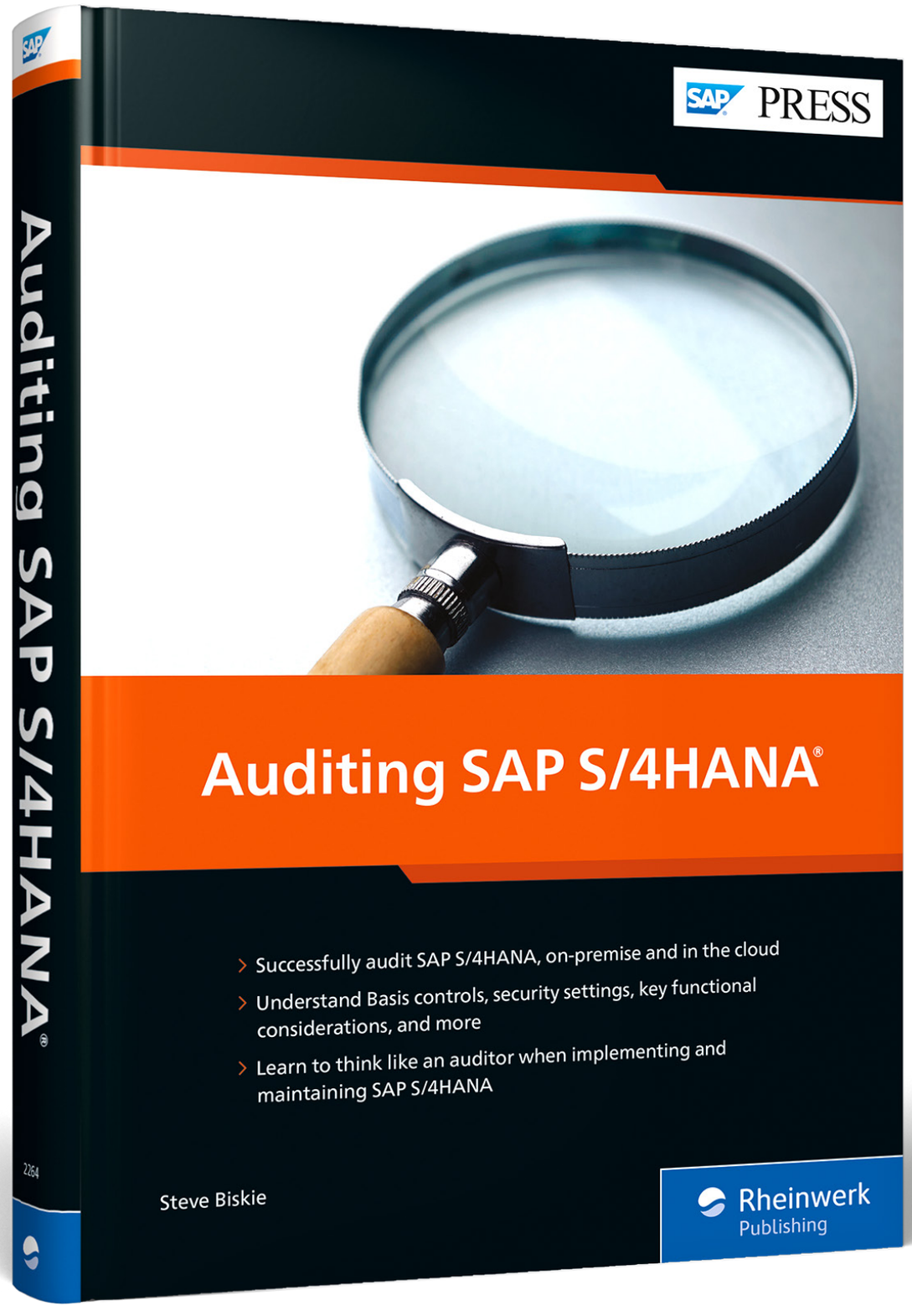


# Reading Sample

*In this chapter, you'll learn about financial reporting audits. After understanding how the record-to-report cycle works in SAP S/4HANA, you'll walk through key risks, configurable controls, security considerations, audit reports, and more.*



Steve Biskie

## Auditing SAP S/4HANA

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# Chapter 6
# Record-to-Report Cycle

*"Balanced budget requirements seem more likely to produce accounting ingenuity than genuinely balanced budgets."*
*—Thomas Sowell*



The record-to-report cycle, also known as the financial reporting cycle, is different from most other key business cycles supported by SAP. Whereas the purchase-to-pay cycle results in the acquisition of goods and/or services, the order-to-cash process results in receipt of payment for satisfying a customer need, and the forecast-to-stock process results in having available inventory for production or sale, the record-to-report process is designed simply to communicate the business transactions that have occurred for internal and external purposes. While historically this cycle has been an after-the-fact documentation event, the speed and power of SAP S/4HANA has made it a much more real-time event.

