

Oracle® Fusion Cloud EPM

Administering Predictive Cash Forecasting



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Oracle Fusion Cloud EPM Administering Predictive Cash Forecasting,

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Contents

Documentation Accessibility

Documentation Feedback

1 Creating and Running an EPM Center of Excellence

2 Welcome to Predictive Cash Forecasting

Predictive Cash Forecasting Overview	2-1
Predictive Cash Forecasting Considerations	2-4
About Forecast Methods	2-5

3 Setting Up Your Application

Implementation Checklist for Administrators	3-1
Extending Your Implementation	3-4
Performing Ongoing Administration Tasks	3-4
Creating a Predictive Cash Forecasting Application	3-5

4 Enabling and Configuring Predictive Cash Forecasting

Enabling Predictive Cash Forecasting	4-1
Map/Rename Dimensions	4-3
Cubes, Dimensions, Rules, and Other Artifacts	4-4
Configuring Predictive Cash Forecasting	4-7
Adding New Cash Metrics	4-8
Setting up the Forecast Range	4-8
Setting Up Currencies	4-9
Setting Forecast Methods	4-11
Setting User Variables	4-12

A Using the Sample Data Import Templates

B Forecasting Methods

About Driver-Based Forecasting Methods	B-1
About Trend-Based Forecasting Methods	B-12
About Prediction-Based Forecasting Methods	B-13

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1

Creating and Running an EPM Center of Excellence

A best practice for EPM is to create a CoE (Center of Excellence).

An **EPM CoE** is a unified effort to ensure adoption and best practices. It drives transformation in business processes related to performance management and the use of technology-enabled solutions.

Cloud adoption can empower your organization to improve business agility and promote innovative solutions. An EPM CoE oversees your cloud initiative, and it can help protect and maintain your investment and promote effective use.

The EPM CoE team:

- Ensures cloud adoption, helping your organization get the most out of your Cloud EPM investment
- Serves as a steering committee for best practices
- Leads EPM-related change management initiatives and drives transformation

All customers can benefit from an EPM CoE, including customers who have already implemented EPM.

How Do I Get Started?

Click to get best practices, guidance, and strategies for your own EPM CoE: [Introduction to EPM Center of Excellence](#).

Learn More

- Watch the Cloud Customer Connect webinar: [Creating and Running a Center of Excellence \(CoE\) for Cloud EPM](#)
- Watch the videos: [Overview: EPM Center of Excellence](#) and [Creating a Center of Excellence](#).
- See the business benefits and value proposition of an EPM CoE in *Creating and Running an EPM Center of Excellence*.



2

Welcome to Predictive Cash Forecasting

Predictive Cash Forecasting Overview

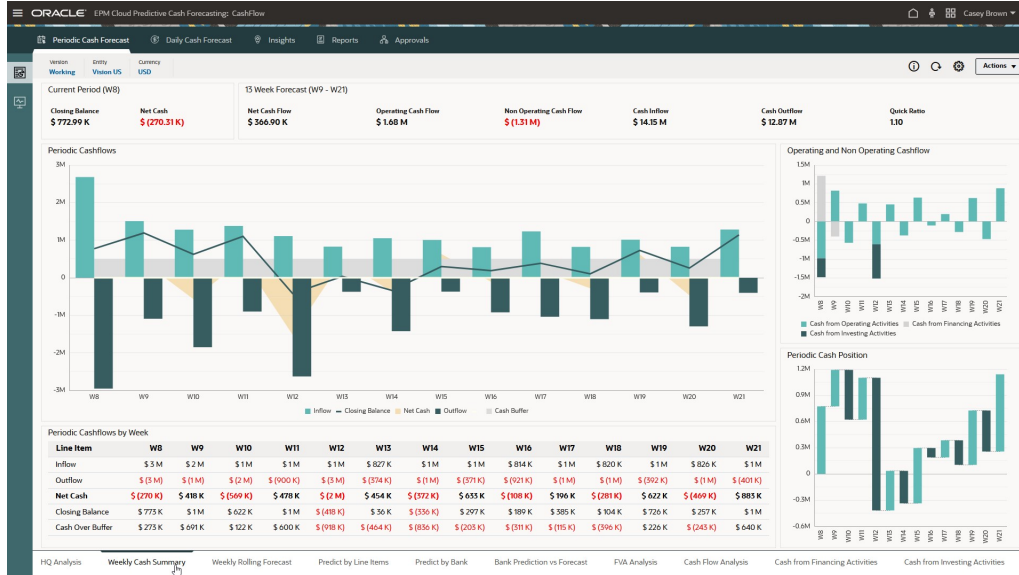
Predictive Cash Forecasting enables companies to make better use of their cash with data-driven continuous cash forecasting.

Predictive Cash Forecasting is a Planning application type designed to help treasurers and cash managers perform short-term tactical (rolling ~10 days) or mid-term operational (~3-6 months /~12-26 weeks) cash forecasting. It allows for daily, weekly, or monthly rolling forecasts that can be generated for operational, financial, and investing cash flow line items. It is built using a direct cash flow method and enables decision-making and actions for cash optimization across multiple legal entities within the business. Additionally, it provides an overview of the organization's overall cash position at each level of the legal hierarchy. With Predictive Cash Forecasting, you can:

- Optimize cash by finding problems and opportunities earlier with increased automation and more frequent cash forecast updates.
- Take action faster by aligning stakeholders and unifying scenario planning with corrective actions.
- Enable operational improvements through deeper insights into order-to-cash and procure-to-pay.

Predictive Cash Forecasting provides pre-built, best practice out-of-box content including a dimensional model, line items, forecast methods, forms, dashboards, rules, and role-based navigation flows.

Cash Managers use the **Summary** dashboard to review continuous rolling cash forecast, operating and non operating cashflow, and daily or periodic cash position by entity, along with KPIs:

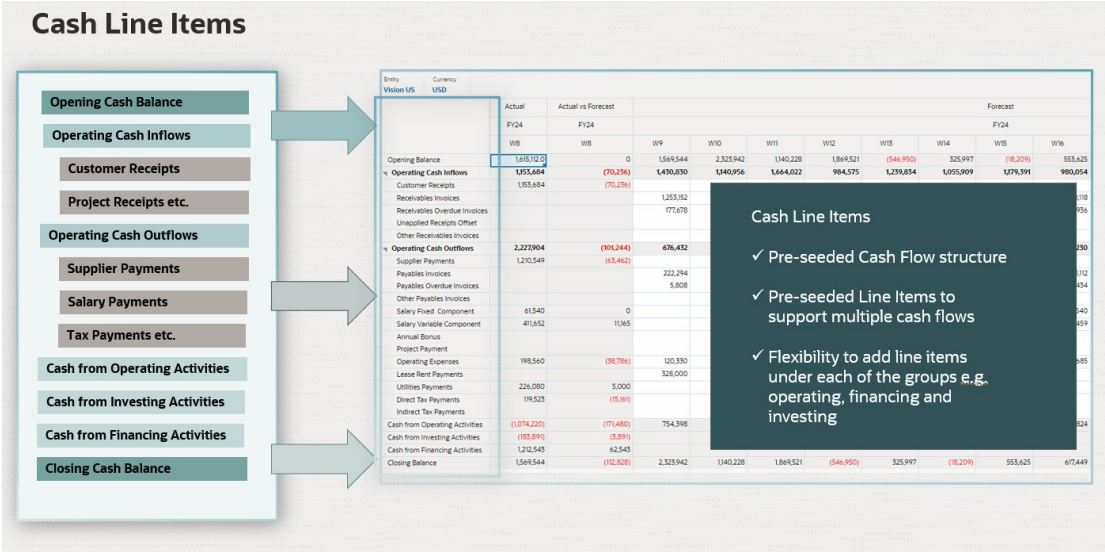


Predictive Cash Forecasting allows for daily, weekly, or monthly rolling forecasts. Cash Managers use the **Rolling Forecast** form to review and modify the forecast for cash inflows and cash outflows for their entity. They can review actuals, the rolling forecast, and actuals versus daily/periodic forecast:

