Fiscal Year Variant and Posting Periods Configuration in APO

Applies to:

This document is applicable to SAP APO implementation for version 4.0 and onwards.

Summary

Purpose of this document is to explain the business rationale of the Fiscal Year, Posting periods and how to address this specialized and varying business requirement using Fiscal Year Variant with Posting Period in SAP APO Forecasting and Replenishment Planning.

Author: Digambar Narkhede

Company: Infosys Technologies Limited

Created on: 9 July 2010

Author Bio

Digambar Narkhede is a SCM Content Expert working with Infosys Technologies Limited. His areas of Expertise are development and solution management in Supply Chain and Logistics area. Digambar has worked on modules of SAP R/3 and SAP APO with multiple versions.

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Business Case - Need for Fiscal Year Variant

Fiscal year is an accounting year of a business organization. This is a usually a period of 12 months, for which the company produces financial statements and carry out inventory audits. Due to the nature of particular businesses, some companies do not use the Calendar year for their financial bookkeeping.

Under certain circumstances, organizations demand for Fiscal years containing fewer than 12 months (termed short fiscal year) and this is due to following cases:
- Establishment of a company
- Changeover from calendar year to fiscal year or vice versa
- Liquidation (closer of company)

As business follows Fiscal year for financial budgeting/ planning all relevant processes like forecasting and replenishment, hence S&OP and logistics planning are driven. For this medium to long term Planning and Visibility, data need to be available in the similar periods.

Fiscal year variants are very helpful when the Forecasting and/or Planning calendars do not begin on the 1st day and also end on the 30th or 31st day of month. There are business scenarios where the month begins on the 2nd week and so on. In such cases a fiscal variant is very helpful in defining periods based on the business requirements.

A typical example is the department store which finds December 31st too early a date to close its books after the holiday rush and had to have a January 31st as a fiscal year-end instead.

Important Terminology

Fiscal Year Variant: The fiscal year variant is used to define the Fiscal year.

Posting Period: A posting period is a self-contained part of a fiscal year. This is a period within a fiscal year for which different business transaction figures are updated.
Every transaction that is posted is assigned to a particular posting period. The transaction figures are then updated for this period

Special Periods: A posting period used to divide the last regular posting period for closing operations.
A maximum of twelve posting periods and four special periods make up a fiscal year.

You can define the following using a fiscal year variant:
- How many **Posting Periods** are in a fiscal year

- How many **Special Periods** you require

- How the system determines the posting periods when posting.

In the definition, you allocate your posting periods to the calendar year.

Allocation control requires the same number of posting periods in the company code and in the assigned controlling area.

APO Configuration for Fiscal Year Variant

Menu Path	IMG Menu → SAP reference IMG → my SAP SCM - Implementation Guide →Advanced Planning and Optimization → Supply Chain Planning → Demand Planning → Basic Settings → Maintain Fiscal Year Variants
TCode	**OB29**

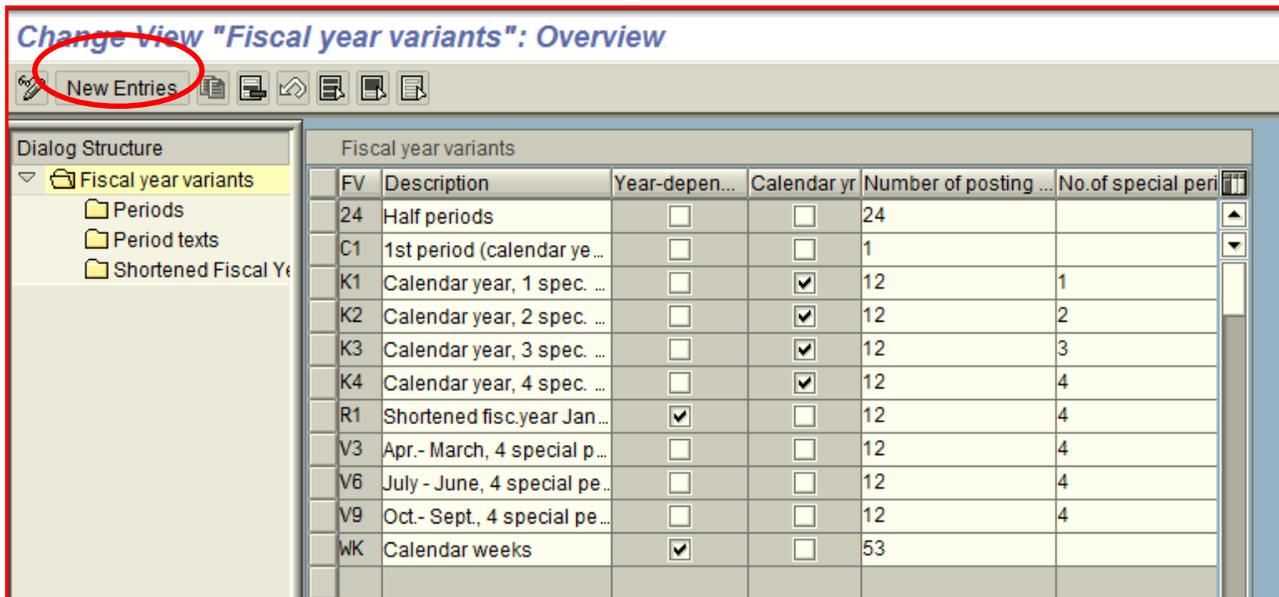Fig. 1.1 illustrates the path described above:

