on the Instrument Analytics page.

Related Links
Instrument Analytics Page

Common Elements Used in the Risk Analysis Process

Field or Control	Description
Calculation or Analytic Calculation	Select a calculation to generate the risk analysis. The selected supplier or supplier product name determines the available values.
Function Usage	Select the type of analysis to perform.
Mode or Analytics Mode	Available values depend on the function usage type.
Supplier or Supplier Product Name	Select from the available supplier names, for example, *Excel Functions*. You define supplier names and their analytic calculations at installation.
Calculate	Click to run a risk analysis calculation.

Provided Valuation Functions

Analytics calculation includes all of the different functions needed to perform a comprehensive risk analysis and management. For example, due to the complexity of analysis and companies, you can create your own customized analytics. Customized analytics include:

- Analytics calculation.

- Treasury deal valuations.

- Cash forecasting.

- Sales forecast.

- Manufacturing optimization.

- Brand and channel valuation.

- Macro level analysis

- Hedging effectiveness.

- Value at Risk (VaR).

Use combinations of different exposure objects to evaluate the impact of business and financial risks on the enterprise. Currently, exposure objects (treasury and non-treasury) are defined stored.

- Graphs and reports.

   The system stores analysis and analytic activity output. You can generate reports (system delivered or customized) for both managerial and compliance needs.

   Here's how to determine hedges:

- Process and analyze a current cash position worksheet.

- Process and analyze VaR risk calculations.

- Determine what deals must be hedged from analysis results.

Related Links

Understanding Hedge Creation and Maintenance

Analyzing VaR

This topic provides an overview of VaR analysis and discusses how to run VaR analysis.

Page Used to Run VaR Analysis

Page Name	Definition Name	Usage
VaR Analysis Page	RSK_VAR_RUN_PNL	Enter analytical parameters and calculate VaR on your portfolios. See Understanding VaR Analysis.

Understanding VaR Analysis

VaR is a methodology for measuring financial risk exposure. VaR is a number that represents estimated portfolio losses due to market movements for a particular time period and a given confidence level. With VaR, you can identify sources of risk and either bear them to support long-term strategies, transfer the risks at a reasonable price, or decide on alternatives to shed the risk.

Defining potential loss depends on two parameters:

- Time horizon considerations.

- Degree of confidence.

Time Horizon Considerations

Choosing a horizon for VaR calculation depends on your company's objectives and the portfolio's characteristics. Typical considerations include:

- Unwind period: how long, on average, does it take to reverse a market position or individual trade?

- Attention period: how often, on average, do you reexamine your portfolio and its mark-to-market or hedging trades?

- Accounting period: how long until the next financial reporting must be done?

Degree of Confidence (Probability of Occurrence)

The degree of confidence is a measure of the degree of certainty of the VaR estimate. The most commonly used degree of confidence is 95 percent, which means that 95 percent of the time the losses will be lower than the VaR number, while 5 percent of the time the portfolio will experience greater losses.

For example, an enterprise's Relative Earnings at Risk (EaR) are 10.00 MM USD, the time period is set to three months, and the confidence level is 95 percent. Over the next three months, there is a five percent chance that earnings will fall 10.00 MM USD or more below the target earnings for the period (6.00 MM USD).

Note: VaR concentrates on financial price risk, not on operational, legal, and other risks that the enterprise faces.

Calculating VaR

You can calculate VaR from three complementary methodologies and use these different measurements to simultaneously provide an overall view of your portfolio's risks.

Term	Definition
Variance-covariance (analytic VaR)	The most commonly used of the three VaR methods, variance-covariance analyzes volatility and correlation between different risk exposures of an enterprise's portfolio.
Monte Carlo simulation	Generates random scenarios of prices and uses them to reevaluate a portfolio. Looking at hypothetical profits and losses under each price scenario, you can construct a histogram of expected profit and losses from which VaR is calculated. It does not assume that portfolio returns are distributed normally, but you need a correlation and volatility matrix to generate the random scenarios.
Historical simulation	Revalues a portfolio for several hundred historical scenarios, building a "hypothetical" distribution of profit and losses based on how the portfolio behaved in the past. It does not use estimated variances and covariances and does not make any assumptions about the distribution of the portfolio returns. Results can be skewed by anomalous events of a previous period. A few major events in the past may dominate the simulation exercise, so your analysis is then based on fewer data points.

VaR Analysis Page

Use the VaR Analysis page (RSK_VAR_RUN_PNL) to enter analytical parameters and calculate VaR on your portfolios.

Navigation:

Risk Management > **Analyze Risk** > **VaR Analysis** > **VaR Analysis**

This example illustrates the fields and controls on the VaR Analysis page. You can find definitions for the fields and controls later on this page.

Field or Control	Description
Vendor	Select a third-party supplier that will perform the VaR calculation based on the input values selected on this page. The supplier selected here determines the values available in the Calculation field.
Calculation	Select the type of VaR calculation to be performed. The calculation value selected here determines which functions from the MTM_DATAMAP_WRK.FUNLIB_02 function library are used to call the supplier to perform the calculation
File Path	Specify the output location of the log file for this supplier.

VaR Method	Select from the following options:
	
	• *Analytic:* Estimation of the volatility of asset returns and of the correlations between these asset price movements.
	
	• *Historical:* Consists looking back over a specific period of time and applying current weights to a time-series of historical asset returns. This return does not represent an actual portfolio but rather reconstructs the history of a hypothetical portfolio using the current position.
	
	• *Monte Carlo:* The Monte Carlo method is a two-step process:
	
	  1. The risk manager specifies a stochastic process for financial variables, as well as process parameters; the choice of distributions and parameters such as risk and correlations can be derived from historical data.
	
	  2. Fictitious price paths are simulated for all variables of interest. At each horizon considered, which can go from one day to many months ahead, the portfolio is marked-to-market using full valuation. Each of these scenarios are then used to compile a distribution of returns, from which a VaR figure can be measured.

Calculate	Click to run the VaR calculation.
VaR	Displays the results of the specified VaR calculation.

Exporting Market Risk Files

Using the Risk File Export process (RSK_FILEXP), you can export risk analysis data for a specified business unit and portfolio to a third party.

Page Used to Export Market Risk Files

Page Name	Definition Name	Usage
Export Market Risk File Page	TR_FOUR15_FILE_EXP	Run the Risk File Export Application Engine process to export risk analysis files to a third-party application.

Export Market Risk File Page

Use the Export Market Risk File page (TR_FOUR15_FILE_EXP) to run the Risk File Export Application Engine process to export risk analysis files to a third-party application.