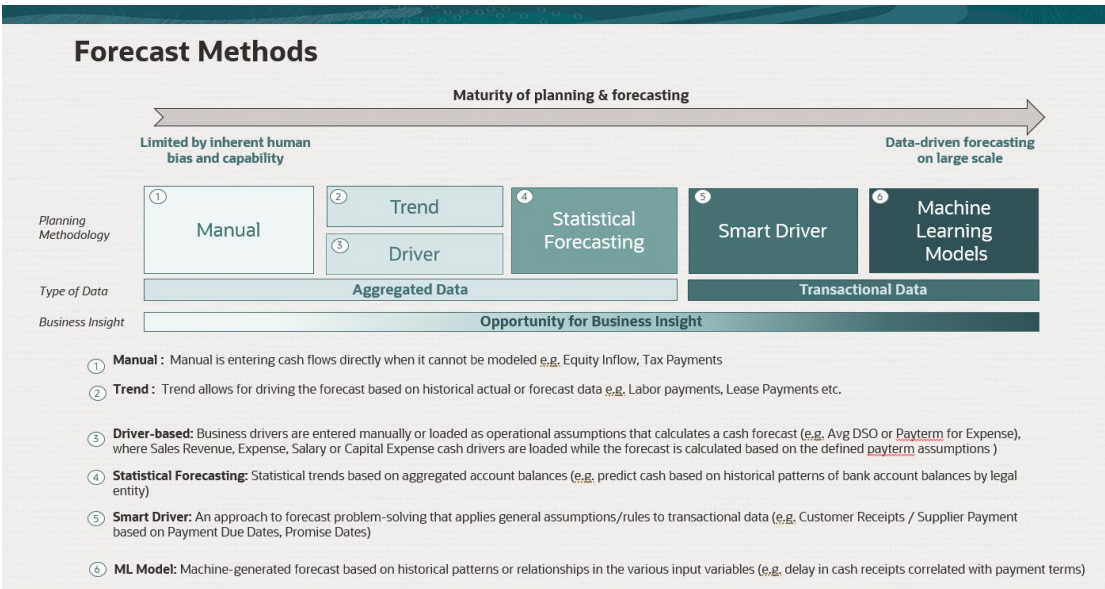
The screenshot displays the Oracle EPM Cloud Predictive Cash Forecasting: CashFlow interface in the 'Rolling Forecast' view. It shows a table comparing actuals and forecasts for various line items. The table has columns for Actual (FY24), Actual vs Forecast (FY24), and Forecast (FY24) across weeks W8 to W21. The line items include Operating Balance, Operating Cash Inflows, Customer Receipts, Receivables Invoices, Operating Cash Outflows, Supplier Payments, Payables Invoices, Payables Overdue Invoices, Salary Fixed Component, Salary Variable Component, Annual Bonus, Lease Rent Payments, Utilities Payments, Travel Payments, Opex Payments, Direct Tax Payments, Indirect Tax Payments, Cash from Operating Activities, Cash from Investing Activities, and Cash from Financing Activities. The table provides detailed numerical data for each item across the forecast period.

Controllers can see an overview of the organization's overall cash position at each level of the legal hierarchy.

Predictive Cash Forecasting provides line items along with the ability to add any additional line items you require. Cash line items drive the various cash inflows, cash outflows, and the balances for a cash forecast. Line items are organized under the structure of Operating Cash Flows, Investing Cash Flows, and Financing Cash Flows.



Predictive Cash Forecasting supports various forecast methods, which are different approaches to arriving at the cash forecasts. Forecast methods can be defined for each line item and version, entity combination, based on the data source available and the maturity of planning and forecasting. Methods include driver-based, trend-based, Smart Drivers, prediction-based methods including statistical predictions and machine learning predictions, and manual input. You can also define period-based forecast methods where you can use different forecast methods for different time frames.



Predictive Cash Forecasting provides role-based navigation flows for Cash Managers, Controllers, and Administrators, to guide users through their process.

Predictive Cash Forecasting offers:

- Integrated and automated process—Predictive Cash Forecasting allows for pulling the data from external systems to drive the cash forecast based on outstanding invoices and transactions. For forecasts beyond a certain period or for certain cash line items, data can be pulled in from any source through Data Integration.


 **Note:**

Fusion ERP Cloud integration is not yet available. In a subsequent update, Predictive Cash Forecasting will include seeded integrations from Fusion ERP Accounts Receivable, Payable and Cash Management. In the interim, you can load your data from any source and can automate the data load using a Data Integration pipeline.

- Real-time and accurate forecasts—Real-time and accurate cash forecasting by applying targeted forecasting models and intelligent predictions. Predictive Cash Forecasting supports multiple cash forecasting process cycles, short-term and medium-term. Both forecasts are rolling forecasts—the periods roll over every day for the daily forecast and roll over by week or month for the periodic forecasts.
- What-if scenarios—What-if planning with the ability to create multiple scenarios that support real-time decision-making.
- Adjustment to forecast—Ability to use direct entry planning for manual adjustments to the forecast based on human judgment.
- Flexible reporting—Multiple views for the data, such as aggregation and grouping, flexible filtering, time periods, view by Region, Legal Entity, Bank, Bank Account, Cash Pools on a daily, weekly, and monthly basis.

Overall, Predictive Cash Forecasting offers a comprehensive solution for cash forecasting that can help businesses make better decisions regarding their cash management strategies. With its advanced features and flexibility, it is a valuable tool for any organization looking to improve its cash forecasting capabilities.

Videos

Your Goal	Watch This
This overview video introduces Predictive Cash Forecasting in Oracle Cloud EPM. Predictive Cash Forecasting helps you develop data-driven cash forecasting and forecast more accurately, take faster actions with respect to cash, and enables cash flow improvements. Predictive Cash Forecasting supports daily, weekly, or monthly short and medium term forecasting, as well as supports multiple forecast methods such as driver, trend, and predictive modeling.	 Introduction to Predictive Cash Forecasting

Predictive Cash Forecasting Considerations

Considerations for Predictive Cash Forecasting:

- During application enablement, for the option **Fusion ERP Integration and Actions**, although integration with Fusion ERP is not yet available, select this option if you want to use it in the future when the feature is available. Enabling this option creates required dimensions, which can't be created later with incremental enablement.
- Available with EPM Enterprise Cloud Service.

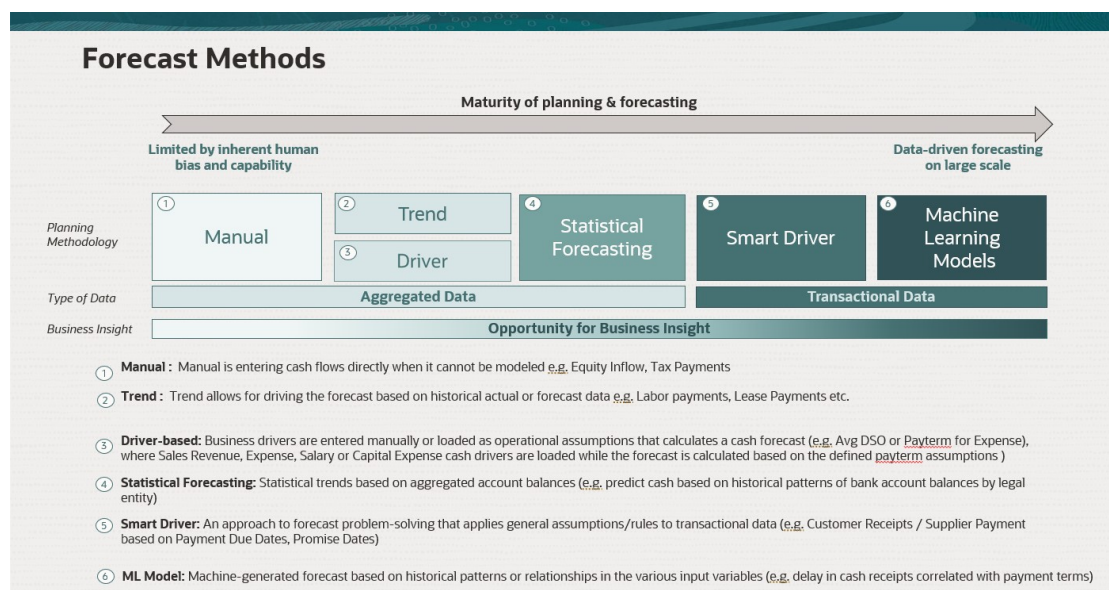
- Currently available in English only. Other languages are coming soon.
- Application is multi-currency only.
- Application is Hybrid Oracle Essbase enabled.
- Application is **Redwood Experience** only.

About Forecast Methods

Forecast methods are different approaches to arriving at cash forecasts.

Predictive Cash Forecasting supports various forecast methods for each cash line item, providing you with the flexibility to choose the appropriate method.

You can define the default forecast methods to use for each line item and entity combination based on the data source available, the maturity of planning and forecasting, and the time horizons for the forecast. You can also define period-based forecast methods where you can use different forecast methods for different time frames.



Administrators typically define the forecast methods to use, although cash managers can make changes for their entity any time if needed. For information about how to set the default forecast method for line items, see [Setting Forecast Methods](#).

Predictive Cash Forecasting supports the following forecast methods, which administrators can enable for the application:

- **Cash drivers**—A calculated method where different drivers are used to drive cash forecast for specific line items. Predictive Cash Forecasting provides 11 different driver-based methods that can be used for different cash inflows and outflows. Business drivers are entered manually or loaded as operational assumptions that calculate a cash forecast (for example, Avg DSO or Payterm for Expense), where Sales Revenue, Expense, Salary or Capital Expense cash drivers are loaded and then the forecast is calculated based on the defined pay term assumptions. For more information about cash drivers, see [About Driver-Based Forecasting Methods](#).

- Smart Drivers—For data you expect to come from ERP. Useful in a daily model. In a periodic model, you might use Smart Drivers for early periods, and other methods for later input.

Smart Drivers is an approach to forecast problem-solving that applies general assumptions or rules to transactional data. For example:

- Smart Drivers to use payment scheduled due dates for accounts receivable and or payable.
- Apply an average delay by legal entity to all transactions.
- Use delivery date for sales orders or purchase orders.

Fusion ERP Cloud integration will be available in a future release. Predictive Cash Forecasting will include seeded integrations from Fusion ERP Accounts Receivable, Payable and Cash Management. In the interim, you can load subledger summarized data from other data sources, such as Oracle EBS, Peoplesoft, or SAP.

- Predictive Planning—You can use Predictive Planning to forecast cash based on the historical data for the line item using time-series forecasting techniques. Predictive Planning selects the best prediction method to use, selecting the method that gives the most accurate results based on the data available. For example, use statistical trends based on aggregated account balances to predict cash based on historical patterns of bank account balances by legal entity. For more information about the statistical forecasting methods, see Predictive Planning Forecasting and Statistical Descriptions in *Working with Planning*.

