

KAPIL SHARMA AND ASHUTOSH MUTSADDI

# Configuring SAP<sup>®</sup> ERP Sales and Distribution

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# **Configuring SAP<sup>®</sup> ERP Sales and Distribution**

**Kapil Sharma  
Ashutosh Mutsaddi**



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Best regards,

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Vice President and Publisher  
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*I dedicate this book to my grandmother and parents,  
because what I am today is due to their teachings and  
blessings, and to my wife Shweta, for all her support  
and encouragement, without which I could have never  
completed this book.*

*—Kapil Sharma*

*I would like to dedicate this book to my family—my son  
Atharva who understood that Daddy could not spend time  
with him due to the book deadlines, my wife Dipashri for  
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*Thank you all for being with me throughout  
this (ad)venture!*

*—Ashutosh Mutsaddi*

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*Kapil Sharma and Ashutosh Mutsaddi*

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# INTRODUCTION



**T**his book provides a deep, working understanding of the essential concepts and customization settings related to the SAP Sales and Distribution (SD) application. SD is one of the most popular modules of the SAP ERP software and indeed the most interesting one to implement.

Over the years, we have worked on a variety of projects ranging from global implementation, support, upgrades, acquisition and mergers, rollouts, and integration. We've had the opportunity to study the business requirements of different industries and the best practices in customizing SAP to meet different challenges. Our goal was to bring the knowledge that we acquired during those projects to you through this book.

## Who Should Read This Book

As the title implies, this book is intended for people who want to learn how to configure the SAP Sales and Distribution application. Whether you are a beginner who wants to make career in SAP as a SAP SD consultant, a business analyst from the IT/IS extended team of your organization, a member of the project implementation team responsible for implementing SD, a production support team member responsible for supporting the Sales and Distribution module after implementation, an experienced consultant from another SAP module who wants to learn SAP SD, or an experienced SAP SD consultant who wants to learn what's new in ECC 6 or how to handle some other functionality, you will find valuable information in this book related to customizing SAP SD.

If you are new to SAP, the learning curve can be steep. In this book, we tried to reduce that learning curve by providing easy-to-follow step-by-step instructions and case studies from a fictitious company called Galaxy Musical Instruments Inc.

## How This Book Is Organized

You can use this book in several ways. The most straightforward way is to start at the beginning and proceed chapter by chapter. We have logically ordered the chapters according to the processes in a standard sales cycle. Each topic covers the prerequisite configurations before discussing how to configure a new submodule. We start with the basic concepts and travel all the way through to some very advanced configuration topics and techniques by the end of the book. If you already have configuration experience, you can skip around from chapter to chapter and follow the step-by-step instructions for a topic of interest in its individual chapter.

## How Is This Book Different?

This book is different from others on the market in the following ways:

- ▶ The book covers the functionality offered by SAP in the latest version: ECC 6.0.
- ▶ It provides an overview of enhancement packages, which are the SAP road maps for delivering innovations in the coming years.
- ▶ It illustrates all the concepts with a real-life case study that runs through all the chapters of the book. This provides a cohesive picture of how a real-life organization can leverage SD to meet its requirements.
- ▶ It contains important tips, useful notes, and helpful links to other resources, such as SAP Service Marketplace (OSS) notes, where applicable.

## What's Inside

Here is a glance at what's in each chapter:

**Chapter 1: Introduction to Sales and Distribution** Gives you a brief overview of the SAP SD application and familiarizes you with the bare-minimum basics that you need to know before you step up to the next chapters.

**Chapter 2: Enterprise Structure** Brings you to the customization world and provides easy-to-follow step-by-step instructions to help you set up your own SAP

SD enterprise structure. To demonstrate the customization, we'll set up the enterprise structure using the business requirement example from our fictitious company, Galaxy Musical Instruments.

**Chapter 3: Master Data in SD** Introduces you to master data setup. Master data plays a key role in the core operation of a business. It may include data about clients and customers, employees, suppliers, products, and so on. Chapter 3 will teach you about how to set up and customize the master data in SAP SD.

**Chapter 4: Partner, Text, and Output Determination** Takes your learning to the next level. You'll learn about the role of partners, output, and text determination in the overall sales cycle, followed by how to customize the same to meet your business requirement.