Given the prevalence of regulations surrounding financial reporting (particularly for publicly traded companies), as well as the use of financial statements to support external funding (e.g., loans) and business events like mergers/acquisitions, it shouldn't be surprising that the record-to-report cycle is commonly audited by external auditors. These audits typically focus on the integrity (e.g., completeness, accuracy) of relevant financial statements and disclosures, with a goal to ensure that investors and other stakeholders have appropriate information upon which to make sound investment decisions. Even for non-public companies, record-to-report audits are common. Because senior leadership often makes decision based on the financial status and projections of an organization, management may request that an internal audit department perform an assessment to ensure the data and reports upon which they make decisions are reliable.

In earlier versions of SAP, statutory reporting was handled primarily by financial accounting, and managerial accounting was handled primarily by controlling. While you'll still see configuration settings separated into these modules in the Implementation Management Guide (IMG), in SAP S/4HANA, financial accounting and controlling are bundled together and not generally implemented separately.

In this chapter, we explore the SAP record-to-report audit process in detail, including considerations for statutory and managerial reporting. We'll start by highlighting additional features that are new to the record-to-report cycle in SAP S/4HANA and beyond those already mentioned in Chapter 1.

## 6.1 Record-to-Report Cycle in SAP S/4HANA

In Chapter 1, we discuss many of the differences between SAP S/4HANA and SAP ERP, including the Universal Journal and other features that relate to the record-to-report cycle. While those features are the most noticeable differences (and we have no intent to replicate that discussion here), we do want to highlight a few more granular differences you may see in SAP S/4HANA.

For those of you familiar with SAP ERP, you will notice a few new items in the **Accounting** section of the SAP S/4HANA main menu, namely the addition of folders for:

- **Central Finance**
  Organizations running Central Finance in SAP S/4HANA use it for, as the name implies, centralizing all finance and accounting transactions on a single platform, including those transactions coming from other SAP systems as well as non-SAP systems.
- **Real-time consolidation (RTC)**
  RTC is an SAP S/4HANA-specific solution intended to eliminate data replication to SAP Business Planning and Consolidation (SAP BPC) that runs on SAP Business Warehouse (SAP BW). With RTC, SAP BPC reads the Universal Journal (table ACDOCA) and the consolidation journal (table ACDOCC) directly from SAP S/4HANA, eliminating replication. From a risk perspective, this also eliminates the risk of inconsistent data due to potential maintenance on replicated data.

**SAP S/4HANA Finance for Group Reporting**

While RTC solved some challenges, it also introduced problems including performance memory issues and limitations on key figures. SAP has already announced that RTC is being sunset, and has been replaced with SAP S/4HANA Finance for group reporting since version 1909. This newest solution can be deployed on-premise and in the cloud, supports continuous accounting, and allows the following:

- Real-time consolidations of not just actuals, but also plans, simulations, and what-if scenarios
- Full integration with SAP Analytics Cloud

Comparing the IMG menus between SAP S/4HANA and SAP ERP, in addition to the options for Central Finance and RTC that were previously mentioned, you'll also see configuration associated with:

- **Predictive accounting**
  At the time of writing this book, predictive accounting is specific to sales (we expect it to evolve as SAP S/4HANA matures) and is intended to predict the profitability of incoming sales orders. The goal of predictive accounting is to give an early indicator







of future profit. Unless your audit is of the sales planning process, it's unlikely predictive accounting will be in scope.

- **Advanced compliance reporting**
  Advanced compliance reporting, however, will very likely be in scope (from a key report perspective) if your organization is using it. Advanced compliance reporting is essentially a reporting framework developed by SAP to help customers with compliance-related reporting requirements. It was initially released with an SAP Fiori app called Run Advanced Compliance Reports, and a related configuration app, Define Advanced Compliance Reports. As of July 2022, the entire framework is now called the SAP Document and Reporting Compliance framework. One key change with SAP Document and Reporting Compliance is that numerous legacy reports have been (or are being) retired and replaced by new reports. Most of these reports relate to country-specific legislation, often with a tax or sales-reporting focus (e.g., Great Britain VAT return, Singapore GST return, Luxembourg EC Sales List, and Romania Domestic Sales Purchase List) but they can include areas like inventory reporting, purchases, journal entry lists, and other topics depending on statutory reporting requirements.