 **Note:**

For Interactive Predictive Planning, Receivable Invoices, Overdue Invoices, Payable Invoices, Payable Overdue Invoices will not provide any results as there is no historical data in these lines. However you can use AutoPredict, because it allows you to reference a different line item for predicting.

- Machine Learning— Machine Learning Models are integrated in Predictive Cash Forecasting to accurately predict the cash inflows from Accounts Receivable data. Machine learning as a prediction model is best suited to customers who have a due date-based payment approach. For example, create a machine-generated forecast based on historical patterns or relationships in the various input variables such as a delay in cash receipts correlated with payment terms.

 **Note:**

Machine Learning will be supported in a future update.

- Manual Input—The most basic method, for line items where it is difficult to apply specific logic; instead you can manually enter the cash forecast numbers. For example, Equity Inflow or Tax Payments.
- Trend—You can use trend-based methods for any line items where the cash forecast can be calculated based on historical trends. Trend-based methods can be used only for Periodic forecasts. For example, Labor Payments or Lease Payments. For more information, see [About Trend-Based Forecasting Methods](#).

Additionally, with Predictive Cash Forecasting, you can blend forecast methods by using different forecast methods for different line items, different forecast methods for different period ranges, or different forecast methods for different entities. You can also perform what-if planning using different forecast methods, and then select the best forecast method to use for a particular line item, entity, or period range.

Forecast Method

Blend Forecast Methods

Vision NA	Week 1-3	Week 4-7	Week 8-13
Customer Receipts	Smart Drivers	Predictive Planning	
Project Receipts	Driver based		
Equity Inflows	Manual		
Salary Payments	Driver based	Predictive Planning	
Supplier Payments	Smart Drivers	Predictive Planning	Trend
Rent Payments	Trend		
Tax Payments	Driver based	Manual	

Blend Forecast Methods:

- ✓ Different Forecast Methods for different Line Items
- ✓ Blend Forecast Methods by Line Items and Period Ranges
- ✓ What-ifs to pick the forecast method that gives best accuracy over the periods
- ✓ Forecast Methods can vary for different entities

3

Setting Up Your Application

Perform the following tasks to set up Predictive Cash Forecasting.

1. Set up the application. See [Implementation Checklist for Administrators](#).
2. Extend the application as needed with additional features available on the Oracle Enterprise Performance Management Cloud platform. See [Extending Your Implementation](#).
3. Perform ongoing administrative tasks as needed. See [Performing Ongoing Administration Tasks](#).

Implementation Checklist for Administrators

Follow this checklist to set up Predictive Cash Forecasting.

Prerequisites:

- Prepare metadata load files.
 - Prepare data load files. For information about sample data load files, see [Using the Sample Data Import Templates](#).
1. Create the Predictive Cash Forecasting application. See [Creating a Predictive Cash Forecasting Application](#).
 2. Enable Predictive Cash Forecasting features. See [Enabling Predictive Cash Forecasting](#).
 3. Configure Predictive Cash Forecasting. See [Configuring Predictive Cash Forecasting](#).
 4. Import metadata: From the Home page, click **Application**, then click **Overview**, and then click **Dimensions**. Click **Import**, and then click **Create**. For each dimension, load metadata. You can import from a file. Refresh the database.

Note:

- You can check the status of the **Import Metadata** job and the **Refresh Database** job in **Jobs**.
- You can leverage EPM Automate to automate the file upload into the Inbox and Outbox folders.
- You can schedule a job for metadata import.

 **Note:**

You can add new line items for driver categories. In the Dimension Editor, add the line item in the **OCF_Total_Cash** hierarchy, in the appropriate category. Additionally, add it as a shared member to the **OCF_Driver_Groups** hierarchy, in the appropriate category.

5. Import data. Oracle recommends that you use Data Integration to manage the data import process, including scheduling jobs. For more information, see [Administering Data Integration for Oracle Enterprise Performance Management Cloud](#).
Predictive Cash Forecasting provides sample data load templates as guidance for you to understand the various intersections at which the application expects data. For more information about the sample data load templates, see [Using the Sample Data Import Templates](#).
Typical data to load includes daily actuals, and driver data, such as expense payments, fixed assets, project payments, project receipts, revenue receipts, and so on.
6. Set user variables. See [Setting User Variables](#).
7. Set forecast methods for each line item and entity combination. Select the forecast methods to drive the calculations for your cash forecasts. This is typically a one-time setup task, although you can make changes any time if needed. See [Setting Forecast Methods](#).
8. Run rules: From the Home page, click **Rules**, and then select the rules to run:
 - **Daily Process Actuals / Periodic Process Actuals.**
 - **Daily Process Forecast / Periodic Process Forecast**
 - **Daily Rollup / Periodic Rollup**Select **OEP_DCSH** or **OEP_PCSH** cube and run these business rules for daily and periodic cash forecasting models.
For information about the rules, see [Rules](#).
9. In **Access Control**, create user groups for Cash Manager and Controller roles and assign them roles as needed. Typically, Cash Managers and Controllers would be **Power Users** or **Planners**.
10. Review the provided navigation flows, and modify the navigation flows as needed for your organization. Assign the navigation flows to the associated user groups you created, and then make the navigation flows active.
To assign the security, make a copy of the navigation flows and assign security users and groups.

 **Note:**

If you plan to modify the navigation flows, Oracle recommends that you make a copy of the predefined navigation flows and work in the copy, not the original. When you update, Oracle applies the update to the original navigation flows and leaves your modified navigation flows unchanged.

11. Prepare any data integrations that you created for loading data for incremental data loads by associating a business rule with the data integration. The rule significantly improves performance by calculating data for loaded combinations.
 - a. From the Home page, click **Application** and then click **Data Exchange**.
 - b. On the **Data Integrations** tab, from the **Actions** **...** menu next to the integration, select **Options**, and then click the **Business Rules** tab.
 - c. Expand the **Embedded** section, click **+**, and add these rules as appropriate for your integration:
 - **OCF_Daily Incremental Process Data For Drivers**
 - **OCF_Periodic Incremental Process Data For Drivers**
 - d. Click **Save**.

For more information about registering business rules in data integrations, see *Registering a Business Rule in Embedded Mode in Administering Data Integration for Oracle Enterprise Performance Management Cloud*.

12. Run data maps to push data to the reporting cube. After the daily and periodic cash forecasting process is completed, push the daily and periodic data to the ASO reporting cube to generate dashboards and reports. From the Home page, click **Application**, then click **Data Exchange**, and then click **Data Maps**. Run the provided data maps (seeded based on how you enabled the application) to push the entire forecast data into ASO reporting cube:
 - **Daily Cash to Reporting**
 - **Periodic Weekly Cash to Reporting**
 - **Periodic Monthly Cash to Reporting**

Oracle recommends that you configure a pipeline job in Data Integration to automate this process.

13. Load opening balances. This step should be done only once, on the first day of implementation. Load your historical bank balance bank to the **OCF_Historical Opening Bank Balance** member, for the **Actual** scenario.

When you run the **Process Actuals** rule, it looks for data in **OCF_Historical Opening Bank Balance**. If it finds data, the **Opening Balance** is set to this value. If it does not find data in **OCF_Historical Opening Bank Balance**, Predictive Cash Forecasting calculates the **Opening Balance** using the previous period's **Closing Balance**.

Predictive Cash Forecasting provides templates to simplify loading the investing and financing cashflow data:

- `DailyHistoricalOpeningBankBalance.csv`
- `WeeklyHistoricalOpeningBankBalance.csv`
- `MonthlyHistoricalOpeningBankBalance.csv`

See [Using the Sample Data Import Templates](#).

14. Oracle recommends that you change the application settings to use Forms 2.0 to leverage the latest features and functionalities available in Forms 2.0. From the Home page, click **Application**, and then click **Settings**. In **Forms Version**, select **Forms 2.0**.

15. Make the application available to planners. From the **Home** page, click **Application**, then click **Settings**. In **System Settings**, change **Enable Use of the Application for** to **All Users**.
16. Communicate the URL to your organization.
17. Set up currencies for the application. For more information, see [Setting Up Currencies](#).

Extending Your Implementation

You can enhance your implementation with additional features available on the Oracle Enterprise Performance Management Cloud platform.

For example:

- Configure a pipeline job in Data Integration. The Pipeline feature enables you orchestrate a series of jobs as a single process across all those steps. In addition, you can orchestrate EPM Cloud jobs across instances from one location. Using the Pipeline, you have better control and visibility of the full extended data integration process for preprocessing, data loading, and post processing jobs.
- Configure IPM Insights. IPM Insights analyzes past data and predicted data, helping you find patterns and insights into data that you might not have found on your own. See *Configuring IPM in Administering Planning*.
- Implement the Approval process to manage the process in your organization. See *Managing Approvals in Administering Planning*.

Note:

An approval unit hierarchy with a secondary dimension can be set up only for a specific dimension if the workflow needs be set at that level. Support for a secondary dimension for approval hierarchy is not supported for the **Rolling Forecast** form. The **Rolling Forecast** form inherits security of any members of secured dimensions.

- Create reports.
- Configure valid intersections.
- Additional configurations for extended forms, dashboards, and rules.

Performing Ongoing Administration Tasks

Perform these administrative tasks as needed on an ongoing basis.

1. Load the bank balance on an ongoing basis to the **OCF_Bank Balance** member for the **Actual** scenario. For example, if you want to forecast starting from tomorrow, load the closing bank balance as of today as the bank balance. Templates are provided to load data to bank balance (*DailyBankBalance.csv*, *WeeklyBankBalance.csv*, *MonthlyBankBalance.csv*.) See [Using the Sample Data Import Templates](#).
2. As Cash Managers and Controllers make adjustments to forecast numbers, run the rules and data maps on a regular basis. If you are working with multiple

currencies, make sure to run the currency-related conversion and rollup rules and data maps. (See [Setting Up Currencies](#).)