Navigation:

Risk Management > **Analyze Risk** > **Export Market Risk File** > **Export Market Risk File**

This example illustrates the fields and controls on the Export Market Risk File page. You can find definitions for the fields and controls later on this page.

Field or Control	Description
Unit	Select a business unit. The business unit selected determines the prompt values for the portfolio and instrument type fields.
Portfolio	Select a portfolio to determine which deals will be included in the file.
Instrument Type	Selecting an instrument type limits the inclusion of file data to only deals of a particular instrument type. This field can be left blank.
File Path	Enter the path and directory to which the newly created file will be exported.

Chapter 5

Creating and Maintaining Hedges

Understanding Hedge Creation and Maintenance

This topic includes:

- Prerequisites.

- Common elements used to create and maintain hedges.

- The hedge life-cycle.

Related Links
Understanding Hedge Analytics and Hedge Accounting

Prerequisites

Before you create and maintain hedges, you must:

1. Analyze cash position and settlements using Cash Management.

2. From cash position and settlements information, identify investing or borrowing instruments using Deal Management.

3. Calculate and analyze your risk based on the cash and deal information and decide if you must create a hedge.

Related Links
Understanding the Risk Analysis Process
"Managing Deal Position Worksheets" (PeopleSoft Deal Management)
"Understanding the Deal Capture Process" (PeopleSoft Deal Management)
"Creating Trade Tickets" (PeopleSoft Deal Management)

Common Elements Used to Create and Maintain Hedges

Field or Control	Description
Initial Fair Value Attributable to Hedged Risk and Fair Value	Displays the fair value (mark to market) of a treasury deal, or the fair value or cash flows of a hedged item.

Field or Control	Description
Initial Fair Value Adjustment and Fair Value Adjustment	Displays the (cumulative) adjustment amount excluded from the calculation of the change in fair value of a deal or hedged item. This amount corresponds to amortized cost for investments and to ¶ 19 adjustments for a hedged item.
Use Zero	Select this check box to use zero value for calculation, instead of initial fair value amount.
Use Values	Select this check box to use entered values for calculation, instead of initial fair value amount.
New Value	Click to calculate the new value of the hedge per specified parameters.

Hedge Life-Cycle

Here's an overview of the entire hedge life-cycle:

• Create hedges, either importing information or creating hedges manually.

• Adjust and remove hedges using the Hedge Maintenance page.

• Process hedge Accumulated Other Comprehensive Income (AOCI) using the Process AOCI page.

• Create hedge groups and maintain hedge items and hedge groups.

Related Links

Risk Management and Hedge Accounting

Creating Hedges

This topic discusses the different types of information that you enter when creating hedges.

Pages Used to Create Hedges

Page Name	Definition Name	Usage
Other Hedgeable Items Page	HDG_EXPOSURE_PNL	You can import a database record from another PeopleSoft application or third-party system.
Hedge Designation Page	HDG_HEDGE	Capture descriptive information about your hedging purposes and strategies to meet disclosure requirements.

Page Name	Definition Name	Usage
Hedging Instrument Page	HDG_HEDGE_DEAL	Capture information about the deal you will use to protect the hedged exposure.
Hedges - Deal Accounting Page	HDG_HEDGE_DEAL_AC	View the accounting associated with your hedging relationship.
Hedged Item Page	HDG_HEDGED_ITEM	Set up the exposure that you will hedge.
Hedged Transaction Details Page	HDG_ITEM_FVRAL_DTL	Capture higher resolution data about your hedge.
Hedges - Item Accounting Page	HDG_HEDGED_ITEM_AC	Set up accounting and effectiveness testing of your hedge.

Other Hedgeable Items Page

Use the Other Hedgeable Items page (HDG_EXPOSURE_PNL) to you can import a database record from another PeopleSoft application or third-party system.

Navigation:

Risk Management > **Analyze Hedge** > **Analyze Other Hedge Items** > **Other Hedgeable Items**

This example illustrates the fields and controls on the Other Hedgeable Items page. You can find definitions for the fields and controls later on this page.

Select the type of item whose risk exposure you want to minimize, and select the status:

Type	Status	Conditions
Forecasted Transaction	*Firm Commitment or Asset / Liab (asset / liability)* *Forecasted Transaction* *No Longer Probable* *Probably Will Not Occur*	If the type is a *Forecasted Transaction*, enter earnings information in the available grid.

Type	*Status*	*Conditions*
Net Investment in a Foreign Op (net investment in a foreign operation)	*Cancelled* *Net Investment in a Foreign Op*	
Recognized Asset or Liability	*Recognized Asset or Liability* *Sold or Bought or Written Off*	
Unrecognized Firm Commitment	*Cancelled* *Recognized Asset or Liability* *Unrecognized Firm Commitment*	

Note: Fields and available status values change depending on the value you select in the **Type** field.

Field or Control	*Description*
Risk Type	Select a type of risk for the hedged item.
Financial Type	Select *Financial Item* or *Non-financial Item.* If the risk to be hedged is financial, enter its **Amount** and its currency (in the field next to the **Amount** field). If the risk is non-financial, enter its **Quantity,** and select the appropriate **Unit of Measure.**
Foreign Currency Denominated	Select if the hedge is in a foreign currency, and select the appropriate value in the **Currency**Currency field.
Period Start and **Period End**	Select the active period start and end dates for the hedge.
Review Date	Select the final review date for the hedge.
Final Earnings Effect	Select to include the effect of the specified amount and percentage on hedge final earnings.

Hedge Designation Page

Use the Hedge Designation page (HDG_HEDGE) to capture descriptive information about your hedging purposes and strategies to meet disclosure requirements.

Navigation:

Risk Management > **Analyze Hedge** > **Analyze Hedges** > **Hedge Designation**

This example illustrates the fields and controls on the Hedge Designation page. You can find definitions for the fields and controls later on this page.

Note: The page display changes depending on the **Hedge Type.**

Field or Control	Description
Hedge Type	This field is a read-only. The hedge type is selected at the business unit level on the Treasury Options page.

Designates a hedge as either an *IAS 39 Hedge, Economic/Other Hedge,* a *FAS 133 Hedge,* or a *FAS 52 Hedge.* From the drop-down list box next to the right-hand **Hedge Type** field, you can further define your hedge using any of the following:

Cash Flow Hedge: Hedge of exposure to cash flow variability from a particular risk (¶ 18(c)).

Fair Value: Hedge of exposure to changes in the fair value of an asset, liability, unrecognized firm commitment, or identified portion thereof from a particular risk (¶ 18(b)).

FX Cash Flow: Hedge of exposure to cash flow variability from changes in foreign currency exchange rates (¶ 18(d)(3)).

FX FV of Available for Sale Security: Hedge of the change in the fair value of an available-for-sale debt security (or a specific portion) from changes in foreign currency exchange rates.