**Audit Implication of SAP Document and Reporting Compliance**

SAP Note 2480067 contains a listing of the reports that have been or are being retired and replaced by new reports in SAP Document and Reporting Compliance. The note provides the old report name, the country it relates to, and the planned end of support date. Consider ensuring that your organization is using the new reports with SAP Document and Reporting Compliance, as the old reports will not be updated to reflect recent legal changes.

SAP S/4HANA also has some additional features related to general ledger master data. One of the biggest is that traditional general ledger master data (from financial accounting) has now been merged with cost element master data (from controlling), eliminating the risk of inconsistencies and the need to duplicate creation when compared to SAP ERP. Additionally, time-dependent attributes can now be added to general ledger account numbers and descriptions, enabling a nice audit trail between old general ledger accounts and their replacement general ledger accounts, if changes are made over time (instead of having to mine this information from the Changes to General Ledger Accounts report). This time-dependent data is optional and does not appear on any reports; it is merely for tracking these changes internally, as shown in Figure 6.1.

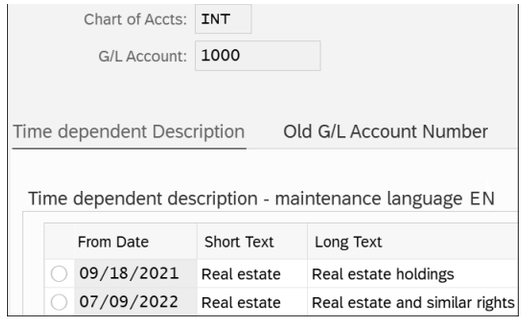


**Figure 6.1** General Ledger Master: Time-Dependent Data

SAP S/4HANA also introduces a couple new journal entry options when compared to SAP ERP, namely:

- The ability to upload journal entries from Microsoft Excel templates
- Replacement of park and post functionality with three SAP Fiori apps: Verify General Journal Entries (for requestor), Verify General Journal Entries Inbox (for processor), and Verify General Journal Entries Outbox (for processor)

While the `F_BKPF_*` authorization objects in SAP S/4HANA technically still allow for traditional park and post settings (where users entering journal entries are assigned a 77 pre-enter activity value instead of a 01 create activity value), standard SAP Fiori apps no longer provide a park option, and thus this technique is only available when using the SAP S/4HANA SAP GUI to enter journal entries. The following blog post provides a more thorough overview of this change: *http://s-prs.co/v552601*.

## 6.2 Risks

Now that we've discussed some of the new record-to-report-related features of SAP S/4HANA, let's move to a review of risks. Note that these risks are less specific to SAP S/4HANA, and more inherent in the record-to-report cycle.

The business impact of *risks* within the financial reporting process can be significant. Reporting is often tied to regulatory or contractual obligations from which fines and prohibitions can result from non-compliance. As such, controlling the integrity of the financial reporting process is absolutely critical.

When planning for an SAP audit covering financial reporting, think through some of the things that could go wrong in the SAP financial reporting process that could affect reporting integrity. A few of these risks include:

- **Insufficient reporting structures**
  The organizational model, chart of accounts, and other relevant SAP S/4HANA structures must be appropriately configured to support the capture and reporting of





transactions required by financial reporting rules. Regardless of the effectiveness of other processes, if the configured financial-related structures do not allow transactions to be categorized and reported appropriately, financial reporting compliance can be difficult to achieve.