Fig.1.1

Once the screen shown in fig.1.1 get opened click on 'New Entries' to create a new fiscal year Variant. The screen shown in fig. 1.2 will open.
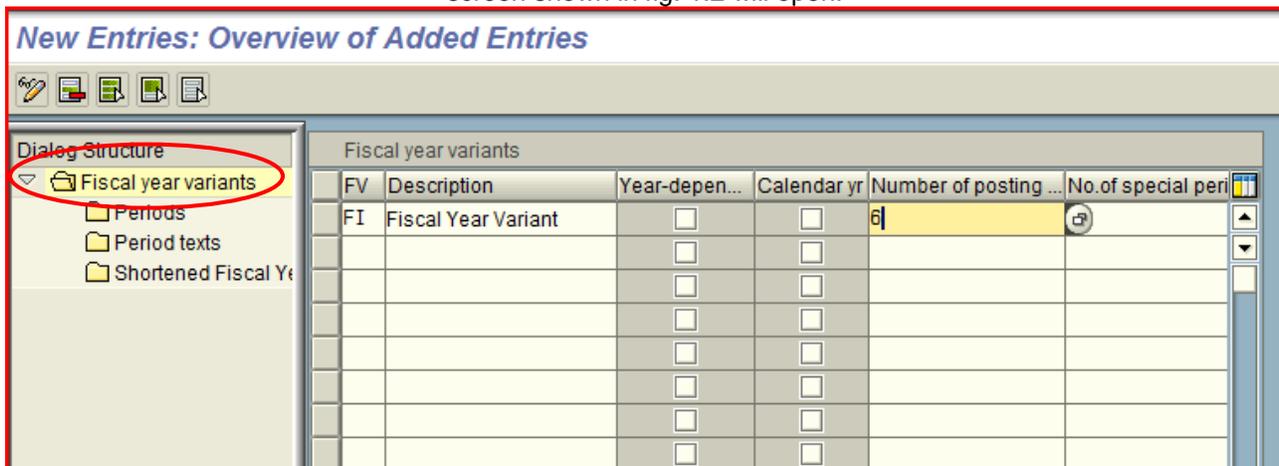

Fig 1.2

Field Relevance:

- **FV:** Nomenclature for the fiscal year variant with two digit alphanumeric identifier of fiscal year variant. SAP delivered fiscal year variants normally begin with a K or a V, so avoid using letters in your variant. This is mandatory field.
- **Description:** Short text indicating the relationship of the fiscal year to the calendar year and how many special periods are used. The field is alphanumeric and can contain up to 30 characters. This is mandatory field.

- **Year dependant:** Checking this field will determine if your Fiscal year Variant is year dependant or not. This is an optional field. This is more advantageous and allows a lot of flexibility in defining calendars separately for each year.

- **Calendar Year:** Checking this field will imply that the posting periods in the fiscal year Variant match the months of the calendar year. This is an optional field.
- **No. Of Posting Periods:** This field determines the number of periods in which are to be created. This is mandatory field.
- **No. Of Special Periods:** Special Periods represent an extension of the last normal posting period. This field is of no relevance in DP. This is an optional field.