You can hedge available-for-sale equity securities if changes in fair value come from changes in foreign currency under the following conditions. You have not traded the security on an exchange (or another established marketplace) where trades are denominated in your functional currency. Dividends, or other cash flows, to the security's holders are denominated in the same foreign currency that you expect to receive when you sell the security (¶ 18(d)(3).

FX FV of Firm Commitment: Hedge of a foreign currency exposure to variability in the functional-currency-equivalent cash flows from foreign-currency-denominated forecasted transactions and foreign-currency-denominated intercompany transactions (¶ 18(d)(2).

FX Hedge of Net Investment: Hedge of foreign currency exposure to your net investment in a foreign operation, which is viewed for accounting purposes, as a single asset versus several single individual assets and liabilities that make up a subsidiary's balance sheet (¶ 18(d)(4). |
| **Hedge Relationship** | Select descriptors of your various risk management strategies and practices (¶ 44). It is up to you to determine a reasonable, shorthand description that parties outside your organization can correlate to your actual complex activities. It is a good idea to obtain validation from your company's auditors. To complete the disclosure requirements in ¶ 44, Risk Management provides a 1,000-character, free-form field so that you can capture context-sensitive issues underlying your hedging activities. |
| **Hedge Strategy** | Select a hedge strategy based on the type of risk being hedged. Doing so enables the default parameters that were entered on the Hedge Strategy page for the specified hedge strategy. |

Field or Control	Description
Attachments	Click to view/ add attachments. See "Installation Options - Multiple Attachments Page" (Application Fundamentals) to define the maximum attachment upload limit for various products.

Effective Assessment Methods

Field or Control	Description
Retrospective Evaluations, Prospective Considerations, and **Ineffectiveness Method**	Effectiveness tests are means for an organization, its stakeholders, and external auditors to evaluate whether risk management strategies are on track, whether hedges are working or are likely to work as planned, and thus are within bounds for special accounting.
	When you set up a transaction and its correspondent hedged deal, link the two and document them for FAS 133. You must also define and document tests of methodologies to assess hedge effectiveness. (¶ 62.)
	Effectiveness assessment methods are dictated by ¶s 65 and 68-70. They are **Retrospective Evaluations, Prospective Considerations,** and **Ineffectiveness Method.** Select one of the following values for each of the fields:
	Assume No Ineffectiveness: Select this value (¶s 65, 68-70) if you are using the Shortcut Method for IRS Hedge. FAS 133's ¶ 68 permits the Shortcut Method for an IRS Hedge. You can use this method of effectiveness assessment only on interest rate swaps.
	If you selected *Assume No Ineffectiveness* in the **Ineffectiveness Assessment** field, and the hedge is an interest-bearing financial instrument with an interest rate swap (¶s 68-70,114,132), then you can select the **Shortcut Method for IRS Hedge** check box to compute ¶ 22(b) or ¶ 30(b) amounts.
	Correlation − Regression: This is a statistical correlation test between some attribute of the hedging deals compared to that attribute of the hedged items.
	Cumulative Offset: Compares the cumulative changes in fair value of the hedging deal with the cumulative changes in fair value of the hedged item. In each period in which this comparison is made, the two amounts must match within a tolerance of 80 percent to 125 percent.
	Note: In addition, when you perform the periodic assessment of effectiveness, you must do more than just run the Assessment reports or process (such as the Hedge Effectiveness report and the Regression test). You should also reassess your expectation that the hedge will continue to be highly effective. This would involve reexamining all appropriate factors, including those described in DIG issue G10.

Field or Control	Description
	Your accounting procedures must meet extensive criteria to qualify for the Shortcut Method, which is also known as Assuming No Ineffectiveness with an Interest Rate Swap. Refer directly to ¶ 68 of FAS 133 to ensure that your scenario qualifies for this accounting treatment of hedging. Assume No Effectiveness does not imply that there will be no periodic assessment of effectiveness. According to DIG G9 - Cash Flow Hedges: Assuming No Ineffectiveness When Critical Terms of Hedging Instruments and Hedged Transaction Match in a Cash Flow Hedge, www.rutgers.edu/ Accounting/raw/fasb/derivatives/issueg9.html, "An entity is still required to perform and document an assessment of hedge effectiveness at the inception of the hedging relationship and on an ongoing basis throughout the hedge period."
Risk Offset	Select *One-sided Offset Against Gains, Onesided Offset Against Losses,* or *Symmetrical Offset.* ¶ 20(b) and ¶ 28 (b) discuss how to assess effectiveness when the hedging instrument provides only a one-sided offset against changes of the hedged item (such as when an option is used).
Inception Date	Displays the current date until you save the page. You record the entity that is creating the hedged relationship—at the data entry level—using the logon user ID. PeopleSoft Workflow can also address your organization's management authorization process, providing further audit trails.
Discontinued Date	Use to record the actual date that a hedged relationship terminates (¶s 25 and 32). The system completes this field as you undesignate the hedge later in the hedging process. If you terminate a hedged relationship and you have sufficient reason to resume the same course with the exact variables, you must create a new hedge relationship. That is, you must create a hedge for accounting purposes that is different from the one that began and ended earlier. This requirement to create a new hedge can also apply to the maturity of a derivative contract.

Note: Once a hedged relationship terminates, it cannot be revived.

Risk Being Hedged

Per ¶ 21(a-f), you can hedge only the four risks listed:

Field or Control	Description
Changes in Overall Fair Value	Select to hedge non-financial risks, such as commodities. Selecting this check box automatically clears any other hedged risk options selected.
Interest Rate Risk	Select to hedge risk of instability in interest rates.
Foreign Currency Exchange Risk	Select to hedge risk of fluctuation of foreign currency exchange rates.
Credit Risk	Select to hedge risk of credit variability.
Other and Risk Name	Select the Other field and enter a name to designate another type of risk investment to be hedged.
Comments	Click to access the Details page to record details of the hedged risk entered in the Risk Name field.

Hedging Instrument Page

Use the Hedging Instrument page (HDG_HEDGE_DEAL) to capture information about the deal you will use to protect the hedged exposure.

Navigation:

Risk Management > **Analyze Hedge** > **Hedges** > **Hedging Instrument**

This example illustrates the fields and controls on the Hedging Instrument page. You can find definitions for the fields and controls later on this page.

Field or Control	Description
Sequence	Displays the default sequence number of *I*. Per ¶ 18, you can have multiple deals designated as the hedging instrument. Enter the **Deal Business Unit** and **Deal ID,** which create the link to the protected deal.
Proportion Designated as Hedge	Given the difference in financial values that deals can have, use this field to define that only a certain percentage of the hedging deal actually be used for hedge purposes.