- **Inaccurate postings**
  While SAP automatically completes the accounting entries associated with many transactions, other postings rely wholly or partially upon user input. Certain accounting estimates, such as reserve calculations, may be based on information within SAP S/4HANA but are ultimately posted to SAP S/4HANA manually. Other accounting postings may be fully calculated and posted by SAP S/4HANA, but rely on appropriate user input or classification (such as assignment of an asset class). User errors during these processes can result in incorrect postings to the general ledger.
- **Incomplete general ledger processing**
  A variety of circumstances can result in transactions not being fully processed in SAP S/4HANA. General ledger transactions that have been put on hold or parked will not be posted. Incomplete documents, where SAP S/4HANA detects missing information required for complete posting, will also remain off the books. These issues must be investigated and resolved for financial reporting to be complete.
- **Postings to the wrong accounting period**
  Near the end of a reporting period, specific rules govern the period to which a transaction must be posted. Obligations incurred before period end, for example, may need to be recognized even if not yet invoiced or otherwise visible to SAP S/4HANA. Even if postings are quantitatively accurate, if they are made to the wrong posting period, then the transaction is technically inaccurate.
- **Uncollectable receivables overstating accounts receivable**
  Organizations that allow customers to purchase by means other than cash, prepayment, or some form of secured/guaranteed asset are subject to credit risk. Since accounts receivable balances appear as an asset on the balance sheet, having a means to ensure the collectability of accounts receivable is important for accurate financial reporting. Organizations can control up-front credit risk through credit limits that cap how much credit exposure one customer can have, and manage post-sale risk through credit monitoring and period-end journal entries intended to properly value the collectability of recorded receivables.
- **Inaccurate or incomplete management reports**
  The integrity of cost center or profitability information can affect the integrity of financial accounting transactions, even if not initially apparent (since statutory accounting principles are generally different from managerial accounting). Cost center and profit center information can be used by management to make determinations that ultimately lead to manual journal entries or adjustments, however. As

a result, while these components do not directly affect external financial statements, they can indirectly affect the integrity of certain general ledger postings.

- **Unauthorized document changes**
  Initial SAP S/4HANA document entry often goes through internal approval and quality assurance (QA) processes. If document changes (made after initial approval) do not go through the same level of scrutiny, unauthorized or inaccurate transactions can be posted to the general ledger.
- **Fraudulent transactions**
  The Association of Certified Fraud Examiners (ACFE) estimates that corporations, on average, lose 5% of revenue to fraud (a figure that has actually come down 2% in the last decade). Whether the result of earnings manipulation to reach incentive thresholds or through outright theft, the existence of fraudulent transactions can cause financial reporting to fall out of compliance with regulatory guidelines.

Of course, each of these risk categories is broad. As mentioned in Chapter 4 on the discussion of designing appropriate controls during an implementation, effectively managing risks requires understanding specific situations for which controls can then be applied. For example, we mentioned how incomplete SAP S/4HANA general ledger postings can result from legitimate transactions being parked or remaining on hold when the financial statements are generated, and thus be missing from the resulting reports. Other situations could also result in incomplete processing. An interface into SAP S/4HANA may fail during a nightly processing run and not be detected and resolved. A contract with financial reporting ramifications may be entered into by a department but not yet communicated to the accounting function. A batch of invoices may be sitting on a clerk's desk waiting processing. During an SAP S/4HANA audit where the financial reporting process is in scope, you will be interested in how each of these risks have been addressed by SAP or by business processes surrounding the use of SAP S/4HANA.

Later in this chapter , we'll  provide suggestions for SAP S/4HANA configurable controls that can help mitigate some of the risks inherent in the financial reporting process, and highlight important processes that can also strengthen control. Before that, however, we'll discuss the SAP S/4HANA enterprise structure relevant to the record-to-report cycle, related master data, and security issues critical to the integrity of the financial reporting process.

## 6.3 Understanding the Enterprise Structure

SAP's official definition of the *enterprise structure* is "a set of organizational units, and their hierarchical relationships, that together form the enterprise." In short, the enterprise structure is a set of organizational units that you configure in SAP to define how your organization operates. It is important that sufficient thought is put into how the





enterprise structure will be configured, as it will affect both reporting (many reports in SAP S/4HANA allow for filtering based on an enterprise structure element) and security (numerous authorization objects discussed in Chapter 5 have field values associated with the enterprise structure). From an audit standpoint, it's therefore important to ensure the enterprise structure is appropriately defined, as making a change post-implementation can be time-consuming. The importance of the enterprise structure can be illustrated by the fact it has its own top-level menu in the IMG, accessed via **SAP Reference IMG • Enterprise Structure** where organizational units are first defined, and then assigned to one another (to create the organizational hierarchy).