Make entries in the required fields, select the created variant and double click on periods shown in Fig1.2.

The screen shown in fig.1.3 will get opened. Click on New entries to create a new fiscal year Variant.
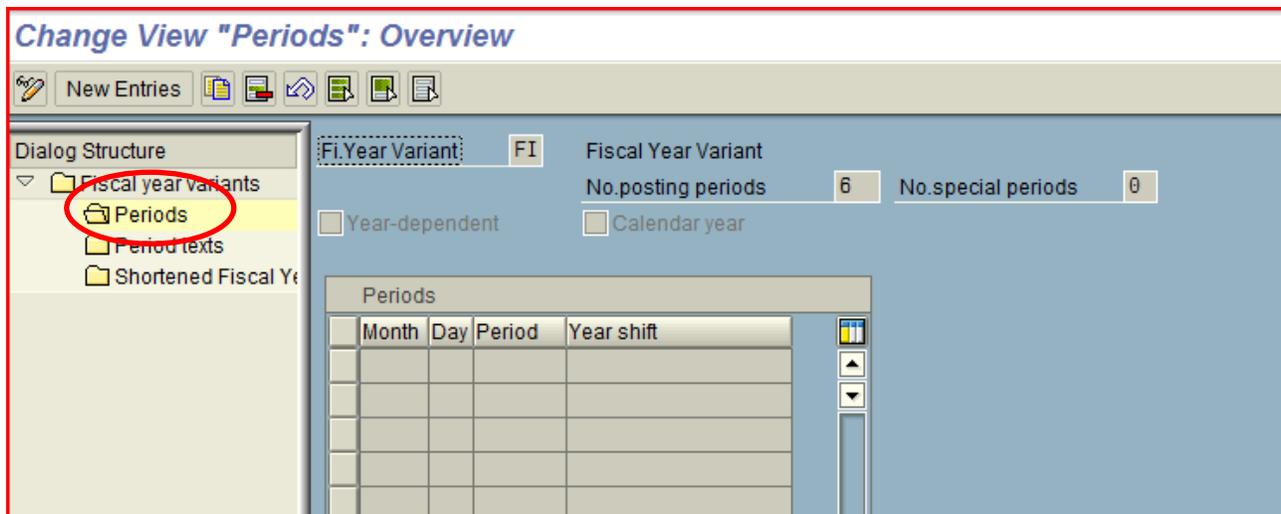

Fig1.3

Field relevance:

- **Month:** The field contains month as a part of the calendar date. For every period you must specify the last valid calendar date as a part of the period.
- **Day:** The field contains day as a part of the calendar date.
- **Posting period:** A Posting period is a self-contained part of the fiscal Year
- **Year Shift:** This field specifies whether the fiscal year of the posting period is different to the calendar year.

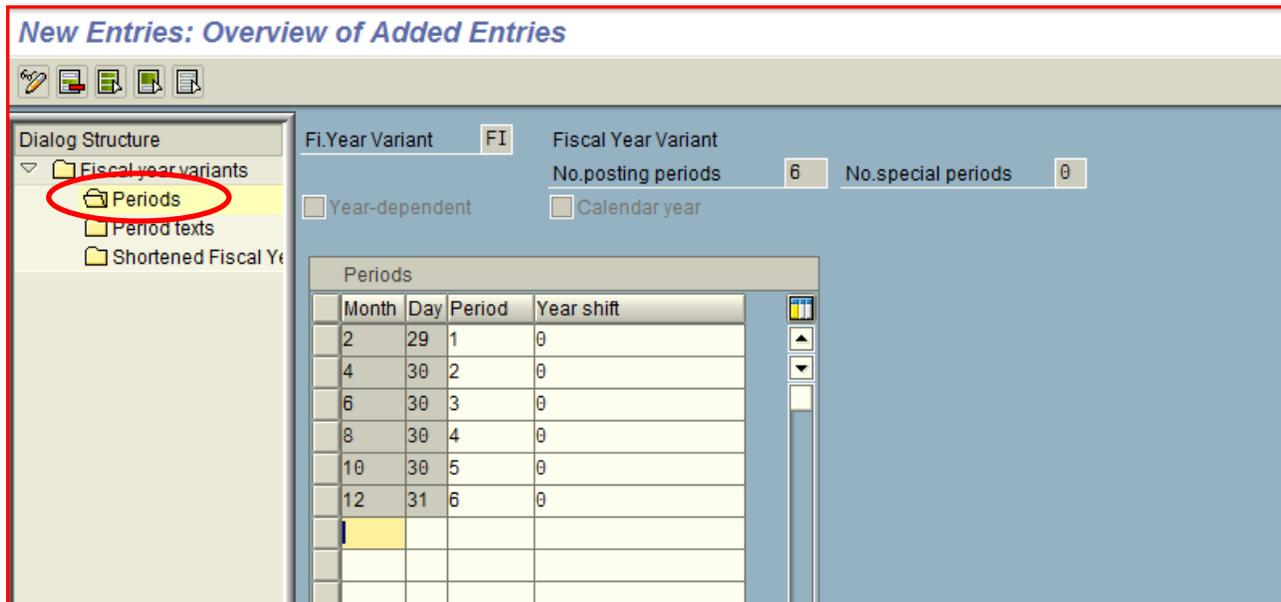Make the specified entries and click on Period texts (shown in Fig 2.1)