Note: FAS 133's ¶ 18 requires that you document that you will use only a portion or percentage of a deal for hedging purposes. It states that either all or a proportion of a derivative may be designated as the hedging instrument. The proportion must be expressed as a percentage of the entire derivative so that the profile of risk exposures in the hedging portion of the derivative is the same as that in the entire derivative. (Thus, an entity is prohibited from separating a compound derivative into any such component as the hedging instrument, except as permitted at the date of initial application by the transition provisions in ¶ 49.)

Assessing Hedge Effectiveness

Define aspects of how the hedge will be evaluated.

Field or Control	Description
Include All Gains or Losses	Select to assess the effectiveness of all fair value changes (¶ 63).
Exclude Time Value	Select to calculate changes in fair value where effectiveness is evaluated on a cumulative basis.
Analytics Mode	Select third-party analytics to calculate the part of your hedge used to assess hedge effectiveness.
Added to Hedge	Displays the current date as the default, which becomes part of the audit trail when the page is saved. The operator's login user ID appears alongside the **Added to Hedge** field in the view-only **By** field.
Removed from Hedge	Enter the date the hedging relationship terminates, or the system will automatically enter the maturation date of the hedged deal as that date passes in time. (See ¶s 25 and 32.)

Hedges - Deal Accounting Page

Use the Hedges - Deal Accounting page (HDG_HEDGE_DEAL_AC) to view the accounting associated with your hedging relationship.

Navigation:

Risk Management > **Analyze Hedge** > **Analyze Hedges** > **Deal Accounting**

This example illustrates the fields and controls on the Hedges - Deal Accounting page. You can find definitions for the fields and controls later on this page.

Field or Control	Description
Initial Fair Value	Enter the initial market to market value amount of the deal, which can be a positive or negative number.
Calculate	Click to recalculate a new fair value and add a new line to the Fair Value History grid. The Calculate button appears only if the Exclude Time Value check box is selected on the Hedging Instrument page.
Use Values	Select this check box to use specified values in the **Fair Value** and **Fair Value Adjustment** fields for calculation, instead of calculated values from Risk Analytics.

Hedged Item Page

Use the Hedged Item page (HDG_HEDGED_ITEM) to set up the exposure that you will hedge.

Navigation:

Risk Management > **Analyze Hedge** > **Analyze Hedges** > **Hedged Item**

This example illustrates the fields and controls on the Hedged Item page. You can find definitions for the fields and controls later on this page.

Field or Control	Description
Hedged Item Source	Select *Treasury Deal* (a deal resident in the PeopleSoft system) or *Other Hedgeable Item* to indicate what you are hedging.
Financial Type	You can set up the hedged deal as a *Financial Item* or a *Nonfinancial Item.* **Note:** The page changes depending on the financial type that you selected.

Hedged Item/Transaction

Field or Control	Description
Portion	Select what portion or percentage of your hedged item or transaction will be used in the hedging relationship: *All:* Use the entire hedged item or transaction. *Embedded Option/Cap/Floor:* Enables you to handle embedded derivatives that do not require separate accounting, for example if the deal can pass a portability test (¶s 21(a) to 22(c)). *Percentage:* Select to enable the**Percentage** field so that you can specify the exact percentage that you will use. *Residual Value in Lease:* Available only for fair value hedges. *Selected Cash Flows:* Available only for cash flow hedges.

Field or Control	Description
Exposure Business Unit	Select the business unit for the exposure.
Added to Hedge or Removed from Hedge	Enter the effective date for the fields.
Remove	Click if you are removing the item from the hedge.

Hedged Transaction Details Page

Use the Hedged Transaction Details page (HDG_ITEM_FVRAL_DTL) to capture higher resolution data about your hedge.

Navigation:

Click the **Details** link on the Hedged Item page.

This example illustrates the fields and controls on the Hedged Transaction Details page. You can find definitions for the fields and controls later on this page.

You can capture hedge information and add the level of detail necessary for your internal monitoring of deals. For example, if you hedge commodities, you will have commodity values available from a PeopleSoft table, such as Crude Oil. The Hedged Transaction Details page enables you to record grades of crude oil, the regions they are from, or other distinguishing traits.

Available fields depend on the hedge type that you specify.

Hedge Type	Available Page Fields
Cash Flow	**Expected to Occur Period Start, Expected to Occur Period End, Expected Cash Flows, Expected Currency Amount,** and **Quantity**
Foreign Exchange	**Exchange Period Start, Exchange Period End, Purchase, Sale, Fixed Price,** or **Face Value**
Fair Value	**Hedged Item End Date, Asset Liability,** or **Face Value**

Note: In the context of FAS 133's language, the free-form text field enables you to explain your hedging with "sufficient specificity." This can include references to the Purchase Order numbers that you hedge or other details that your risk managers and auditors consider relevant for meeting the intent of FAS 133.

Hedges - Item Accounting Page

Use the Hedges - Item Accounting page (HDG_HEDGED_ITEM_AC) to set up accounting and effectiveness testing of your hedge.

Navigation:

Risk Management > **Analyze Hedge** > **Analyze Hedges** > **Item Accounting**

This example illustrates the fields and controls on the Hedges - Item Accounting page. You can find definitions for the fields and controls later on this page.

Note: Available fields depend on the hedge type selected at the business unit level.

Hedge Type	Page Fields	Description
Cash Flow Hedges	**Initial Future Cash Flow Attributable to Hedged Risk**	The fair value (mark to market) of a treasury deal, or the fair value or cash flows of a hedged item.
Cash Flow Hedges	**Fair Value Adjustment**	The (cumulative) adjustment amount excluded from the calculation of the change in fair value of a deal or hedged item. Corresponds to amortized cost for investments and to ¶ 19 adjustments for a hedged item.
Fair Value	**Amortize Carrying Amount Adjustment**	Select this check box if the adjustments of the carrying amount of the hedged item should be amortized to earnings (¶ 24).
Fair Value	**Amortization Period Begin/End**	Define date parameters for the amortization period calculation.

Field or Control	Description
As of Date	The fair value calculation is based on this date.
Fair Value	The value of the deal on the As of Date.

Maintaining Hedges

This topic discusses how to remove and adjust hedges as well as process hedge accumulated other comprehensive income (AOCI).

Pages Used to Maintain Hedges

Page Name	Definition Name	Usage
Hedge Maintenance Page	HDG_WRKFLW	Designate the hedge relationship or remove the hedged deal from the hedge, or adjust AOCI.
Hedge AOCI Adjustment Page	HDG_AOCI_RUN_CNTL	Run the Adjust Hedge AOCI Application Engine process (HDG_AOCI_ADJ) to perform AOCI adjustments on your hedges.