The record-to-report-related enterprise structure elements can be found in the **Financial Accounting** and the **Controlling** folders underneath the enterprise structure **Definition** and **Assignment** subfolders. The primary organizational units are (in order based on the IMG):

- **Company**
  A company is an organizational unit related to accounting that represents either a single legal entity or a group of several legal entities. A company is a superset of one or more company codes, and is typically the ultimate parent for accounting consolidation functions. By default, SAP S/4HANA comes with a single company (G0000), and SAP recommends keeping this preset company if only one company is needed (as it will reduce configuration effort in tables already populated with this preset value).
- **Credit control area**
  A credit control area is SAP's organizational unit that manages customer credit checks and limits. There is a one-to-many relationship between a credit control area and company codes, with the primary constraint being a credit control area uses the same currency for all company codes assigned. The default credit control area in SAP S/4HANA is 0001.
- **Company code**
  A company code is an organizational unit related to accounting that represents a legal entity. More precisely, a company code is an entity used for statutory reporting in financial accounting in SAP S/4HANA. Think of a company code as a segregated set of general ledger accounts, transactions, and audit trails that contain the complete record of and can generate relevant reports for external reporting requirements. Journal entries are posted to a specific company code. While many organizations use four numbers to represent their company codes, technically any four alphanumeric characters (including spaces) can be used to identify a company code. SAP S/4HANA comes delivered with 40 template company codes that are used as templates to represent configuration typical for common countries of operation.
- **Business area**
  A business area is an accounting-related organizational unit typically used for internal reporting, and often representing an operational area such as a department

within the organization. A journal entry can be posted to a business area (in addition to the company code, which is mandatory for the journal entry). Business areas are represented by a four-character alphanumeric code. The default business area in SAP S/4HANA is 0001.

- **Functional area**
  A functional area is used for expense-related allocation associated with cost-of-sales accounting. Common functional areas are things like marketing, research and development (R&D), sales, administration, etc. Functional areas are assigned to cost centers in the IMG as part of SAP S/4HANA configuration and are represented by a four-character alphanumeric code.
- **Consolidation business area**
  Similar to how a company is the accounting consolidation unit for one or many company codes, a consolidation business area is the accounting consolidation unit for one or more business areas. Consolidation business areas have balance sheets that can be included in business area consolidation, and are represented by a four-character alphanumeric code.
- **Financial management (FM) area**
  An FM area is an organizational unit within accounting used for cash budget management and funds management. There is a one-to-many relationship between an FM area and a company code. FM areas are represented by a four-character alphanumeric code. The default FM area in SAP S/4HANA is 0001.
- **Segment**
  A segment is a controlling concept that represents a portion of a company able to produce external financial statements. A segment is part of the master record of a profit center, and during posting is derived from the assigned profit center. Segments were introduced with something called new general ledger that was launched in the early 2000s, and since company codes can be associated with more than one segment, they allow financial reporting at a unit more granular than a company code. Segments are represented by a 10-character alphanumeric code.
- **Profit center**
  Profit centers are an organizational element within the profit center accounting portion of controlling that allows revenue and expenses (via assigned cost centers) to be tracked based on a management-oriented view of the organization (versus a statutory or compliance-oriented view). Profit centers are a managerial accounting concept intended to allow management to identify and effectively manage those parts of the organization that drive revenue. Profit centers are modeled in a hierarchy to allow tracking of profit both at a micro level and a macro level, and are represented by a 10-character alphanumeric code. Note that while profit centers are initially defined in the enterprise structure configuration, the data associated with profit centers is considered master data (and thus not required to be transported during maintenance).





- **Cost center**
  While technically cost center configuration is not part of the enterprise structure configuration within the IMG (instead, it's located at **SAP Reference IMG • Controlling • Cost Center Accounting • Master Data • Cost Centers**), we are including it here because of the relationship between cost centers and profit centers. Effectively, cost centers are an organizational unit within controlling that define where in the organization an expense originates. Like profit centers, they are modeled in a hierarchy to allow tracking of expenses (costs) at a micro level and a macro level, and are represented by a 10-character alphanumeric code. Also similar to profit centers, the data associated with cost centers is considered master data (and thus not required to be transported during maintenance).
- **Controlling area**
  A controlling area is the primary organizational unit within controlling in SAP, used for managerial accounting (e.g., profit center and cost center accounting). Internal allocations are performed within a controlling area. There is can either be a one-to-one relationship between a controlling area and a company code (in which case both the internal and external accounting viewpoints are identical), or a one-to-many relationship between a controlling area and a company code (also known as cross-company code cost accounting). The one-to-many model is useful when an organization wants to centralize cost accounting across multiple independent subsidiaries, however all company codes must use the same operating chart of accounts. Controlling areas are represented by a four-character alphanumeric code. The default controlling area in SAP S/4HANA is 0001.

## 6.4 Key Concepts

In addition to the terms introduced as part of our discussion on the enterprise structure, several other record-to-report-related configurations are important to the operation of the entire process. These configurations are set up during the implementation, and typically only change due to changes in legal reporting requirements.