Creating a Predictive Cash Forecasting Application

To get started, create a Predictive Cash Forecasting application.

To create a Predictive Cash Forecasting application:

1. On the EPM Enterprise Cloud Service landing page, click **SELECT** under **Planning** to view available options for creating a Planning application. Under **Create a new application**, click **START**.
2. Enter an application name and description, and for **Application Type**, select **Cash Forecasting**, and then click **Next**.
3. Specify application details, and then click **Next**:
 - **Start and End year**—Years to include in the application.
 - **First Month of Fiscal Year**—Month in which your fiscal year begins.
 - **Main Currency**—For a multicurrency application, this is the default reporting currency and the currency against which exchange rates are loaded. Note that Predictive Cash Forecasting applications are always multi currency.
For more information about using multiple currencies, see [Setting Up Currencies](#).
4. Review the application details, and then click **Create**.

4

Enabling and Configuring Predictive Cash Forecasting

Enabling Predictive Cash Forecasting

After creating a Predictive Cash Forecasting application, enable features.

Before users can start performing cash forecasting, you must enable Predictive Cash Forecasting features. Based on your selections, dimensions, drivers, forms, and accounts are created.

To enable Predictive Cash Forecasting features:

1. At the end of the **Application Creation** wizard, click **Configure**. Or, from the Home page, click **Application** and then click **Configure**.

 **Note:**

Use the **Admin** navigation flow to enable and configure Predictive Cash Forecasting.

2. Click **Enable Features**.
3. Select the features you want to enable, and then click **Enable**.

Table 4-1 Enabling Predictive Cash Forecasting Features

Enable	Description
Time Granularity	Select the time granularity for your cash forecasting process. You can select Daily , Periodic , or both. If you select Periodic , you can select Monthly or Weekly . If you select Weekly , you can select 53 Weeks for 53-week planning. If you select Daily , there will be a two-year rolling forecast. Select whether to include Quarters and Months in the hierarchy. You can also enable 53-week planning. Forms always show level 0 members for rolling forecasts. But for reporting, you show can show quarters or months if you select that. Oracle recommends that you enable both daily and periodic cash forecast.

Table 4-1 (Cont.) Enabling Predictive Cash Forecasting Features



Enable	Description
<p>Driver Based Forecasting</p>	<p>Select the driver-based forecasting methods to use to forecast cash inflows and outflows. This enables you to forecast cash using different calculation methods for different cash line items. Based on the methods you select, Predictive Cash Forecasting creates sample line items (accounts) for you to use. You can add your own additional line items in each category. Forms and calculations are added based on methods you select. For information about the methods, see About Driver-Based Forecasting Methods.</p>
<p>Trend Based Forecasting</p>	<p>Select Trend Based Forecasting if you want to plan any of your periodic cash using different trend-based methods. You can use trend-based methods for any line items where the cash forecast can be calculated based on historical trends. Trend-based methods can be used only for Periodic forecasts. For information about the methods, see About Trend-Based Forecasting Methods.</p>
<p>Predictive Forecasting</p>	<p>Select the predictive methods to use for cash forecasting:</p> <ul style="list-style-type: none"> • Statistical Time Series—Use Auto Predict and Predictive Planning to predict future performance based on historical data. • Machine Learning Summary—Use Machine Learning to predict the cash forecast using provided ML models. <div style="border-left: 2px solid #0070C0; border-bottom: 2px solid #0070C0; padding: 10px; margin-top: 10px;"> <p> Note:</p> <p>Although Machine Learning is not yet available, select this option if you want to use it in the future when the feature is available.</p> </div>

Table 4-1 (Cont.) Enabling Predictive Cash Forecasting Features

Enable	Description
Fusion ERP Integration and Actions	<p>Enable integration with Fusion ERP, and select the ERP integrations to use. If you want to enable this feature, it must be selected the first time you enable features. Enabling this option creates required dimensions, which can't be created later with incremental enablement. When selected, appropriate line items are created to support the integration. It also creates the Party and Business Unit dimensions, which are mandatory with Fusion ERP integration.</p> <div style="border: 1px solid #0070C0; padding: 10px; margin-top: 10px;"> <p> Note:</p> <p>Although integration with Fusion ERP is not yet available, select this option if you want to use it in the future when the feature is available.</p> </div>
Other Features	<p>Default features included for application; they are always enabled automatically.</p>
Map/Rename Dimensions	<p>Map existing dimensions to Predictive Cash Forecasting dimensions, rename dimensions, and enable custom dimensions (Business Unit, Party, Category, and one additional custom dimension). The Business Unit and Party dimensions are mandatory if you select Fusion ERP Integration and Actions. You can also associate custom dimensions with features. You must perform this configuration task the first time you enable features, although you can incrementally associate the Category or Custom dimensions with additional features at any time.</p> <p>See Map/Rename Dimensions.</p>

When you click **Enable**, the Predictive Cash Forecasting artifacts are populated, including dimensions, forms, line items, rules, navigation flows, and so on, based on the features you selected. For details about some of the artifacts, see [Cubes](#), [Dimensions](#), [Rules](#), and [Other Artifacts](#).

4. Sign out and sign in back to start using Predictive Cash Forecasting.

Map/Rename Dimensions

Map or rename existing dimensions, enable custom dimensions, and associate custom dimensions with driver methods. You must perform this configuration task the first time you enable features.

In **Map/Rename Dimensions**:

- To enable custom dimensions, click the **Enable** box next to the dimension. When you first enable features for Predictive Cash Forecasting, you must enable any custom dimensions you will use—**Category**, **Party**, **Business Unit**, and one additional custom dimension.
- To rename a dimension, click **Rename Target Dimension** next to a dimension, and enter a new name.

Do not rename the **Bank**, **Business Unit**, and **Party** dimensions.

- To associate dimensions with driver methods, click **Rename Target Dimension** next to a dimension, and then select the driver methods the dimension applies to from the **Valid for** list. (Driver methods are not available if you didn't enable the associated driver method.)

Custom dimensions are added to the Page in forms for features to which the custom dimension applies. For example, if a custom dimension is applicable to Expense Payments only, it appears on the Page for Expense Payments forms. In forms for other features, such as Revenue Payments, **NoMember** for the dimension is on the POV.

 **Note:**

You can't change the association once selected, so select this option only if you are sure, because selecting this option seeds the dimensions in the driver- or trend-based forms.

You can incrementally associate custom dimensions with additional features after you first enable Predictive Cash Forecasting.

Cubes, Dimensions, Rules, and Other Artifacts

Review the Predictive Cash Forecasting artifacts.

Predictive Cash Forecasting provides predefined artifacts including:

- [Cubes](#)
- [Dimensions](#)
- [Rules](#)
- [Navigation Flows](#)

Cubes

A Predictive Cash Forecasting application includes these cubes:

- **OEP_PCSH**—Periodic (Hybrid BSO)
- **OEP_DCSH**—Daily (Hybrid BSO)
- **OCFREP**—Reporting (ASO)
- **OEP_RCSH**—Reporting (ASO)

Dimensions

Table 4-2 Predictive Cash Forecasting Dimensions

Dimension	Dimension Details	Comments
Currency	Mandatory, Standard	You can perform multi-currency forecasting, with multiple currencies imported from Fusion ERP or other sources. Adjustments can be done at each input currency and translated into reporting currency.
Entity	Mandatory, Standard	This is the legal entity structure that can be pulled from Fusion ERP or other sources. The Entity can then be categorized under hierarchies for rolling up cash forecast and actual numbers by entity, regions, and overall global views.
Forecast Method	Mandatory, Provided	Forecast methods are provided in the application as a way to arrive at your forecast. Includes different forecast methods such as Smart Driver (forecasting based on ERP data), Driver, Trend, Predictive (statistical predictions from Auto Predict and ML-based predictions). Also used for pay terms and other assumptions. For each line item, you define which forecast method to use.
Line Item	Mandatory, Standard	This dimension represents each of the cash flow elements, such as cash balance, inflows, and outflows; the equivalent of the Accounts dimension.
Period	Mandatory, Standard	You can enable cash forecasts to be Daily rolling and Periodic rolling forecasts. Periodic forecasts can be either weekly or monthly. You can choose to include Quarters and Months in the hierarchy.
Scenario	Mandatory, Standard	This dimension allows for delineating actual, daily, and periodic forecasts.
Version	Mandatory, Standard	This dimension allows for multiple versions of the forecast. It supports a working version and what-if versions, to compare between working and what-if versions. You can create additional versions.
Years	Mandatory, Standard	Cash forecasting can be done for multiple years. This dimension allows for creating multiple years, both historical and future periods that can help you analyze cash reporting year over year. Years can be calendar years or fiscal years.
Bank	Mandatory, Provided	Bank balances are a critical part of the cash forecasts. Use this dimension to analyze cash by different banks and bank accounts. Typically used for historical data and cash position for reporting by bank. Forecasting is not available by bank; forecasting is done by Any Bank or No Bank . Bank and Bank accounts can be imported from Fusion ERP or other sources.
Business Unit	Optional, Provided	Business Unit is a mandatory dimension if Fusion ERP integration is enabled. This dimension allows for cash reporting based on business unit across the enterprise. Business Unit can be imported from Fusion ERP or other sources.