Fig 2.1

A new screen will open as shown in Fig 2.2 click on New entries and make the relevant entries.
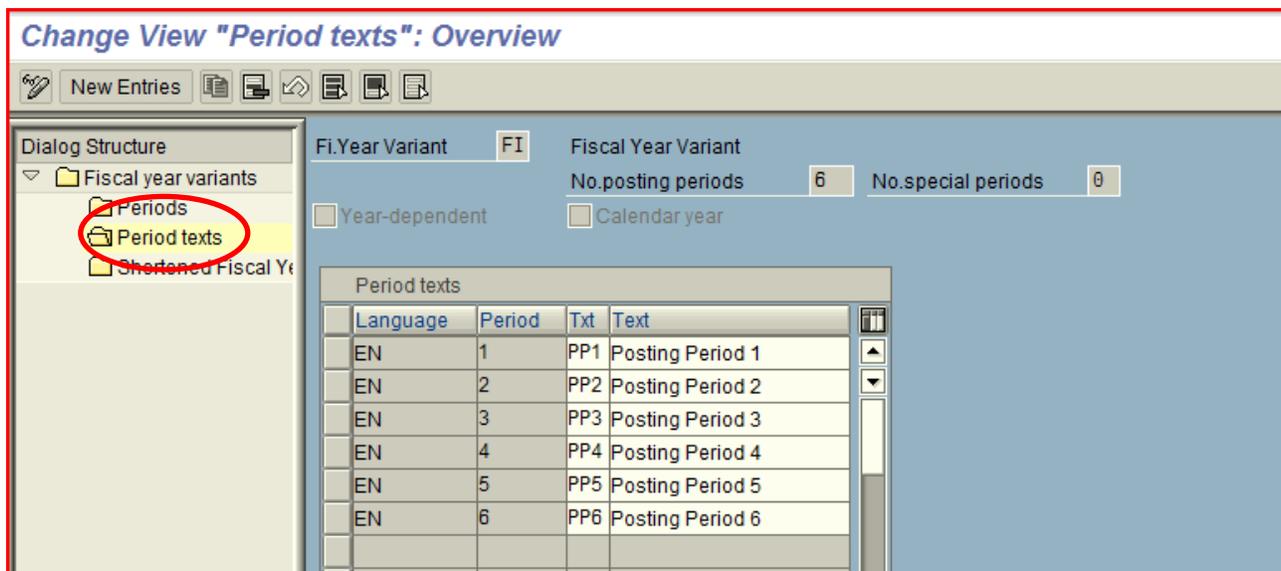** Period text is an optional feature used to assign texts to your posting periods.

Fig 2.2

Field relevance:

- **Language:** The language key designates the language in which you display, enter and print texts.
- **Period:** The field for entering the period to which you wish to assign some texts.
- **Txt:** A three digit alphanumeric short text to be assigned to a posting period.
- **Text:** Short description to be given to the posting period.

Make the required entries and save it. The fiscal year Variant is created now ready to use it in APO DP planning.

Assign this fiscal year variant to the storage bucket profile with or without the standard bucket and similarly create a time bucket profile using the fiscal year variant as per business requirement.