Let's walk through the concepts that will be relevant to auditing:

- **Chart of accounts**
  The *chart of accounts* is a means for grouping general ledger accounts. There is a many-to-one relationship between the chart of accounts and company codes. While a company code technically can be assigned multiple charts of accounts, only one will be designated as the primary chart of accounts, also known as the *operating chart of accounts* for that company code, and is used for financial account and cost accounting. Additional charts of accounts assigned to a company code may be country specific (due to statutory requirements in that country), or consolidation related (known as a *group chart of accounts*). Other than a flag that indicates the chart of

accounts is blocked for adding general ledger accounts at the company code level (generally only used when there is centralized management of general ledger accounts), the rest of the chart of accounts configuration is more informational than audit relevant.

You can view the configuration for charts of accounts by running Transaction SPRO, and then navigating to **SAP Reference IMG • Financial Accounting • General Ledger Accounting • Master Data • G/L Accounts • Edit Chart of Accounts List**, and then double-clicking on the relevant chart of accounts.

- **Fiscal year variant**
  The *fiscal year variant* defines the characteristics of the year used for accounting purposes, including the number of periods, whether those periods follow the calendar year (e.g., each month is a period) or another formula, and whether the fiscal year is the same from one year to the next. *Special periods*, used only during the last period of the fiscal year for closing activities, can also be defined, and each period can be described textually in one or many languages. For example, we can see from Figure 6.2 that the fiscal year variant identified as **K4** has **12** posting periods and **4** special periods. The check in the **Calendar year** field indicates that each period is equivalent to a calendar month, which we can also see in the text descriptions configured for each period. Company codes are assigned to a single fiscal year variant as part of company code configuration.

  You can view the configuration for fiscal year variants by running Transaction SPRO and then navigating to the **SAP Reference IMG • Financial Accounting • Financial Accounting Global Settings • Ledgers • Ledger • Fiscal Year and Posting Periods • Maintain Fiscal Year Variant**, selecting the fiscal year variant, and double-clicking the **Period Texts** folder (if the periods are calendar months) or the **Periods** folder (if the periods don't align to calendar months).

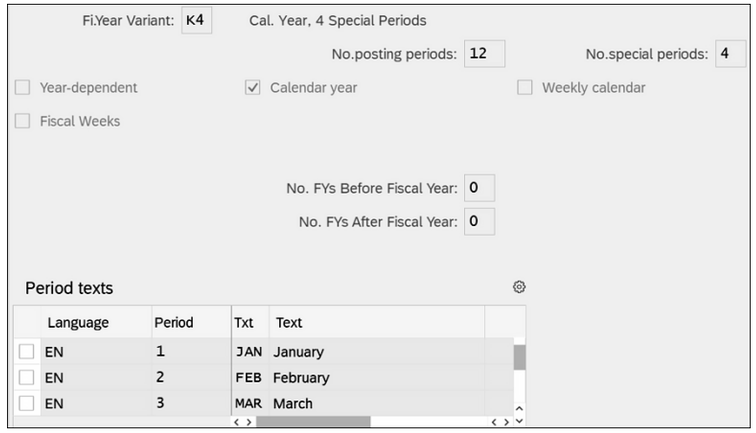


**Figure 6.2** Fiscal Year Variant Example





- **Posting period variant**
  A *posting period* is a timeframe within a fiscal year into which accounting entries are posted. The *posting period variant* is a configurable item in SAP S/4HANA that sets, for a defined range of general ledger accounts, what period or range of periods can accept accounting entries. Those periods configured to accept accounting entries through the posting period variant are called *open*, and all other periods are called *closed*. A posting period can be assigned to one or many company codes, allowing the posting periods within multiple companies to be opened and closed at the same time, if so configured. In Section 6.7.1, we'll be talking about auditing open/closed periods, and will share how to view the related configuration at that point.



## 6.5 Master Data

Let's now review the master data relevant to the record-to-report cycle. We'll discuss not only what the master data represents and how it is used in the process, but also control-related elements of that master data. Keep in mind that control-related settings in master data are not considered configuration—they can be changed in production through normal functionality and do not have to go through a transport process even if the production client is locked (a topic we discussed in Chapter 5). As such, your audit procedures over master data should seek to understand how the organization ensures the completeness and accuracy of data entered into these control-related fields.

We'll first review an important financial accounting set of master data, then move to two controlling-related master data concepts, and end with treasury-related master data.