Table 4-2 (Cont.) Predictive Cash Forecasting Dimensions

Dimension	Dimension Details	Comments
Category	Mandatory, Provided	The Category dimension is a generic placeholder custom dimension that you can use for various purposes such as Projects, Stores, Assets, or Tax Payments, for example. Hierarchies are populated based on driver-based methods that need this dimension. For example, for project-related payments, you can use this dimension for your projects. The category applicable for each cash line item can be different. For example Project Payments have different Projects in the Category dimension and Supplier Payments have supplier types in the Category dimension.
Custom 1	Optional, User defined	Predictive Cash Forecasting provides one additional custom dimension for any use, such as cost center, market segment, stores, or any other important business dimension that is relevant for the purpose of cash reporting. This placeholder custom dimension is provided to support modeling using this dimension.
Party	Optional, Provided	Party is a mandatory dimension if Fusion ERP integration is enabled. It represents customer and supplier hierarchies. You can import Customers and Suppliers from Fusion ERP or other sources for forecasting and analyzing cash data by customers or suppliers. Customers and Suppliers are tiered into multiple ranked tiers based on key business drivers to identify the top parties to be prioritized versus the others.

Rules

- **Daily Process Actuals**—This rule calculates opening and closing balance based on actuals inflows/outflows. Run this rule on a daily basis after loading daily actuals. This rule is run by entity. This rule sets the substitution variables for the daily period, processes actual data after it is loaded, and calculates the opening balance of the forecast period using the current period ending/closing balance. If you select a parent member to run it for, it runs for all level0 children. The rule takes today's date as the current date.
This seeds the forecast with a rolling forecast so planners can start working, with a forecast range based on **Forecast Range Setup**.
- **Periodic Process Actuals**—This rule processes actual data after it is loaded and calculates the opening balance of the forecast period using the current period ending balance.
- **Daily Process Forecast** or **Periodic Process Forecast**—Run this rule before cash managers begin forecasting for the day. This rule populates the rolling forecast based on the forecast method set for each line item and period range and also populates the overall rolling forecast amount. It also posts the opening balance across all open forecast periods.
- Currency Translation rules:
 - **Daily Currency Translation To Entity Currency**
 - **Daily Currency Translation To Reporting Currency**
 - **Periodic Currency Translation To Entity Currency**

- **Periodic Currency Translation To Reporting Currency**
- Rollup rules so Controllers see values of an entity at the parent level:
 - **Daily Rollup Entity**
 - **Periodic Rollup Entity**

Navigation Flows

Predictive Cash Forecasting provides role-based navigation flows:

- **Cash Manager Flow**— The primary end user navigation flow that covers both periodic and daily cash forecasting by Entity. Cash Managers review cash inflows and outflows for their Entity to forecast and optimize cash. This navigation flow covers multiple cash forecasting methods, grouped as vertical tabs.
- **Controller**—Another end user navigation flow that can be used by reviewers or treasury who have visibility into to multiple Entities (such as regional-level or country-level). Controllers can drill in to entity-level cash forecasts (the same as the Cash Manager navigation flow). Cash Managers typically report to Controllers.
- **Admin**—The default navigation flow that is provided for administrators for configuring the Predictive Cash Forecasting application and extending it for more capabilities from the EPM Cloud Platform.



Note:

Create groups, such as Cash Manager and Controller, in **Access Control**, to correspond to the navigation flows, and then assign the navigation flow to the associated group.

Configuring Predictive Cash Forecasting

Perform these configuration tasks after enabling Predictive Cash Forecasting features.



Note:

Use the **Admin** navigation flow to enable and configure Predictive Cash Forecasting.

1. From the Home page, click **Application** and then click **Configure**.
2. Perform the following tasks:

Table 4-3 Configuring Predictive Cash Forecasting

Configure	Description
Cash Metrics	Add new cash metrics. See Adding New Cash Metrics .
Forecast Range Setup	Configure the time granularity for Daily and Periodic cash forecasting. See Setting up the Forecast Range .

Adding New Cash Metrics

Predictive Cash Forecasting provides cash metrics, but you can add any additional metrics you need for your organization.

To add cash metrics:

1. From the Home page, click **Application** and then click **Configure**.
2. Click **Cash Metrics**.
3. To add a metric, from the **Actions** menu, select **Add**, and then enter details in the new row.

Notes:

- Specify unique member names and aliases for custom members so they don't conflict with any provided members.
- You can't delete the cash metrics provided with Predictive Cash Forecasting.
- You can't edit the properties of the cash metrics provided with Predictive Cash Forecasting. However, you can edit the formula by clicking the **Edit Formula** icon.

Setting up the Forecast Range

Configure the forecast time frame for Daily and Periodic cash forecasting.

To configure the time frame for forecasts:

1. From the Home page, click **Application** and then click **Configure**.
2. Click **Forecast Range Setup**.
3. In **Forecast Start Day**, select an option:
 - **Specific Date**—Specify a different start date, for example, if you are in the implementation phase and you want a future start day for your production phase, or when the forecast start day is a future date due to holidays. The specific date can't be beyond 30 days of the system date.
 - **System Date**—The default. In general, Oracle recommends that you use the system date for your production environment.

With every daily maintenance window, the date rolls over. The current rolled over date and data becomes the forecast start date, and the previous day becomes the Actuals. These changes are reflected in the **Rolling Forecast** form.

4. In **Daily Rolling Forecast**, if your application was enabled for daily forecasting:
 - a. Select the **Number of Forecast Days**. The **Rolling Forecast Range** is updated based on the **Forecast Start Day** and the **Number of Forecast Days**.
 - b. Select the **Number of Actual Days** to define the number of actual days for variances and reporting. The **Actual Rolling Forecast Range** is updated based on the **Forecast Start Day** and the **Number of Actual Days**. Even though the actual date range displays based on your selection, you can upload more historical periods for actual data if you have it.
5. In **Periodic Rolling Forecast**, if your application was enabled for periodic forecasting:

- a. Select the **Number of Forecast Periods**. The **Rolling Forecast Range** is updated based on the **Forecast Start Day** and the **Number of Forecast Periods**.
 - b. Select the **Number of Actual Periods** to define the number of actual periods for variances and reporting. The **Actual Rolling Forecast Range** is updated based on the **Forecast Start Day** and the **Number of Actual Periods**.
6. Click **Save**.

Based on the forecast range, substitution variables and valid intersection combinations are updated.

Additionally, the rolling forecast form and some of the historical variance forms and dashboards are defaulted with date ranges based on the forecast range setup.

**Note:**

If you change the forecast range, you must run the **Daily Process Forecast / Periodic Process Forecast** rules again to see the change reflected in the **Rolling Forecast** form.

Setting Up Currencies

Set up currencies for the Predictive Cash Forecasting application.

Predictive Cash Forecasting performs currency translations from the input currency to the reporting currency.

To set up currency in Predictive Cash Forecasting:

1. During application creation, select a main currency against which the entire application will refer to when a currency conversion is done.
The **Currency** dimension is created, which stores input and reporting currencies.
2. After the application is created, in the **Currency** dimension, create a Currency member for each currency in the application. The Currency members you create are listed under **Input Currencies**. Data is entered or loaded in an input currency and data can be entered or loaded into multiple input currencies for any given combination; for example Entity and Account.
3. While creating a Currency member, you can specify whether the currency you're adding is also a reporting currency. Select the **Reporting Currency** option to make a currency a reporting currency.

When you select **Reporting Currency**, a member is automatically added in the Reporting Currencies hierarchy as **<Currency>_Reporting**.

**Note:**

Each application has one main currency, and is allowed to have many reporting currencies.

4. Enter exchange rate data to the exchange rate form that was automatically created and seeded during application creation. The exchange rate form is called **Daily Exchange**

Rate to Main Currency, **Weekly Exchange Rate to Main Currency**, or **Monthly Exchange Rate to Main Currency**, depending on how your application was enabled; for example, **Daily Exchange Rate to USD**. Enter the exchange rates by period for all input currencies against the main currency. Rates can be entered both as average rates or end of period rates. You must enter the values across all intersections under which you want to see the converted data.

Triangulation calculations perform conversions between any currencies.

5. Using the Dimension Editor, edit each member in the **Entity** dimension to tag the entity with a currency to use for the entity (the Entity Currency): Make sure the **UDA** column is showing, and then select the entity currency to use from the **UDA** column. This enables the input currency (loaded or adjusted values) to be translated to the entity currency (the reporting currency for the entity) that you defined for each entity.
6. At this point, the application is ready for you to load data and run the required rules. See the [Implementation Checklist for Administrators](#).
7. Run currency conversion rules. After data is loaded, and Cash Managers or Controllers make any adjustments in the input currency, you must run currency conversion rules in order to see values in the reporting currency. The input currencies are first converted to entity currencies and then to reporting currencies:

- a. To convert the input currency to the reporting currency based on the currency of the selected entity:

- In the Daily cube (OEP_DCSH)—**Daily Currency Translation to Entity Currency**
- In the Periodic cube (OEP_PCSH)—**Periodic Currency Translation to Entity Currency**

For each rule, select the entity or entities, scenario (for example, forecast or actuals), and version to run the rule for. You can run the rule for a specific entity, multiple entities, or all children of a parent entity.

- b. To convert the input currency to the selected reporting currency or currencies:

- In the Daily cube (OEP_DCSH)—**Daily Currency Translation to Reporting Currency**
- In the Periodic cube (OEP_PCSH)—**Periodic Currency Translation to Reporting Currency**

For each rule, select the parent entity, scenario (for example, forecast or actuals), and version to run the rule for, and enter the reporting currency to convert values to. You can run the rule for a specific entity, all entities, or all children of a parent entity.