APO Demand Planning Overview

Sales forecasting or demand management forms an integral part of organizations' strategy planning and closely integrated with financial planning. Financial budgeting is generally done based on the combinations of statistical forecasts and consensus forecasts arrived from the major business stakeholders.

This long term forecasting/demand management is carried out in Demand Planning-sub module of SAP APO which is a bucketed planning and can be modeled in different types of buckets depending on business requirement.

This sales/forecast data is be planned, stored in APO DP planning area which can be aggregated and disaggregated in different required time buckets easily as and when required for further planning and analysis.

As different countries and business organizations have different fiscal years where sales figures are posted in different posting periods other than standard. And to facilitate forecasting periods in line with the sales posting periods, Fiscal year variants are used in Demand Planning (DP) to set up Planning / Storage buckets to satisfy the business need.

- **Storage Bucket Profile**: A storage buckets profile defines the time buckets in which data (based on a planning area) is saved in Demand Planning or Supply Network Planning.

  In a storage buckets profile, you specify:
  - One or more periodicities in which you wish the data to be saved
  - The horizon in which the profile is valid.

- **Planning bucket Profile:** Planning Bucket Profile or the time bucket profile is used to display the data in the Planning Book. The periodicities in a planning bucket profile should be a subset of that defined in the storage bucket profile.

SAP APO DP has provided standard Planning /Storage buckets and those are:
  - Day
  - Week
  - Month
  - Quarter
  - Year

The fiscal Year Variants can be used independently or in conjunction with any of the standard buckets. Generally if the R/3 system (or any other transactional ERP system) uses any of the non-standard buckets mentioned above as their financial posting period then the Fiscal Year Variant is used in conjunction with the standard bucket.

The correlation between the Fiscal Year variant and the standard Bucket is based on the following two factors:

  - Definition of Fiscal Year variant
  - Time based Disaggregation.

In DP each planning area can have only one fiscal Year Variant...

Fiscal Year Variant Setup for APO DP

DP Planning Area Design

Planning areas are the central data structures for Demand Planning and Supply Network Planning.

Storage bucket profile with Posting Periods from fiscal year variant

Planning area based on periodicity of posting periods

Time bucket profile for display and planning in Planning book layout

DP Forecasting Profile

To carry out Forecasting using Fiscal year variant select the period indicator as P – 'Posting period' and enter the Fiscal Year variant to be used in the master forecasting profile. It means that the forecast profile will consider the data available in the posting periods for statistical forecasting. See Fig 2.3

Forecast Profile setting:

Fig 2.3

DP Planning Book: Data in Posting Periods

The posting period declaration as two months combination as a period i.e., the posting period starts with 1st of the month and end with the next month 30th or 31st according to the month.

Monthly bucket Display which shows the monthly values of Actual sales

Planning Book: [Live] ZDP_PLBK_MTH / ZDP_DV_MTH

	Unit	M 10.2009	M 11.2009	M 12.2009	M 01.2010	M 02.2010	M 03.2010	M 04.2010	M 05.2010	M 06.2010	M 07.2010
Actual Sales	L	200	200	200	200	200	200	200	200	200	
Best View	L										
Sales/SOP Forecast	L										
Total PIR	L										

Fig 3.1 a

Fiscal year variant bucket Display which shows the values of Actual sales in posting period

Planning Book: [Live] ZDP_PLBK_FI / ZDP_DV_FI

APO Product 1001162   APO Location 6101

	Unit	P 03.2009	P 04.2009	P 05.2009	P 06.2009	P 01.2010	P 02.2010	P 03.2010	P 04.2010	P 05.2010	P 06.2010
Actual Sales	L	399	393	399	405	399	399	399			
Best View	L										
Sales/SOP Forecast	L										
Total PIR	L										

Fig 3.1 b

So in the planning book display every two months of past (Actual Sales)/future (Total PIR as forecast) is combined and depending upon that the respective forecast is got displayed. It is because of the declaration as Pro-data (P) in planning area Time based Disaggregation. Instead if it is declared as equal distribution (E) then the distribution will be in equal distribution manner.

The monthly historical data are summed up, forecasted and displayed in posting periods in the Fig 3.1b and 3.2 respectively.

Forecasting in Demand Planning with Posting Periods

Now based on the data available for Actual Sales we will carry out forecasting using statistical toolbox of APO demand planning and analyze the results for figures arrived in Total PIR key figure.