### 6.5.1 General Ledger Account Master

General ledger account master data defines key information related to the general ledger account. There are two categories of general ledger account master data:

1. Chart of accounts data
2. Company code data

The chart of accounts data applies to that general ledger account regardless of which company code it is associated with. It describes the name, associated chart of accounts, structure within financial statement reporting presentation, and language-specific key words (used when searching for a general ledger account). You can view the chart of accounts-related data associated with a general ledger account via Transaction FSP3. In the example in Figure 6.3, we can see that general ledger account **14000**, associated with the **INT** chart of accounts, is a balance sheet account. Within the balance sheet, it is organized with other accounts grouped in the **General G/L Accounts** category.

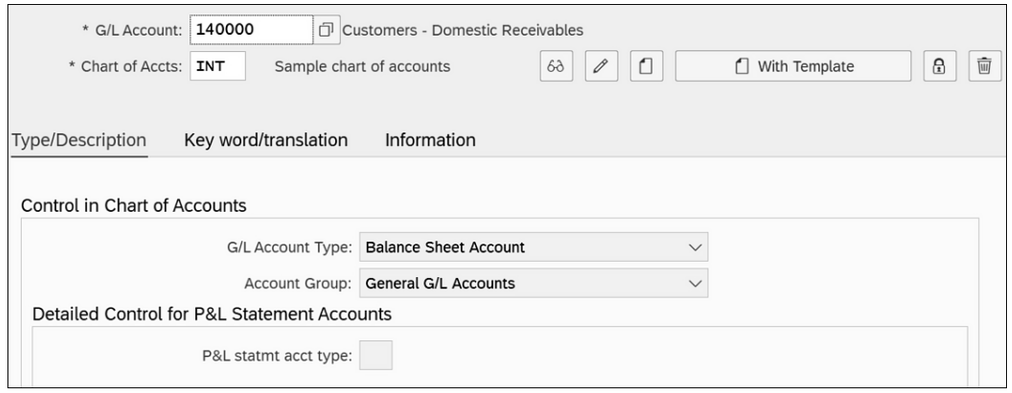


**Figure 6.3** General Ledger Account: Chart of Accounts Data

Whereas the chart of accounts-specific data of a general ledger account applies to that general ledger account regardless of what company code it is assigned, the more detailed characteristics of a general ledger account are company code specific. For example, your organization can make the general ledger account type and account group (from Figure 6.3) differ from the presentation when all related company codes are consolidated at the chart of accounts level. Authorization groups can be assigned at the company code level and, if also assigned to a user's security role, limit who can interact with that general ledger account within the company code. There are also several control-related options that can be specific to the general ledger at the company code level. You can view the company code-related data associated with a general ledger account via Transaction FSO3.

As you can see from Figure 6.4, within company code **0003**, general ledger account **140000** is assigned to field status group **G067**. Field status groups for general ledger accounts determine what fields are required, optional, or suppressed when making a posting to that account.

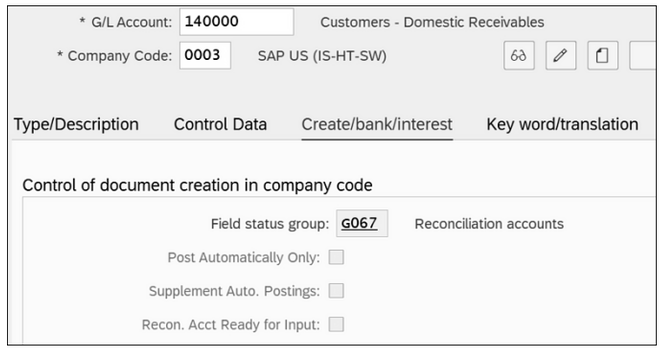


**Figure 6.4** General Ledger Account: Company Code Data





This means that it's possible that the fields required when posting to this account from company code **0003** are different than if posting to this account from company code **0001**. Later in this chapter, we'll be talking about a few considerations when auditing general ledger accounts.

### 6.5.2 Profit Center Master

Profit center master data is time dependent, meaning that it can have a start date an end date. This allows changes made in advance of them going into effect (e.g., making a change to the person responsible for the profit center, to take place on the first day of next month). Every profit center is also assigned to a controlling area and associated with one or several company codes, which then permits posting to the general ledger. Profit centers can have other optional data added, such as the responsible party and address/contact details. You can view profit center master data via Transaction KE53.

Profit centers can also have a *dummy profit center*. Essentially, if a profit center record gets flagged in the "Indicators" tab as the dummy profit center, then any profit-related postings that can't automatically get assigned to another profit center get posted to this dummy profit center account. These postings can then be reallocated manually after investigation.