- c. For Controllers to see currency converted data at a higher level in the hierarchy, run a rule to roll up converted data:

- In the Daily cube (OEP_DCSH)—**Daily Rollup Entity**
- In the Periodic cube (OEP_PCSH)—**Periodic Rollup Entity**

For each rule, select the parent entity, scenario (for example, forecast or actuals), and version to run the rule for, and enter the currency to convert values to.

8. Push all of the converted data from the BSO cubes to the ASO reporting cube by running data maps in **Data Exchange**:

- **Daily Cash to Reporting**
- **Periodic Monthly Cash to Reporting**

Setting Forecast Methods

Select the default forecast method to use for each line item to drive cash forecasts.

Line items forecasts are calculated based on the default forecast method for that line item.

Administrators typically perform this one-time setup task. Cash managers can make changes for their entity any time if needed.

For details about each of the supported forecast methods, see [About Forecast Methods](#).

Note:

Use the **Cash Manager Flow** navigation flow to set forecast methods.

1. From the Home page, click **Daily Cash Forecast**, and then click **Set Forecast Method**.
2. Select the entity from the POV. (You must set forecast methods for every entity.)
3. For each line item, select the default forecast methods to use for different time periods of the rolling forecast range:

Tip:

You can open the form in Oracle Smart View for Office to quickly update all the line items.

- a. **Preferred Method 1**—Select the preferred default forecast method.
 - b. **Method 1: End Period**—Select the last period of the rolling forecast range to use the preferred method 1 you selected. (In a daily model, the period is days. In a periodic model, the period is monthly or weekly.)
4. Repeat these steps for Method 2 and Method 3.
Note that every end period following the first end period has be greater than the first end period.
 5. Repeat these steps for each entity.
You can use the rule **Daily / Periodic Push Assumptions to Entities** to copy assumptions from one entity to one or more entities.

Note:

You can calculate forecasts for line items using any method, but the method you select here becomes the default.

Setting User Variables

Each planner must set the user variables described in this topic.

User variables define the context for forms and dashboards.

1. On the Home page, click **Tools**, then click **User Preferences**, and then click **User Variables**.
2. Select members for these user variables:
 - **Customer**
 - **Project**
 - **Supplier**
 - **Context Period**—Weekly only
 - **Controller Entity**—For controllers, who have access to multiple entities. Select the entity to use.
 - **Currency**
 - **Entity**—For users other than controllers.
 - **Reporting Period**—Weekly only
 - **Scenario**
 - **Version**

A

Using the Sample Data Import Templates

You can use data import templates as a guide to importing data to Predictive Cash Forecasting .

Before importing data, configure the application as described in this guide and import the dimensional metadata.

You can download data import templates from within the application. The templates are generated based on the features you've enabled and the custom dimensions that were added.

Predictive Cash Forecasting provides these data load templates as guidance for you to understand the various intersections at which the application expects data. However, Oracle recommends that you use Data Integration as the preferred choice of integration with external sources. Use these templates as guidance, and use Data Integration to configure your data load rules.

For more information about Data Integration, see [Administering Data Integration for Oracle Enterprise Performance Management Cloud](#).

To download the data import templates:

1. From the Home page, click **Application** and then click **Configure**.
2. From the **Actions** menu, select **Download Data Load Templates**.
3. Save the ZIP file (CASHFLOW_CASH_FORECASTING_DATA_LOAD_TEMPLATES.zip) locally, and then extract the CSV files.

If you need more information about using the data load templates for directly loading data, see Importing Data in *Administering Planning Modules*.

B

Forecasting Methods

About Driver-Based Forecasting Methods

Predictive Cash Forecasting provides eleven driver-based forecast methods. Depending on how your administrator enabled the application, driver methods and their associated calculations, along with example line items, are populated in the application.

Administrators enable **Driver Based Forecasting** when enabling the application. Cash Managers set the assumptions for the driver-based forecasting methods.

Process for Working with Driver-Based Forecasting Methods

1. Set up the assumptions (such as pay terms, due dates, and so on) by entity, line item, and other custom dimensions.
2. Load or input the data used to drive the cash forecast.
For DSO and DPO, load or input the average DSO or DPO and the outstanding revenue or expense to drive the cash forecast.
3. Run the daily **Daily Process Forecast / Periodic Process Forecast**, which calculates the cash flows.
4. When you load or save the cash inflow or cash outflow driver form, Predictive Cash Forecasting calculates the cash inflows or outflows based on the driver amount and driver assumptions, and posts them into the appropriate periods.
For DSO and DPO, Predictive Cash Forecasting calculates the cash flows based on the Average DSO or DPO and outstanding revenue or expense.
5. The cash inflow or outflow is automatically populated in the **Rolling Forecast** form.

Cash Inflow Drivers

- **Revenue Receipts**— Drive cash inflow from product or service revenue using pay terms, for example, revenue from retail stores in retail might have a fixed pattern of 70% cash received in three days and 30% cash received in five days.
- **Project Receipts**— Drive cash inflow from projects revenue, milestone dates, and pay terms. For example, cash receipts from contracts or IT projects is driven by milestones and pay terms. Useful for project-based contract companies.
- **Days Sales Outstanding (DSO) - Receipts**—Drive cash inflow considering the average Days Outstanding on the Revenue, at the party or entity level. Useful when pay terms are very dynamic.

Cash Outflow Drivers

- **Expense Payments**—Drive cash outflow considering the expense and the pay terms. For example, for some Operational expenses such as travel and utilities, cash outflows can be determined based on a regular pay term.

- **Fixed Asset Payments**—Drive cash outflow considering the fixed asset spends and pay terms. Fixed assets payments are determined based on pay terms, which can be set by asset class. Data for fixed asset payments could come from the Planning Capital module or other source.
- **Recurring Payments**—Drive cash outflow for ongoing expenses that have payments on a recurring basis, such as lease or rental payments.
- **Salary Payments**—Drive cash outflow for salary and payroll-related payments based on salary expenses, salary basis, and timing of the pay-outs, such as annually, monthly, or weekly, and salary incidence such as beginning of period, end of period, bi-monthly, or a specific due date. Data for salary payments could come from the Planning Workforce module or a payroll system.
- **Project Payments**—Drive cash outflow from project expenses and pay terms. Project expense cash outflow for material, labor, or other project related costs can be modeled based on milestones and pay terms. Data for project payments could come from the Planning Projects module or other source.
- **Direct Tax Payments**—Drive cash outflow for direct tax payments based on tax liability, installment percentage, and due dates. Used for any direct tax payment, for example to government or regulators.
- **Indirect Tax Payments**—Drive cash outflow for indirect tax payments based on tax liability and pay terms. For example, indirect tax payments such as GST or Sales Tax that are payable to regulatory agencies.
- **Days Payables Outstanding (DPO) - Payments**—Drive cash outflow considering the average days outstanding on the expense, typically by supplier or at the entity level. Useful when pay terms are very dynamic.

Revenue Receipts (Based on Revenue and Pay Terms)

Description

Drive cash inflow from product or service revenue using pay terms.

Use the Revenue Receipts driver method when product or service revenue is based on pay terms, for example, retail customers and direct channel customers. Typically overall stores revenue has a set pattern of receipts that you can model using this method. You can also use this if you want to drive your cash forecast based on direct revenue coming from ERP or Planning and a specified pay term.

You can use this driver method for line items in the Revenue Receipts category, where you can add line items such as product revenue receipts or service revenue receipts.

Example

Revenue from retail stores in retail might have a fixed pattern of 70% cash received in three days and 30% cash received in five days.

Drivers

Specify for entity and line items. Additional custom dimensions can be considered if they are enabled.

Pay Terms

- **Percentage**—Percentage expected for each pay term
- **Due Period**—Payment days, weeks, months

Driver Input

Product or service revenue or other customer-defined line items.

Driver inputs can be extracted from source systems such as a POS system or ERP, loaded through a .csv file, brought in from Planning, or you can manually enter them on the Driver Assumptions form.

Once the driver inputs are loaded, Cash Managers can see them reflected in the Assumptions form, and can make manual adjustments to driver inputs based on their best judgment and experience for the line item.

Calculation Logic

Based on payment term assumptions, including percentage input and due period, Predictive Cash Forecasting calculates the cash inflow amount considering the revenue amount. It calculates the cash inflow if the due period falls within the cash forecast period range and it posts the inflow amount in the respective periods based on the assumptions entered for percentage and due period.

Project Receipts (Based on Project Revenue, Milestones, and Pay Terms)

Description

Drive cash inflow from projects revenue, milestone dates, and pay terms, and calculate the milestone amounts based on contract value. This method is useful for project-based contract companies, engineering and construction companies, real estate companies, and project-based consulting service companies.

Example

Revenue (cash receipts) from contracts or IT projects driven by milestones and pay terms.

Drivers

Specify at the entity, project, line item level. Additional custom dimensions can be considered if they are enabled.

Milestones for the project

- **Percentage**—Percent completion
- **Due Date**

Pay Terms for the project

- **Percentage**
- **Due Period**

Driver Input

Project revenue by project.

Driver inputs can be extracted from systems such as the ERP Project Management module, the Planning Projects module, or can be loaded through a .csv file.

Once the driver inputs are loaded, Cash Managers can see them reflected in the Assumptions form, and can make manual adjustments to driver inputs based on their best judgment and experience for the line item.