**Chapter 5: Pricing and Tax Determination** Introduces you to the pricing and tax determination world. Here you'll learn about various pricing elements and will configure them to determine the final price at which the sales transaction can take place.

**Chapter 6: Availability Check, Transfer of Requirements, and Backorders** Covers the available-to-promise functionality in detail. Promising accurate and reliable dates for delivery to your customers is a key element of the order fulfillment process in today's competitive environment, and this chapter talks about all the things you need to know in order to customize your SAP SD application to provide this reliability.

**Chapter 7: Sales** Covers the customization and sales cycle flow for a variety of sales documents types that are available in standard SAP. You will learn about contracts, standard orders, third-party orders, debit/credit notes, consignments, warranty and maintenance contracts, quantity contracts, and so on.

**Chapter 8: Shipping and Transportation** Covers shipping- and transportation-related activities in detail. This chapter covers topics such as delivery documents, routing, picking, packing, transportation, transfer orders, and shipment documents.

**Chapter 9: Billing** Covers customer invoicing-related topics such as billing process, milestone billing, periodic billing, invoice lists, rebates, debit/credit notes, and payment card setup in SAP SD.

**Chapter 10: Account Assignment and Revenue Recognition** Covers GL account determination for account posting of the invoice document. We'll also cover revenue recognition functionality in this chapter.

**Chapter 11: Credit Management** Covers credit management in SAP SD in detail.

**Chapter 12: Material Determination, Listing, Exclusion, and Proposal** Talks about various material-related functionalities in detail. This includes topic such as material determination, automatic product proposal, customer–material info records, and so on.

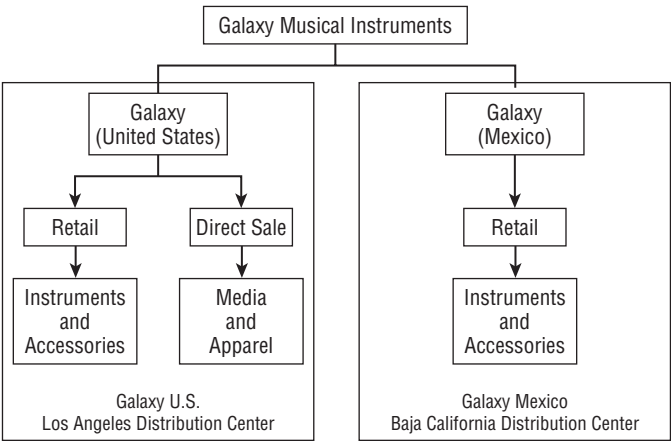
**Chapter 13: Serial Numbers and Batch Management** Covers the serial number and batch management topics in detail.

**Chapter 14: Advanced Techniques** Talks about various technical topics such as user exits, BAPI, EDI, IDOCS, and ABAP queries. This chapter also covers switch framework and enhancement packs in detail.

The appendix at the end of the book contains valuable information about transaction codes, database tables, and recommended web resources for further learning.

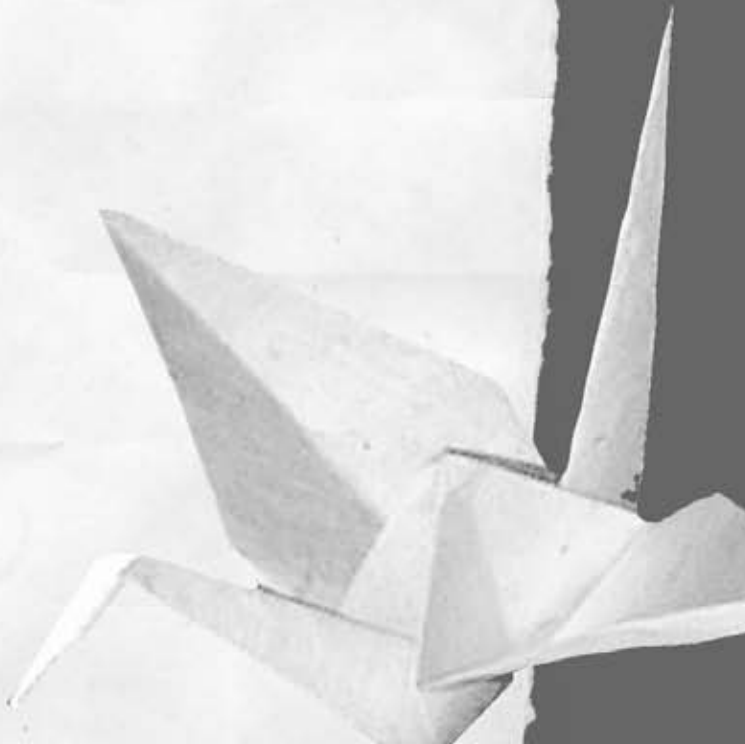
All through this book, we will use a case study of a fictitious company called Galaxy Musical Instruments; it’s a trading organization that deals in musical instruments as well as related media and accessories, with operations in the United States and Mexico. This end-to-end case study will ensure continuity and help you understand how an organization can put SD’s functionalities to use.