For example: As we do not have trend-like patterns or seasonal variations in history data so we will use Constant Model Forecasting method.

Basic Value is determined using formula as below

$$G(t) = \alpha V(t) + (1 - \alpha) G(t-1)$$

$G(t)$	=	The current basic value for the current period (t)
$G(t-1)$	=	The previous basic value from the previous period
$V(t)$	=	Actual demand for the current period (t)
α	=	Smoothing factor for the basic value

To calculate the forecast value, the system uses the preceding forecast value, the last historical value, and the alpha smoothing factor. This smoothing factor weights the more recent historical values more than the less recent ones, so that they have a greater influence on the forecast.
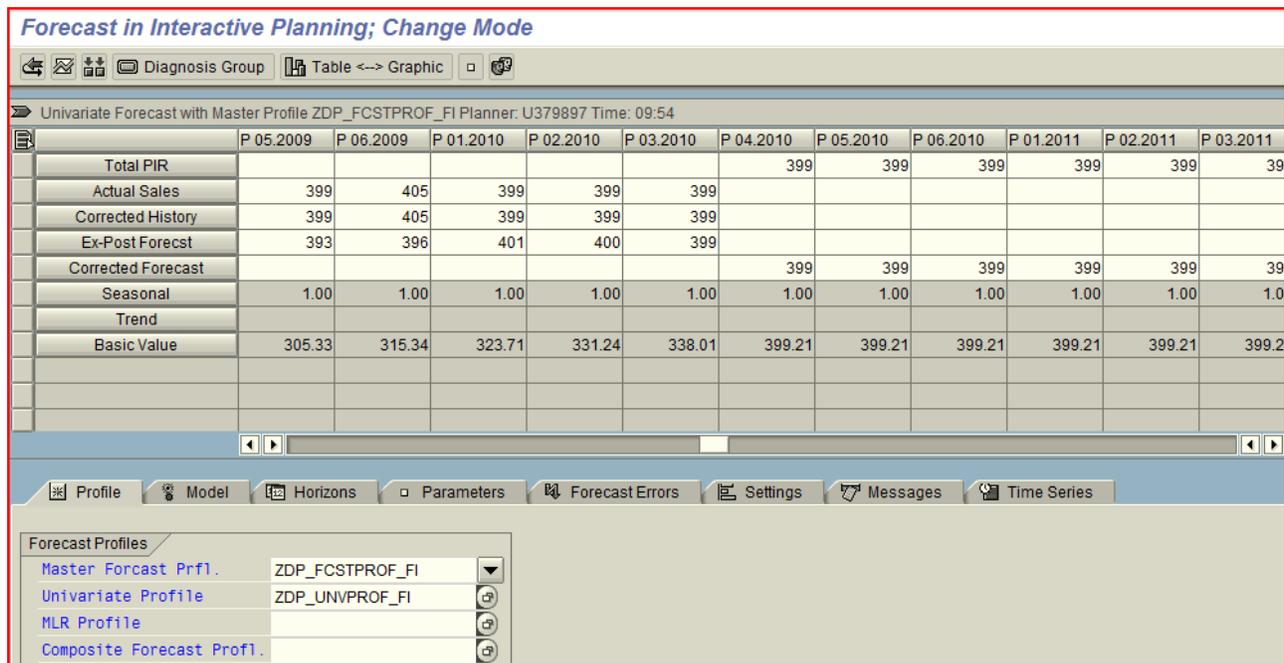
Forecast in Interactive Planning; Change Mode

Diagnosis Group | Table <--> Graphic

Univariate Forecast with Master Profile ZDP_FCSTPROF_FI Planner: U379897 Time: 09:54

	P 05.2009	P 06.2009	P 01.2010	P 02.2010	P 03.2010	P 04.2010	P 05.2010	P 06.2010	P 01.2011	P 02.2011	P 03.2011
Total PIR						399	399	399	399	399	39
Actual Sales	399	405	399	399	399						
Corrected History	399	405	399	399	399						
Ex-Post Forecst	393	396	401	400	399						
Corrected Forecast						399	399	399	399	399	39
Seasonal	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.0
Trend											
Basic Value	305.33	315.34	323.71	331.24	338.01	399.21	399.21	399.21	399.21	399.21	399.2

Profile | Model | Horizons | Parameters | Forecast Errors | Settings | Messages | Time Series

Forecast Profiles

Master Forcast Prfl.	ZDP_FCSTPROF_FI
Univariate Profile	ZDP_UNVPROF_FI
MLR Profile	
Composite Forecast Profl.	