Calculation Logic

Cash flow is calculated by applying the pay term on the milestone amount for the project. Milestone amounts are derived from the milestone percentage for each project. The drivers are captured by project and the cash flow is calculated on the project.

Predictive Cash Forecasting calculates the project milestone amount based on total contract amount * the milestone percentage and populates the result in the respective milestone day/ periods. Once the milestones are derived in respective periods, Predictive Cash Forecasting applies the pay terms logic on the milestones to calculate the cash inflow amount and populates it in the respective day or period of the cash forecast. In case the due date or due period falls outside the cash forecasting period range, Predictive Cash Forecasting does not post that milestone / cash inflow amount.

Days Sales Outstanding (DSO) Receipts (Based on Average DSO and Outstanding Receivables)

Description

Drive cash inflow considering the average days outstanding on the revenue at the party or entity level. This method is useful when pay terms are very dynamic.

Days sales outstanding (DSO) is a driver measure of the average number of days that it takes a company to collect payment for a sale. DSO is often determined on a monthly, quarterly, or annual basis. Based on the DSO driver, Predictive Cash Forecasting determines the cash inflow by applying it to the Outstanding Revenue.

This method can be useful for customers who want to forecast cash when they don't have corresponding source data yet, especially for periods further out in the cash forecast.

Example

You can use DSO when pay terms are very dynamic, for example, for revenue line items such as revenue not yet booked, or future projected revenue, such as indirect channel revenue cash inflow.

Drivers

Average DSO

- **Assumptions**, average across year
- Period buckets, average for the period

Driver Input

Adjusted DSO days can be used as driver input for calculating the cash inflow in the forecast, and can be loaded or input either at the Entity level or based on the dimension (for example, Party) that this method is applicable for. DSO can be loaded as an overall assumption or by period. Additionally, Outstanding Revenue is available as the driver. Outstanding Revenue is usually the opening Accounts Receivable + Credit Sales for the period.

Calculation Logic

Cash inflow is calculated based on the Outstanding Revenue (future revenue) and the Average DSO. Predictive Cash Forecasting considers the appropriate periods' average DSO or it takes the overall assumption. The cash inflow is determined based on the Average DSO applied on the driver input amount and posted to the period based on the number of DSO days.

Expense Payments (Based on Expense and Pay Terms)

Description

Drive cash outflow considering the expense and the pay terms. This driver method is applicable for operating cash outflow line items such as labor payments, travel payments, or hotel payments. This driver method is used to derive the cash outflows based on standard pay terms for that expense applied on the expense.

Example

For example, cash outflows for some operational expenses such as travel and utilities can be determined based on a regular pay term.

Drivers

Specify at the entity, line item level.

Pay Terms

- **Percentage**—Percentage expected for each pay term
- **Due Period**—payment days, weeks, or months

Driver Input

Any expenses such as travel, hotel, or utilities.

You can extract driver inputs from various sources such as the Planning Financials module, ERP, or you can load purchase orders through a .csv file.

Once the driver inputs are loaded, Cash Managers can see them reflected in the Assumptions form, and can make manual adjustments to driver inputs based on their best judgment and experience for the line item.

Calculation Logic

Predictive Cash Forecasting calculates the cash outflow amount based on the pay term assumptions. There can be multiple pay terms for certain expenses. Predictive Cash Forecasting calculates the cashout flow amount considering the expense amount (driver input) * percentage input for each pay term. The calculated amount is then posted in the respective day or period as per the due period defined in the pay terms assumptions. If there are multiple pay terms, Predictive Cash Forecasting posts the outflow in the respective pay term and period according to the driver assumptions.

Fixed Asset Payments (Based on Fixed Asset Spends and Pay Terms)

Description

Drive cash outflow considering the fixed asset spends and pay terms. Fixed asset payments are determined based on pay terms that can be set by asset class.

The Fixed Asset Payments driver method is applicable for capital payments (fixed assets payments) line items in the cash forecast.

Cash outflow from this method writes into **Cash from Investing Activities**, as opposed to **Cash from Operating Activities**.

Example

This driver method can be used by companies where they are fixed asset purchases booked in the Payables Fixed Assets module and the supplier payment happens on a periodic basis based on pay terms with the asset supplier.

Drivers

Pay Terms:

Specify at the entity, capital payments line item level. Additional custom dimensions, such as Party, Asset Class or Project, can be considered if they are enabled.

- **Percentage**—Percentage expected for each pay term
- **Due Period**—payment days, weeks, or months

Driver Input

Fixed Asset Spends.

Driver inputs can be extracted from the Planning Capital module or other source, such as the ERP Order module, or can be loaded through a .csv file.

Once the driver inputs are loaded, Cash Managers can see them reflected in the Assumptions form, and can make manual adjustments to driver inputs based on their best judgment and experience for the line item.

Calculation Logic

Cash outflow is calculated by applying the pay term percentage on the driver input and posting the cash outflow to the period buckets based on the due date.

Predictive Cash Forecasting calculates the cash out flow amount considering the Fixed Assets spends (the driver input) * percentage input for each pay term. The calculated cash outflow amount is then posted in the respective day or period as per the due period defined in the pay terms assumption form.

In case the due date or due period falls outside the cash forecasting period range, Predictive Cash Forecasting does not post that cash outflow amount. If there are multiple pay terms, Predictive Cash Forecasting posts the outflow in the respective pay term and period according to the driver assumptions.

Recurring Payments (Based on Recurring Pay Terms)

Description

Drive cash outflow for ongoing expenses that have payments on a recurring basis, such as lease or rental payments.

Example

The Recurring Payments driver method is applicable for recurring expense line items such as Lease or Rent payments or Insurance payments. This driver method can be used by companies for recurring expenses that are paid to suppliers on a contracted periodic basis.

Drivers

Specify at the entity, line item level.

- **Pay Basis**—Annual, Monthly, or Weekly
- **Pay Period**—The starting period from when recurring payments should begin

- **Recurring Frequency**—The recurring frequency, for example, every pay cycle or every 3 pay cycles
- **Number of Occurrences**—The number of recurring payments to be posted

Driver Input

Any expense that has a recurring pattern.

Driver inputs can be extracted from the Planning Financials or Capital module or other source, such as ERP Expense Management, Lease, GL, or can be loaded through a .csv file.

Once the driver inputs are loaded, Cash Managers can see them reflected in the Assumptions form, and can make manual adjustments to driver inputs based on their best judgment and experience for the line item.

Calculation Logic

Cash outflow is calculated based on the recurring schedule that is defined by the assumptions applied to the driver input amount and posted in respective days or weeks.

Salary Payments (Based on Payment Basis and Pay Terms)

Description

Drive cash outflow for all employee-related payments such as salary and other payroll-related payments based on salary expenses, salary basis, and timing of the pay-outs, such as annually, monthly, or weekly, and salary incidence such as beginning of period, end of period, bi-monthly, or a specific due date.

Example

The Salary Payments driver method is applicable for periodic salary and benefit expenses line items and other related expenses such as Earnings and Variable Payments, or other periodic fixed expenses.

Drivers

Specify at the entity, line item level. Additional custom dimensions can be considered if they are enabled.

- **Salary Basis**—Annual, Monthly
- **Salary Incidence**—Drives when the cash flow occurs (Begin Period, End Period, Semi-monthly, or Biweekly)
- **Annual Payment Due Date**—For annual payments, the salary due date
- **Pay Terms**—Optional. If the payment is in multiple payments, defined by the percentage and due periods

Driver Input

Salary or related expenses.

Data for salary payments could come from the Planning Workforce module, a payroll or other source system, or can be loaded through a .csv file.

Once the driver inputs are loaded, Cash Managers can see them reflected in the Assumptions form, and can make manual adjustments to driver inputs based on their best judgment and experience for the line item.

Calculation Logic

Cash outflow is calculated based on salary basis and posted to respective periods based on salary incidence, due date, and pay terms.

The driver input can be provided as an assumption, in which case it is divided by the number of periods and posted to the appropriate periods. Or, the driver input can be loaded into period buckets, in which case the amount for each period is considered.

The salary basis and payment due date determines the cash outflow posting date or period for the salary and earnings expenses. If the salary basis is monthly, Predictive Cash Forecasting divides the annual salary amount by 12 and posts it to the last date of the given month.

In weekly model, Predictive Cash Forecasting posts the salary and earnings amount to the last day of corresponding week. If pay terms are defined for salary and earnings line items, Predictive Cash Forecasting calculates the cash outflow based on the percentage input and the due period for each pay term.

There could be annual expenses such as variable compensation that are an annual payout. In this case, Predictive Cash Forecasting posts the entire amount to the corresponding date based on the defined due date or the period where the date falls into. If the middle of the year salary assumption is changed, Predictive Cash Forecasting reforecasts only for the open periods in the rolling forecast (periods after current period).

Project Payments (Based on Project Expense, Milestones and Pay Terms)

Description

Drive cash outflow from project expenses and pay terms. Project expense cash outflow for material, labor, or other project related costs can be modeled based on milestones and pay terms.

Example

Project expense cash outflow for material, labor, or other project-related costs.

Drivers

Specify at the entity, project, line item level.

- **Milestones**—Percentage, Due Date
- **Pay Terms**—Percentage, Due Period

Driver Input

Project Expense by Project.

Data for project payments could come from the Planning Projects module or other source, such as the ERP Projects module, or can be loaded through a .csv file.

Once the driver inputs are loaded, Cash Managers can see them reflected in the Assumptions form, and can make manual adjustments to driver inputs based on their best judgment and experience for the line item.