Page Name	Definition Name	Usage
Hedge Effectiveness Page	HDG_CUM_OFST_INQRY	Search and review cumulative offset information for specified hedges.
Hedge Summary Page	HDG_SUMMARY	View online report of summarized hedge information a specific hedge.

Hedge Maintenance Page

Use the Hedge Maintenance page (HDG_WRKFLW) to designate the hedge relationship or remove the hedged deal from the hedge, or adjust AOCI.

Navigation:

Risk Management > **Analyze Hedge** > **Analyze Hedges** > **Hedge Maintenance**

This example illustrates the fields and controls on the Hedge Maintenance page. You can find definitions for the fields and controls later on this page.

AOCI is an account balance associated with the hedged transaction. It represents derivative (hedge deal) gains or losses that have been set aside from earnings and parked in the AOCI account instead. In essence, ¶ 30(b) says, "Set aside derivative gains or losses, but don't set aside too much." ¶ 30(b) addresses recognizing that you have set aside too much and puts the excess into an earnings account.

For Hedged Item

The fields available change, depending on the FAS 133 Hedge Type that you selected on the Hedge Designation page.

Hedge Type	Page Fields	Description
All hedge types.	**Remove Hedged Item from Hedge**	Remove hedged item from the hedge. By itself, making this selection does not terminate the hedge. **Note:** This check box appears for all hedge types.
Cash Flow Hedge *FX Cash Flow Hedge*	**Reclassify AOCI**	Select the **Reclassify AOCI** check box when reclassifying the adjusted other comprehensive income from cash flow hedges, and enter the **Reclassify Amount.** Or select the **Will Not Occur AOCI Reclassify** check box.
Cash Flow Hedge *FX Cash Flow Hedge*	**Final Earnings Effect**	Select to include the effect of the specified **Amount** and **Percentage** on hedge final earnings.
Cash Flow Hedge *FX Cash Flow Hedge*	**Current AOCI Balance**	Displays the current AOCI balance for the hedge.
FX FV of Available-for-Sale *FX FV of Firm Commitment* *Fair Value Hedge*	**Amortize Carrying Amount Adj** (amortize carrying amount adjustment)	Select this check box if the adjustments of the carrying amount of the hedged item should be amortized to earnings. (¶ 24) Also enter the **Amortization Period Begin Date** and **End Date.**

Setting Up Hedge Groups

To define hedge groups, use the Hedge Group Definition component (HDG_COLLECTION_HDG_GBL).

This topic discusses how to define hedge groups and add to a hedge group definition.

Pages Used to Set Up Hedge Groups

Page Name	Definition Name	Usage
Define Hedge Groups Page	HDG_COLLCTN_HDG	Set up hedge group definition.

Page Name	Definition Name	Usage
Add to Hedge Group Page	HDG_COLL_FAV_A	Search and add individual hedge items to a hedge group.

Define Hedge Groups Page

Use the Define Hedge Groups page (HDG_COLLCTN_HDG) to set up hedge group definition.

Navigation:

Risk Management > **Administer Risk** > **Define Hedge Groups** > **Define Hedge Groups**

Field or Control	Description
Add to Hedge Group	Click to search and add individual hedge items to this hedge group. Your selected hedge items, added to the hedge group definition, appear in the **Hedge Details** group box.

Add to Hedge Group Page

Use the Add to Hedge Group page (HDG_COLL_FAV_A) to search and add individual hedge items to a hedge group.

Navigation:

Click the **Add to Hedge Group** button on the Define Hedge Groups page.

Use the upper portion of the page to search for hedge items. All matching results appear in the lower portion of the page. Select a hedge item check box and click the **Update** button to add the hedge item to the hedge group.

Managing Hedge Groups

After creating hedge items and setting up hedge group definitions, you can aggregate them into collections and maintain them from a central location.

This topic lists common elements and discuss how to manage and update your hedge groups as well as manage items in a hedge group.

Pages Used to Define and Manage Hedge Groups

Page Name	Definition Name	Usage
My Hedge Groups Page	HDG_COLLECTION_FAV	Aggregate and maintain your hedge groups from a central location.

Page Name	Definition Name	Usage
My Hedge Groups - Update Page	HDG_COLLCTN_FAV_A	Add or clear hedge groups from the My Hedge Groups page.
Hedge Group Manager Page	HDG_COLLCTION_DTL	Review and maintain hedge items for a selected hedge group.

Common Elements Used to Define and Manage Hedge Groups

Field or Control	Description
Inception Date	Displays the active date of the hedge item.
Retrospective Evaluations	Displays the retrospective evaluation value for the hedge item.

My Hedge Groups Page

Use the My Hedge Groups page (HDG_COLLECTION_FAV) to aggregate and maintain your hedge groups from a central location.

Navigation:

Risk Management > **Administer Risk** > **My Hedge Groups** > **My Hedge Groups**

Field or Control	Description
Update My Hedge Groups	Use to add existing hedge groups (assigned to you) to this page.
Create a New Group	Add a new hedge group on the Hedge Group Definition page.
Search for a Hedge Group	Search for a hedge group using the Hedge Manager.

My Hedge Groups - Update Page

Use the My Hedge Groups - Update page (HDG_COLLCTN_FAV_A) to add or clear hedge groups from the My Hedge Groups page.

Navigation:

Click the **Update My Hedge Groups** link on the My Hedge Groups page.

Field or Control	Description
Update	Select the check box of a hedge group and then click the **Update** button. The selected hedge group appears on the My Hedge Groups page. To clear a hedge group from the My Hedge Groups page, deselect the respective check box and click **Update.**

Hedge Group Manager Page

Use the Hedge Group Manager page (HDG_COLLCTION_DTL) to review and maintain hedge items for a selected hedge group.

Navigation:

Risk Management > **Analyze Hedge** > **Hedge Group Manager** > **Hedge Group Manager**

Field or Control	Description
Hedge Group	Access the Define Hedge Groups page for the specified hedge group.
Hedge IDs	Navigate to data about a particular hedge item.
Add a Hedge	Click this link to add another hedge item to this group.

Chapter 6

Managing Position Limits

Understanding Position Limits and Exposure Positions

This topic includes:

- Prerequisites.

- Positions limits and exposure positions.

Prerequisites

Before you can track and monitor your positions, you must define limit checking controls to manage your exposures on the Tree Manager - Position Limits page.

You must also determine the method of limit warning notification.

To implement the Position Limit Workflow virtual approval methodology, use PeopleSoft Application Designer to define business processes, activities, business events, worklists, routings, and approval rule sets.