Fig 3.2

Release of Forecast from DP to SNP using Fiscal year variant

DP to SNP release profile

Fig 4.1

In the above figure category represents the various stock, receipt, requirement, and forecast categories in APO. FA represents the forecast release.


Fig 4.1a

Result of Fiscal Year Variant in SNP Planning Book layout

The forecasted data in interactive demand planning book is released to SNP planning book to identify the effect. Before release of data "Release Profile" (Fig 4.1) is created by mentioning the mandatory fields like planning area, version and the key figure which is to be released to the SNP planning book.

In this release profile the daily bucket profile is not mentioned so the effect of data is as it is in the FI variant declarations i.e., in periods and which also reflect the time bucket profile which is attached with the planning area. So as a conclusion there is no effect in the display of SNP release data.

SNP Planning Book
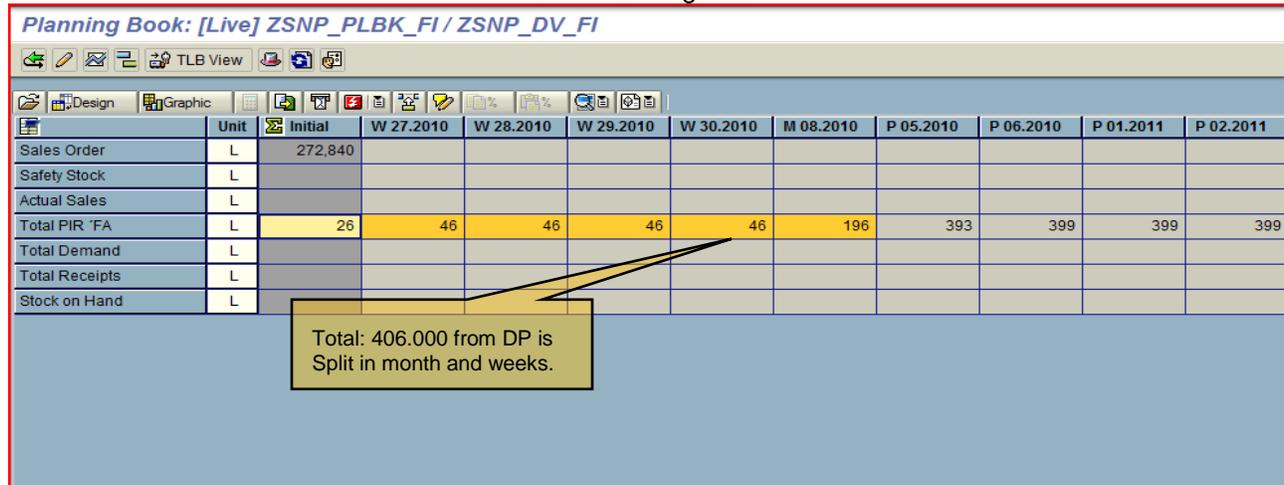
	Unit	∑ Initial	W 27.2010	W 28.2010	W 29.2010	W 30.2010	M 08.2010	P 05.2010	P 06.2010	P 01.2011	P 02.2011
Sales Order	L	272,840									
Safety Stock	L										
Actual Sales	L										
Total PIR 'FA	L	26	46	46	46	46	196	393	399	399	399
Total Demand	L										
Total Receipts	L										
Stock on Hand	L										

Total: 406.000 from DP is Split in month and weeks.

Fig 4.2

In the above planning book first forecasting period is displayed in weeks and then months according to the time bucket profile definition and the same way the data from posting period is divided in two months(M072010 and M082010)and then from month(M072010)to weeks according to Pro-data basis (Declared in Planning area). Month 07.2010 is taken as July and 08.2010 as August as designed in periods... Hence it is clear that the data is divided in to equally pro-data basis.

Related Content

http://en.wikipedia.org/wiki/Fiscal_year

http://help.sap.com/saphelp_scm50/helpdata/en/70/1b7539d6d1c93be10000000a114084/frameset.htm

http://forums.sdn.sap.com/thread.jspa?messageID=3450960#3450960

For more information visit Supply Chain Management homepage.

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