Here is the organization structure for Galaxy Musical Instruments.



# CHAPTER 1

## ***Introduction to Sales and Distribution***



**W**elcome to the world of SAP Sales and Distribution!

In this chapter, we will start with the basics about the SAP ERP system. We will discuss the various application areas and how they are structured. You will see that there are different menus offered to end users (who have to run transactions) and administrators (who configure or set up the system). We will introduce some basic transactions that you will need to know before you proceed with the rest of the book.

Sales and Distribution (SD) is one of the most important application areas in the SAP ERP system. In this chapter, we will explain how a general sales cycle is carried out in SAP. We will also give you an idea of how this book is structured.

## Introduction to SAP

SAP is one of the most popular enterprise resource planning (ERP) solutions in the world. It offers an integrated system that supports major business functions such as sales, production, and financial accounting. Over the years, SAP has been enhanced, and new versions have been released. The older SAP R/3 has now developed into the SAP ERP system on which we have based this book.

The latest version of SAP ERP at this time is ERP Central Component, Release 6.0, often referred to as ECC 6.0. It consists of several application components closely integrated with one another. SD is one of these application components.

When any organization looks to implement SAP ERP, it first studies its business processes and decides on the ones that are to be mapped in SAP. Based on this, it can select the application components that are relevant. For example, a manufacturing organization may require a different set of applications than a service provider or a trading company.

The Sales and Distribution application caters to the business processes associated with customer order fulfillment. SD has several components offering diverse functionality. For example, there are components for pricing (which control how prices and costs are determined in a sales transaction), availability check (that control how product stocks are allocated to orders from various customers), and credit management (that check the credit worthiness of the customer before a transaction is permitted). Again, you have to select which processes are applicable to you.

In an integrated system, each application has to mesh with other related applications to ensure continuity and consistency. This is one of the strong points of the SD application.

Next we'll cover the first steps in accessing SAP. As we go through the application in this book, we will discuss each step in further detail.

## First Steps in SAP

We'll now discuss some of the basic menus, screens, and transactions that you need to know when you log on to SAP. As we go along, we will also discuss the various features and applications that appear on each screen and how they relate to each other. This will help you understand the concepts better.

### Easy Access Menu

After you log on to SAP, the first screen that greets you is the SAP Easy Access menu (Figure 1.1).

**FIGURE 1.1** SAP Easy Access menu



You can customize this menu based on your role in the organization. Specifically, you can arrange processes and transactions that you require for easy access and you can omit other transactions that you never use from the list.

Users can access transactions and run reports from this menu. However, they cannot carry out administrative functions from here. Those functions will be covered in the Customizing menu that we will discuss soon.

SAP ERP offers several business applications. As you can see, the major application areas in this menu are Accounting, Human Resources, and Logistics:

**Accounting** If you drill down this menu, you will find diverse applications listed. Some of them are for financial accounting/controlling (FI/CO), financial supply chain management, and Project Systems (PS).

**Human Resources** All the applications related to human resources management are grouped here. For example, you will find applications for personnel management, time management, payroll, and travel management.

**Logistics** All the applications related to logistics functions are contained in this menu. Materials Management (MM), Production (PP), and Plant Maintenance (PM) are some of the applications listed here. The focus of this book—Sales and Distribution—is an application that falls under the Logistics menu. Logistics Execution (LE) is another application that is relevant here, because it covers the product delivery processes.