Calculation Logic

Cash flow is calculated applying the pay term on the milestone amount for the project. Milestone amounts are derived on milestone percentage for each project. The drivers are captured by project and the cash flow is calculated on the project.

Predictive Cash Forecasting calculates the project milestone amount based on project expense * milestone percentage based on completion of work and populates the result in the respective milestone days or periods. Based on the milestone amount, Predictive Cash Forecasting then applies pay terms logic on each milestone amount to calculate the cash outflow amount and populates it in the respective day or period of the cash forecast.

There can be multiple pay terms for the project. Predictive Cash Forecasting calculates the cash outflow amount considering the project amount per milestone * percentage input for each pay term. The calculated cash out flow amount is then posted in the respective period according to the due period driver defined in the assumptions.

Direct Tax Payments (Based On Tax Installment and Tax amounts)

Description

Drive cash outflow for direct tax payments based on tax liability, installment percentage, and due dates. Used for any direct tax payment, for example to government or regulators.

The Direct Tax Payments driver method is applicable for the Annual Direct Tax line item in the cash forecast. This driver method can be used by companies that have to pay direct taxes such as income tax, property tax, taxes on assets, and so on as per the due date on a periodic basis based on local laws or statutory compliance.

Example

Direct Tax payments to different regulatory or government agencies based on due dates as per the local government statutory laws and tax compliance regulations.

Drivers

Specify at the entity, annual direct tax line item level.

Tax Installments for every fiscal year—**Percentage** and **Due Date**.

Driver Input

Tax Liability value.

If there are multiple tax installments during the year, the percentage and due date driver input should be available for each tax installment.

The driver inputs can be extracted from Tax Reporting, ERP GL, or can be loaded through a .csv file.

Once the driver inputs are loaded, Cash Managers can see them reflected in the Assumptions form, and can make manual adjustments to driver inputs based on their best judgment and experience for the line item.

Calculation Logic

Cash outflow is calculated based on the annual tax liability and the installment percentage and due dates. The annual tax is cumulative and any change in the annual tax amount is adjusted for considering the incremental / decreased amount posted in the future installments

YTD Annual Direct Taxes Liability are loaded to all the periods. Predictive Cash Forecasting calculates the tax installments based on the following rules:

- Taxes are calculated based on the percentage input according to the due date assumption for the first installment.
- The second installment is applied on the latest tax liability. However, if there is a change in the tax liability, Predictive Cash Forecasting calculates the overall tax liability to date by

summing the installment percentages, subtracts the previous tax paid, and then posts the remaining tax amount.

- The same approach is applied to all of the remaining tax installments.

Indirect Tax Payments (Based on Tax Basis, Due Dates and Pay Terms)

Description

Drive cash outflow for indirect tax payments based on tax liability and pay terms.

The Indirect Tax Payments driver method can be used by customers for all indirect tax payments where cash outflow occurs based on due dates as per the government statutory laws and indirect tax compliance regulations.

The Indirect Tax Payments driver method is applicable for the Indirect Tax payments line item.

Example

Indirect tax payments such as GST, Sales Tax, or other Annual Indirect taxes that are payable to regulatory agencies. This driver method can be used by companies that have to pay indirect taxes such as sales tax, excise taxes, value added taxes, and so on as per the due date on a periodic basis based on statutory compliance.

Drivers

- **Tax Basis**—Annual, Monthly
- **Indirect Taxes Due Date**—Mainly for annual taxes
- **Pay Terms**—Percentage and due Period

Driver Input

Indirect tax liability value.

The indirect tax liability value can be loaded from the Planning Financials module, ERP system, or can be loaded through a .csv file.

If there are multiple tax installments during the year, the percentage and due date driver input should be available for each tax installment.

Once the driver inputs are loaded, Cash Managers can see them reflected in the Assumptions form, and can make manual adjustments to driver inputs based on their best judgment and experience for the line item.

Calculation Logic

Cash outflow is calculated based on the indirect tax liability, tax basis, payment incidence (to be paid in same period or next period), and payment terms based on tax liability value. The driver input is usually recorded in respective periods and that is taken and cash flow is calculated based on this.

Indirect taxes are calculated as follows.

- If the Tax Basis is Annual and the payment incidence is the same period, the Annual Tax amount is posted on the due date.
- If the Tax Basis is Annual and the payment incidence is the next period, the Annual Tax amount is posted on the next day of the due date.

- If the Tax Basis is Annual and the payment incidence is same period and Pay Terms are defined, the Annual Tax amount is posted on the due date and pay terms are applied from the due date.
- If the Tax Basis is Annual and the payment incidence is next period and Pay Terms are defined, the Annual Tax amount is posted on the next day of the due date and pay terms are applied from the next day of the due date.
- If the Tax Basis is Monthly and the payment incidence is the same period and the amount is loaded on a given date, pay terms are applied from the loaded date.
- If the Tax Basis is Monthly and the payment incidence is the next period and the amount loaded is on a given date, pay terms are applied from the next day of the loaded date.

DPO Payments (Based on Average DPO and Payables)

Description

Drive cash outflow considering the average days outstanding on the expense, typically by supplier or at the entity level. This method is useful when pay terms are very dynamic.

Days payable outstanding (DPO) is a financial ratio that indicates the average time (in days) that a company takes to pay its bills and invoices to its trade creditors, which can include suppliers, vendors, or financiers. The ratio is typically calculated on a quarterly or annual basis, and indicates how well the company's cash outflows are being managed. Based on the calculated DPO days driver, Predictive Cash Forecasting posts the expense amount in the corresponding day or period based on periodicity.

You can adjust the DPO driver input and based on the adjusted DPO days and outstanding expense, Predictive Cash Forecasting calculates the cash outflow and posts the amount in the corresponding day or period.

Example

You can use this method for line items in the cash forecast where smart driver logic cannot be applied, when pay terms are very dynamic, such as consumables. You can also use this method for future periods that are beyond what is captured through invoices.

Drivers

Average DPO

- **Assumptions**—Average across the year
- **Period buckets**—Average for the period

Driver Input

Expense or any line item. The calculated DPO days.

You can load calculated DPO days from ERP as a starting point. Cash Managers can adjust the calculated DPO days based on experience. Adjusted DPO days are used as driver input for calculating the cash outflow in the forecast.

Calculation Logic

Cash flow is calculated applying the average DPO for the period on the period expense or it by applying the average DPO across the year if the DPO by period does not exist.

Cash outflow is calculated based on the Outstanding Expense and the Average DPO. Predictive Cash Forecasting considers the appropriate periods average DPO or it uses the

overall assumption. The cash outflow is determined based on the Average DPO applied on the driver input amount and posted to the period based on the number DSO days.

About Trend-Based Forecasting Methods

Predictive Cash Forecasting provides trend-based forecasting methods.

Trend-based forecasting methods can be used for any line items where the cash forecast can be determined based on historical trends. Trend-based methods can be used only with Periodic forecasts. Trend-based methods could be used if the cash inflows and outflows use a standard pattern.

Administrators enable **Trend Based Forecasting** when enabling the application. Cash Managers set the assumptions for the trend-based forecasting methods.

Process for Working with Trend-Based Forecasting Methods

1. Set up the trend assumptions by selecting the trend method to use and the percent increase or decrease.
2. Load or input the data used to drive the cash forecast.
3. Run the daily **Daily Process Forecast / Periodic Process Forecast**, which calculates the cash flows.
4. When you load or save the trend form, Predictive Cash Forecasting calculates the cash inflows or outflows based on the driver amount and trend assumptions, and posts them into the appropriate periods.
5. The cash inflow or outflow is automatically populated in the **Rolling Forecast** form.

Here are some of the trend-based methods that are supported in Predictive Cash Forecasting.

- **Current Year Actual Average**—Calculates the average for the cash line item for the current fiscal year. Example: Bank charges.
- **Current Period Actual**—Last period actuals are used for the forecast periods. Example: Utilities.
- **Prior Year Actual**—Takes the prior year actual for corresponding periods. Example: Marketing or Service Revenue.
- **Prior Year Actual Average**—Calculates the average for a cash line item for the year prior to the current fiscal year. For example, if the current fiscal year is FY22, the prior year is FY21. Example: Travel.
- **Forecast Average**—Calculates the average of the forecast for the current fiscal year. Example: Labor.
- **Seasonalization**—Applies the seasonality of last year actual for forecast periods to the current year actual average. For this method, the current year actual average rate is calculated first. Then, the forecast is calculated using the following formula: Forecast = Prior year actual amount for the period * sum of forecast amount (as per Current Year Actual Average method) for the remaining periods of current year / Sum of prior year actual data for same remaining periods.

Example: Trade Spends

- Year over Year Inc / Dec—Applies a percentage increase or decrease to the prior year's value. Example: Rent.
- Periodic Growth—Calculates year over year change for a line item using current year and prior year as the basis to calculate the growth. Example: Variable Compensation.

About Prediction-Based Forecasting Methods

You can use Predictive Planning to forecast cash based on the historical data for the line item using time-series forecasting techniques.

Predictive Planning selects the best prediction method to use, selecting the method that gives the most accurate results based on the data available. For example, use statistical trends based on aggregated account balances to predict cash based on historical patterns of bank account balances by legal entity.

For more information about the statistical forecasting methods, see Predictive Planning Forecasting and Statistical Descriptions in *Working with Planning*.



Note:

For Interactive Predictive Planning, Receivable Invoices, Overdue Invoices, Payable Invoices, Payable Overdue Invoices will not provide any results as there is no historical data in these lines. However you can use AutoPredict, because it allows you to reference a different line item for predicting.