The integration between Treasury and Notification Framework will be delivered as system data to support email and worklist notifications, as shown in this table:

Description	Process Name	Process Category	Navigation
Position Limit Notifications	TR_NOTIFICATIONS	POSITION_LIMIT	**Enterprise Components > Events & Notifications > Notifications Framework > Notifications Registry**

See the product documentation for *PeopleTools: Application Designer Developer's Guide* and *PeopleSoft Events and Notifications Framework*.

Related Links
"Understanding Dealing Trees and Deal Positions" (PeopleSoft Deal Management)

Position Limits and Exposure Positions

Risk Management works with your organization to manage the positions on the books and exposures related to them. PeopleSoft enables internal control procedures for checking position limits while providing you with a tool to define each person's area of accountability regarding limit violation reviews. You can monitor your exposures, check your limits, and notify the appropriate person of limit violations.

In Risk Management, an exposure is the amount of risk associated to a position from variables such as interest rates or currency exchange rates. Fluctuations in these rate types or in foreign markets can increase or decrease the amount of risk/exposure for a position. You can determine exposures from across the enterprise, and by establishing limits, you can link operational controls and risk management policies and procedures with day to day treasury operations.

PeopleSoft is flexible enough to manage any kind of exposure, including:

*   Currency exposure.

*   Interest rate exposure.

*   Counterparty risk.

*   Country risk.

*   Individual dealer positions.

*   Specific instrument limits.

*   Specific business unit limits.

Checking Position Limits

You can check position limits for specified trees and tree nodes on an ad hoc basis.

Page Used to Check Position Limits

Page Name	Definition Name	Usage
Ad-hoc Limit Check Page	POS_ADHOC_LIMITS	Verify limits on an ad hoc basis.

Ad-hoc Limit Check Page

Use the Ad-hoc Limit Check page (POS_ADHOC_LIMITS) to verify limits on an ad hoc basis.

Navigation:

Risk Management > **Position Limits** > **Check Position Limits** > **Check Position Limits**

Click the **Check Limit** button on the Check Position Limits page.

Field or Control	Description
Check Limit	Select the SetID, tree name, and (optionally) the tree node for which you want to process a limit check. Then click the **Check Limit** button. If you do not select a tree node, the entire tree is selected.

Field or Control	Description
Tree Name	Displays the tree name specified in the **Tree Name** edit box.
Tree Node	Displays the tree node, if specified in the **Tree Node** edit box.
Utilization	Displays the amount of the position limit used.
Limit Min (limit minimum)	Displays the minimum amount for this position limit.
Limit Max (limit maximum)	Displays the maximum amount for this position limit.
Internal/External	Displays the internal or external genesis of the position limit. Management or the board of directors typically define internal limits and the counterparty designates external limits.

Processing Limit Warning Notifications

You run the Limit Notification process (TR_POS_NOTFY) to check if deals have exceed established limits. If so, the system sends emails and worklist messages to defined users.

Page Used to Process Limit Warning Notifications

Page Name	Definition Name	Usage
Limit Notification Page	TR_AE_RUNCNTL	Run the Limit Notification process (TR_POS_LMT) to run position limit check processing requests.

Related Links
"Setting Up Dealing Trees and Deal Positions" (PeopleSoft Deal Management)
"Delivered Deal Management Workflows" (PeopleSoft Deal Management)

Limit Notification Page

Use the Limit Notification page (TR_AE_RUNCNTL) to run the Limit Notification process and position limit check processing requests.

Navigation:

Risk Management > **Position Limits** > **Limit Notification** > **Limit Notification**

Field or Control	Description
State Record	**Bind Variable Name** or **Value** are not necessary for the POS_NOTFY_AET state record. The Limit Notification process includes this information.

Setting Respondents for Limit Warning Notifications

Indicate users who have responded to notifications regarding position limits.

Page Used to Set Respondents for Limit Warning Notifications

Page Name	Definition Name	Usage
Review Limit Notification Page	POS_NOTIFY	Specify users who have responded to limit warning notifications.

Review Limit Notification Page

Use the Review Limit Notification page (POS_NOTIFY) to specify users who have responded to limit notifications.

Navigation:

Risk Management > **Position Limits** > **Review Limit Notification** > **Review Limit Notification**

Field or Control	Description
Responded	Select who has responded to limit warning notifications.

Defining Limit Warning Notification Exclusions

You can exclude certain user IDs from receiving position limit warning notification.

Page Used to Define Limit Warning Notification Exclusions

Page Name	Definition Name	Usage
Exclude from Limit Notification Page	POS_LMT_NFY_NOT	For a specific tree and tree node, define who should not be notified regarding limits.

Exclude from Limit Notification Page

Use the Exclude from Limit Notification page (POS_LMT_NFY_NOT) to for a specific tree and tree node, define who should not be notified regarding limits.

Navigation:

Risk Management > **Position Limits** > **Remove from Limit Notification** > **Exclude from Limit Notification**

Select **Do Not Notify** for each role name that you do not want notified of issues with limits. Automatic notifications to that role name are then disabled.

Related Links

"Defining Treasury Business Unit Options" (PeopleSoft Cash Management)

Chapter 7

Reevaluating Deals

Understanding Reevaluating Deals

Market factors create exposures for your PeopleSoft deal transactions. To evaluate the risks associated with these exposures requires the use of complex analytical models to value these deals and obtain analytic sensitivities used to analyze the deals. Risk Management enables you to revalue positions periodically, ensuring you base the portfolio's value on current market rates or the price of the underlying.

Common Elements Used to Reevaluate Deals

Field or Control	*Description*
Function Usage	Select from the following: *Delta:* Describes an option premium's sensitivity to changes in the price of the underlying. It is the amount of the underlying necessary to hedge small changes in the option price for small movements in the underlying. *MTM* (mark-to-market): Calculates the value of the financial instrument based on the current market price of the underlying. *MTM-A* (mark-to-market accounting): Calculates the clean value of the financial instrument based on the current market price of the underlying for accounting purposes. This value does not contain any accrued interest.
Analytics Mode	Limit the analysis by specifying an analytics mode from the available values. Available values are limited by your implementation configuration.
Portfolio	Select the portfolio to process.

Prerequisites

You must define analytic structures and analytic parameters, set up your third party supplier information, define function parameters, and specify file export parameters before you can start revaluing your positions.

Before you reevaluate deals, perform the following tasks:

1. Create deals.

2. Analyze and calculate risk.

3. Group deals and hedges into portfolios.

Related Links

"Understanding the Deal Capture Process" (PeopleSoft Deal Management)

"Creating Trade Tickets" (PeopleSoft Deal Management)

Understanding the Risk Analysis Process

Understanding Hedge Creation and Maintenance

Reevaluating Deals Analytics

This topic describes how to define the parameters for deal analysis.