## The Customizing Menu

You can configure and customize the SAP system to meet the specific requirements of your organization. The Sales and Distribution module has been developed with several business processes and various industries in mind. Some of these processes may not be relevant to your business. On the other hand, there could be some specific requirements that you will need to map in SAP through configuration.

During configuration, you can carry out various settings that control the process setup, such as the following:

- ▶ Activating or deactivating a certain process for your organization
- ▶ Configuring the look and feel of a transaction screen for a user
- ▶ Controlling which fields on the screen can be accessed, changed, or displayed
- ▶ Setting up a smooth flow of data from one document to another to ensure consistency and avoid the duplication of manual effort

You can access the Customizing menu in SAP using the following path: SAP Easy Access Menu > Tools > Customizing > IMG > Execute Project (transaction code SPRO).

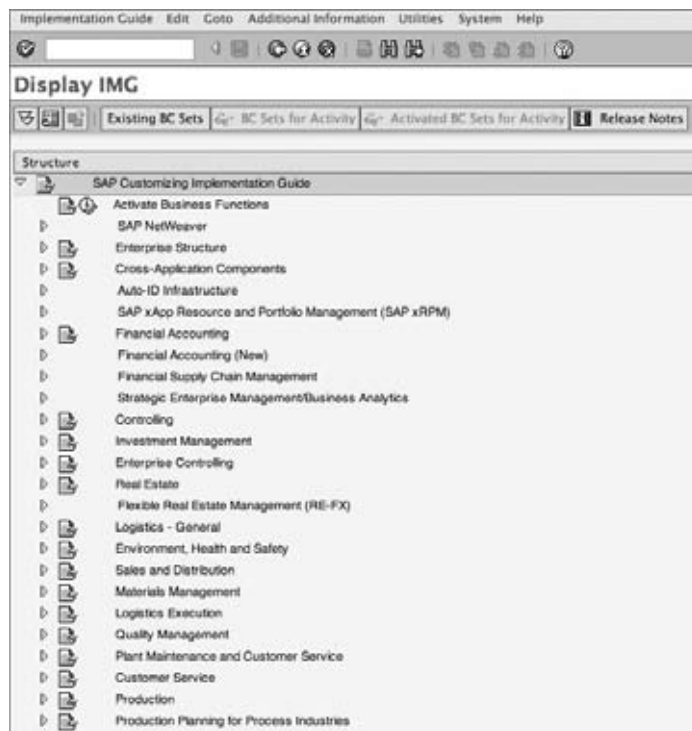




**NOTE** A *transaction code* is a shortcut to a specific transaction in SAP. The menu path described would also lead you to the same destination. Whenever a transaction code is available, we will mention it alongside the path. You will also find a list of important transaction codes in the appendix.

This transaction code leads you to the Display IMG screen, as shown in Figure 1.2. You will find a menu with the various applications listed. It is called SAP Customizing Implementation Guide (or IMG for short). All the customization-related steps will be launched from this menu. If you click any application, you will find another menu that leads you to various submodules. Based on the exact path listed in the book, you can reach the specific transaction in the menu where the customization setting is to be carried out.

**FIGURE 1.2** Customization menu



In this book, we also refer to the Display IMG screen as the Customizing menu or just IMG while explaining menu paths.

The focus of this book is the Sales and Distribution application. However, to complete the configuration steps, we will also touch upon some of the other topics, listed in IMG, under the nodes:

- ▶ Enterprise Structure
- ▶ Logistics – General
- ▶ Logistics Execution

In this book, we cover all the important settings that an SD expert should know. However, in an integrated system, a business process usually spans more than one application. You will need to work with experts in other areas (such as MM, FI/CO, WM, and so on) to complete the end-to-end process setup.

## The Basic Sales Cycle

We'll now discuss the basic set of transactions that are most important in the SD area. The term *sales cycle* refers to the creation of a sales order document followed by delivery and a billing document. As we go along, we will tell you the transaction codes at each step. We will also point out how this book is structured to help you understand each area and functionality in the sales cycle.

### Create a Sales Order

To create a sales order, follow the menu path SAP Menu ➤ Logistics ➤ Sales And Distribution ➤ Sales ➤ Order ➤ Create (VA01). Again, note that the transaction code mentioned in parentheses after the path will lead you to the same screen.

Figure 1.3 shows the sales order creation screen. Before you create a sales order, you must enter the organizational data such as sales organization, distribution channel, division, sales office, and sales group. This maps the organizational entities in your company.

To learn about how to set up the organizational structure in SAP, refer to Chapter 2, “Enterprise Structure.” That chapter will explain how to configure SAP so the organizational entities are created and assigned to one another.

You must also specify the type of order document being created. After entering this information, you can proceed to the next screen, the Overview screen (Figure 1.4).

**FIGURE 1.3** Creating a sales order

Sales document Edit Goto Environment System Help

### Create Sales Order: Initial Screen

Create with Reference Sales Item overview Ordering party

Order Type **ZGRD** Rush Order

**Organizational Data**

Sales Organization	9090	Galaxy Musical USA
Distribution Channel	97	Reseller
Division	99	Default
Sales Office		
Sales Group		

**FIGURE 1.4** Create Standard Order: Overview screen

Sales document Edit Sales Release Environment System Help

### Create Standard Order: Overview

Standard Order

Sales document: 10012 Net value: 854.85 USD

Sales organization: 10012 Sales office: 10012

PO Number: 100120001 PO date: 09/09/2009

**Sales** Item overview Item detail Ordering party Procurement Shipping Configuration Reason for rejection

Req. deliv. date: 09/24/2009 Delivery plant: Contract start: Contract end: Total weight: 10.000 Volume: 0.000

Complete dlv. Delivery block Billing block Payment card Payment terms 0004 Order reason

Exp. date: 09/24/2009 Incoterms: CIP (Cost Insurance Freight Inc.)

Item	Material	Order Quantity	Uo	Description	Pls	Route	Customer Material Number	MC	D.	Hg,wh	First date	Batch	Ch.	Ar
10012	10012	1.00	EA	Acoustic Guitar (K43)	1	0001		TAN			09/24/2009			
20012	20012	1.00	EA	Drums (20)	1	0001		TAN			09/24/2009			

The sales document consists of header, item, and schedule line data. At the header level, you specify the details that are applicable to the entire document, such as the customer number (sold-to party) and the purchase order reference number. At the item level, you enter the products ordered. Details such as the material number,

You'll use master data at every step of the transaction. Data about your regular customers or the products and services offered are examples of master data. You have to maintain the repository of master data before using it in transactions. To learn more about master data setup, refer to Chapter 3, "Master Data in SD."

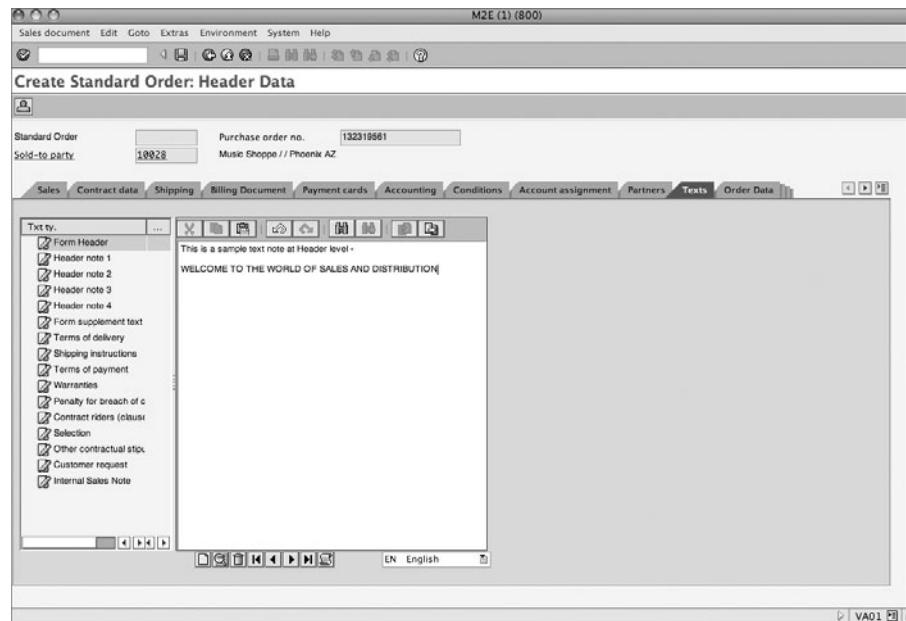
For example, if you want to know all the partner functions associated with the sales transaction, you can select Goto > Header > Partner. As shown in Figure 1.5, this tab lists all the partners such as the sold-to party, ship-to party, bill-to party, and payer for this order. If you have different partners at each line item level, you can specify them on the Partners tab (which you can reach by selecting Goto > Item > Partner).