Related Links

Setting Up Risk Analytics

Pages Used to Define Deal Analytics

Page Name	Definition Name	Usage
Deal Analytics Page	MTM_DEALVAL_PNL	Set up analytics for the deal. Override the analysis results by manually entering values. View a history of values that were created during the lifetime of the deal. See also Understanding Fair Value Accounting.
Deal Risk Measures Page	MTM_DEAL_RSK_SEC	View the various types risk metrics for the deal.

Understanding Fair Value Accounting

Mark to market accounting entry is utilized to reflect the current market value of securities, equities, or investments. The unrealized gain or loss on the mark to market event can be determined as these values:

• Per Period Fair Value - The difference between the prior recorded market value and the current market value.

• Cumulative Fair Value - The difference between the original cost and the current market value.

The choice of fair value adjustment type (Per Period Fair Value or Cumulative Fair Value) can be configured in the Instrument Analytics component.

Mark to market accounting for securities, equities, or investments can be calculated daily or at different intervals. In addition, you can initiate multiple runs of mark to market accounting to capture late price adjustments that are not captured in the previous run or undo a mark to market adjustment in the Deal Analytics component.

Mark to market gain or loss is calculated and captured for each individual deal through the Mark to Market accounting event configured on the associated instrument type. A mark to market accounting event is created when a new fair value adjustment is processed through:

- the Deal Analytics component,

- the Equity Valuation process, or

- the Security Mark to Market process.

Loss on Mark to Market values can be calculated and accounted separately from gain on Mark to Market values by configuring Amount Calc Types 09G and 09L on the Mark to Market Accounting Templates. Treasury Accounting processing uses the accounting reversal program to reverse the cumulative fair value accounting entries generated during the previous process instance. The user can also manually reverse a cumulative fair value accounting entry.

Mark to Market adjustments in the Deal Analytics component can be reviewed on the Event Log page.

Setting Up Deals for Fair Value Accounting

Before you can create fair value accounting adjustment entries, you must set up the following:

1. Create an Accounting Template with Amount Calc Types 09G and/or 09L to create Mark to Market accounting lines on the Accounting Templates page (**Cash Management** > **Treasury Accounting** > **Accounting Templates**).

2. Configure the Instrument Type to process the Mark to Market Accounting Event in the Define Instruments component (**Deal Management** > **Administer Deals** > **Define Instruments** > **Accounting Templates**).

3. Associate the fair value adjustment type with the instrument on the Instrument Analytics page (**Risk Management** > **Structure Analytics** > **Instrument Analytics**). The following fair value adjustment types are currently available:

   - Cumulative Amortized Cost

   - Cumulative Fair Value

   - Per Period Fair Value

4. Create a securities deal, an equities deal, or an investment deal.

5. For a securities deal: Enter security market values manually or import security market values.

6. For an equities deal: Enter equity market values manually or import equity market values.

7. Enter the market value for the deal on the Deal Analytics page.

Deal Analytics Page

Use the Deal Analytics page (MTM_DEALVAL_PNL) to set up analytics for the deal.

Navigation:

Risk Management > **Reevaluate Deals** > **Deal Analytics** > **Deal Analytics**

This example illustrates the fields and controls on the Deal Analytics page, using an instrument type to calculate cumulative MTM.

Analytic functions based on the instrument type can also be set on a specific deal to track the effects of various types of market risk against the deal's fair value.

Field or Control	Description
Initial Fair Value	Displays the deal value as defined on the Deal Detail page (**Deal Management** > **Capture Deals** > **Deals**).
Override Fair Value	Select to override the initial fair value amount.
Function Usage	Displays the function usage, which is limited to a Mark to Market Adjustment. In the future, this field can be enabled to process function usages from third-party systems.
Mode	Represents a more granular method by which to establish diverse analytics function usages.
Risk Measures	Click this link to display values of risk measures calculated by analytic functions.

| Field or Control	Description
Event Log	Click this link to open the Event Log page, where you can review the details of events recorded on the deal.

Fair Value History

Note: When you manually add a row to the Fair Value History grid, you should always click the Add button for the maximum As of Date row.

Field or Control	Description
As of Date	Enter a date for the fair value.
Fair Value	Enter the market value as of the indicated date.
Fair Value Adjustment	Displays the system-calculated fair value adjustment.
Accounted Gain or Loss	Displays the accounted value that has been updated by the Treasury Accounting process.
Currency	Displays the currency used in the deal.
Fair Value Adjustment Type	Displays the fair value adjustment type associated with the deal, as defined on the Instrument Analytics page.
Accounting Reversal	Displays the status of the accounting reversal.
[−]	Click the Delete Row icon to delete a mark to market adjustment only for the maximum dated row. If an accounting entry has already been created for that row, then the system schedules a reversal of the accounting entry at the end upon saving. You can delete only one row at a time.

The diagram here illustrates the Mark to Market (MTM) Accounting process on the Deal Analytics page.

This diagram shows how the system updates the accounting reversal flag for mark to market adjustments.
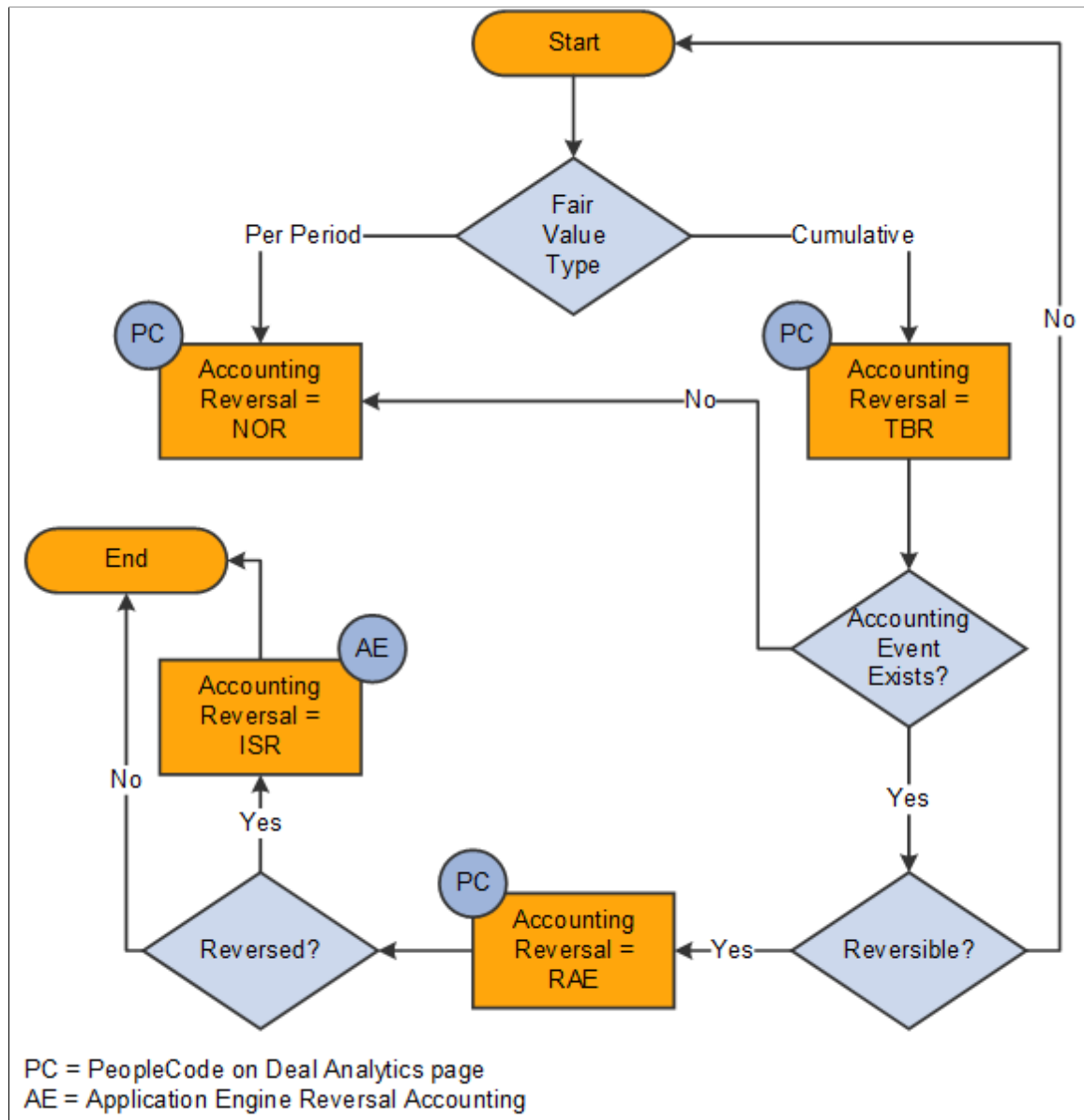
The system populates the **Accounting Reversal** field programmatically through code associated with the Deal Analytics component and the Reversal Accounting process. The following values in the **Accounting Reversal** field identify fair value adjustment rows that should be reversed or not:

- *No Reversal*: The system uses NOR to identify all fair value adjustment rows that do not require reversal or no accounting event.

- *To Be Reversed*: The system uses TBR to identify all cumulative fair value adjustment rows that will be reversed in future.

- *Reverse Accounting Entry*: The system uses RAE to identify all cumulative fair value adjustment rows that have to be reversed in the next Reversal cycle.

- *Is Reversed*: The system uses ISR to identify all cumulative fair value adjustment rows that have already been reversed.

Processing Portfolio Revaluation

Run the Mark-to-Market Batch Application Engine process (TR_PORT_MTM) on your portfolios to revalue and automatically update their current market value.

Page Used to Process Portfolio Revaluation

Page Name	Definition Name	Usage
Portfolio Revaluation Page	MTM_RUN_CNTL_PNL	Run the Portfolio Revaluation batch process to run analytic calculations on your portfolios and revalue their current market value.

Portfolio Revaluation Page

Use the Portfolio Revaluation page (MTM_RUN_CNTL_PNL) to run the Portfolio Revaluation batch process to run analytic calculations on your portfolios and revalue their current market value.

Navigation:

Risk Management > **Reevaluate Deals** > **Portfolio Revaluation** > **Portfolio Revaluation**

This example illustrates the fields and controls on the Portfolio Revaluation page.

Chapter 8

Risk Management - Configuring Batch Processes

Configuring Temporary Tables for Batch Processing

When you run batch processes in parallel, you risk data contention and deadlocks on temporary tables. To avoid this, PeopleTools enables you to dedicate specific instances of temporary tables for each process. When PeopleSoft Application Engine manages a dedicated temporary table instance, it controls the locking of the table before use and the unlocking of the table after use.

When you decide how many temporary table instances to dedicate for a process, consider the number of temporary tables that the process uses. More instances result in more copies of the temporary tables on the system. For example, if a process uses 25 temporary tables and you have 10 instances for a process, you will have 250 temporary tables on the system.

If you run processes in parallel and all of the dedicated temporary table instances are in use, the performance of the process decreases. You need to find a balance that works for your organization.

Note: When you specify the number of instances, PeopleSoft Application Designer displays a list of the temporary tables for the process. Use the list to determine how many temporary tables each process uses. See the product documentation for *PeopleTools: Application Designer Developer's Guide*.

Specify how many temporary table instances to dedicate for the following batch process that can run in parallel in Risk Management: Adjust Hedge AOCI {Accumulated Other Comprehensive Income (HDG_AOCI_ADJ)}.

The PeopleTools documentation discusses the usage of temporary tables in detail and describes how to specify the number of instances. See the product documentation for *PeopleTools: Application Engine*.

If you run any of the General Ledger COBOL processes, also configure the temporary tables for those processes. The documentation for *PeopleSoft General Ledger* discusses how to do this in detail.

Related Links
"Understanding Optimal General Ledger Performance" (PeopleSoft General Ledger)

Chapter 9

Risk Management Reports

Risk Management Reports: A to Z

This table lists the BI Publisher reports provided with PeopleSoft Risk Management, sorted alphanumerically by report ID.

Report ID and Report Name	Description	Navigation	Run Control Page
TRX3015 FX - Mark to Market	Lists mark-to-market information for transactions for a specified business unit and all defined currencies of the business unit for a specific date range.	**Risk Management** > **Reports** > **Mark to Market**	RUN_TRC3015
TRX4030 Stale Hedges	Generate a report listing all stale hedges.	**Risk Management** > **Reports** > **Stale Hedges** > **Stale Hedges**	RUN_TRC4030
TRX4031 Hedges	Provides a listing of all hedge activities for a specified business unit. Report can be filtered by hedge status, type, and relationship.	**Risk Management** > **Reports** > **Hedges Report** > **Hedges**	RUN_TRC4031
TRX4032 Hedge Assessment Tickler	Generate a report of hedges that need an assessment.	**Risk Management** > **Reports** > **Hedge Assessment Tickler** > **Hedge Assessment Tickler**	RUN_TRC4032
TRX4110R Hedge Summary	Provides a summary of all hedged risk for a single hedge or all hedges of a specified business unit.	**Risk Management** > **Reports** > **Hedge Summary Report** > **Hedge Summary**	RUN_TRC4110R