**FIGURE 1.5** Sales order: Header Data, Partners tab

[illegible]

Another screen is the Texts tab, which appears at the header and item levels. The menu path is either Goto > Header > Text or Goto > Item > Text. Here you store all the text messages and instructions (as shown in Figure 1.6) that you want to flow with the order.

**FIGURE 1.6** Sales order: Header Data, Texts tab



You can customize the setup for partners, texts, and outputs as per your requirements.

In partner determination, you can control which partner functions are of importance to you and make them mandatory. Text determination helps you set up how the texts are copied from one document to another. Output determination lets you customize the outputs from sales documents and transmit them to the business partners. For example, you can use it to send out a copy of an order confirmation document to the customer in print or by email or EDI.

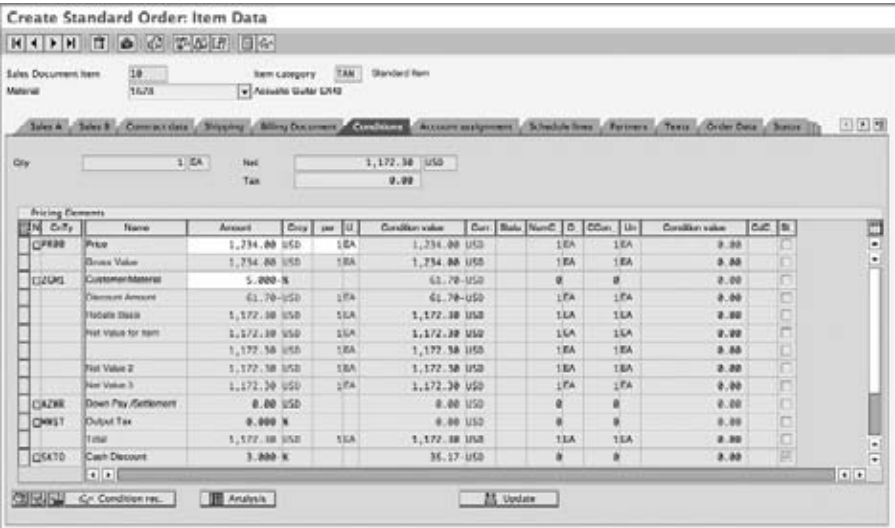
Chapter 4, “Partner, Text, and Output Determination,” will discuss how to maintain settings related to partners, outputs, and texts.

One of the most important parts of a sales transaction is the price that the customer has to pay. The price can be entered manually in the sales order. However, if your product prices are going to be stable for certain duration, you can maintain price records and set up automatic price determination to avoid manual entry.

To see how the exact price has been computed for a sales item, select Goto ➤ Item ➤ Conditions. As shown in Figure 1.7, the pricing schema gives you the details of the various pricing *conditions* in it. Pricing conditions are things such as base prices, discounts, freight conditions, or taxes. Certain pricing conditions can apply to the entire order (such as total freight charges). These are listed in the Header conditions tab.

To learn how to customize pricing, visit Chapter 5, “Pricing and Tax Determination.”

**FIGURE 1.7** Sales order: Item Data, Conditions tab



*Availability check* controls how product availability is checked and the date on which you can commit the delivery to the customer. As shown in Figure 1.8, as soon as you enter a material in the sales order, the system can be configured to carry out an availability check and display the earliest date on which this product can be delivered.

In a sales order, you can always check the schedule lines by selecting Goto ➤ Item ➤ Schedule Lines. As shown in Figure 1.9, you can check the dates on which the quantity can be confirmed.

Chapter 6, “Availability Check, Transfer of Requirements, and Backorders,” will cover this topic in greater detail.