Profit centers are organized into *profit center groups*, which allow reporting, allocations, and planning data to be aggregated from multiple individual profit centers. SAP S/4HANA requires one specific profit center group, known as the *standard hierarchy*, which must contain all profit centers associated with the controlling area. The standard hierarchy, which is considered to be part of the profit center master data, defines how profit centers roll up in the controlling area, and can have an authorization group added to it to limit who can interact with (create, maintain, delete, or display) profit center data. You can display the standard hierarchy in Transaction KCH6N.

### 6.5.3 Cost Center Master

Like profit center master data, cost center master data is time dependent. Cost centers are also assigned to a controlling area and associated with one or several company codes for posting to the general ledger. From a data perspective, costs centers and profit centers are very similar. The main difference is that cost centers can be locked for actual postings or for planning. Additionally, cost centers can be associated with templates for defining allocations. You can view cost center master in Transaction KSO3.

Cost centers are organized into *cost center groups*, which allow reporting, allocations, and planning data to be aggregated from multiple individual cost centers. SAP S/4HANA requires one specific cost center group, known as the *standard hierarchy*, which must contain all cost centers associated with the controlling area. The standard hierarchy, which is considered to be part of the cost center master data, defines how

cost centers roll up in the controlling area, and can have an authorization group added to it to limit who can interact with (create, maintain, delete, or display) cost center data. You can display the standard hierarchy in Transaction OKENN.

### 6.5.4 Banking Master

The banking master file defines your own treasury bank accounts (i.e., not those of vendors). Bank accounts are associate with a country key and a bank key, which is a unique identifier for a bank in a country. When defining bank country keys, your organization also specifies the definition of this bank key, allowing it to differ by country. It should be noted that in some countries, the bank account number serves as the bank key and the actual account number, so the bank key field may at times be blank. You can view banking master data by running Transaction FI03.

## 6.6 Security Considerations

SAP security can provide a powerful level of control by limiting abilities to only a small group of authorized users. Master data controls are also critical due to the effect that master data has on business transactions. Ensuring strong *security and master data* processes are in place is important when planning an audit of the SAP S/4HANA record-to-report process. We'll discuss specific security considerations in the following sections.

### 6.6.1 Restricting Postings to Functional Areas

The large majority of general ledger postings occur through daily transaction processing—often without the user recognizing the automatic accounting entries created in the background. Goods receipts post items to inventory or expense and recognize an obligation to pay for those items. Shipments subtract from inventory and trigger an expectation of customer payment. Common transactions like these occur every day without any need for a user to go into SAP S/4HANA financial accounting and post directly to the general ledger. Inevitably, however, some transactions require manual posting and thus some accounting users need to create journal entries. This ability should be limited because manual postings create the exposure for data error.

Within the accounting and finance functions, the ability to post general ledger transactions may require an additional level of control. Small organizations with only a few employees in the accounting function can probably get by with allowing accounting employees to post most financial accounting transactions due to the low volume of transactions (thus making a full review of all manual postings possible). In larger organizations, however, additional segregation should be considered, since review of all





transactions may no longer be possible. By *restricting* the type of transaction that a user can post to their specific area of responsibility, you can further reduce the risk of errors or unauthorized transactions.

Most organizations find it appropriate to, at a minimum, restrict general ledger postings by company code using authorization object `F_BKPF_BUK`. Further restrictions can be placed on the document type and business area using authorization objects `F_BKPF_BLA` and `F_BKPF_GES`, respectively. Restricting access to account types or specific general ledger accounts using authorization objects `F_BKPF_KOA` and `F_BKPF_BES`, respectively, is also a common practice.



**Leveraging Available Restrictions**

In addition to reviewing that your organization has leveraged SAP security to control record-to-report-related master data and sales transactions, you may also want to question those techniques your organization did *not* use. For example, if you find general ledger transactions postings are restricted by account type and/or general ledger account, but that related users are granted a wildcard (*), you may want to inquire as to why postings are not truly restricted by these values.

### 6.6.2 Limiting Access to Powerful Transactions

When assigning security privileges, ensure that powerful SAP S/4HANA transactions and abilities within the record-to-report process have been *limited* to a small number of personnel. Even if these functions are never used, the ability of a user to perform them poses risk to the organization and thus creates audit concern. A few of these transactions include:

- The ability to open and close accounting periods (Transaction F-60, Transaction S_ALR_87003642, and Transaction OB52)
- The ability to perform mass reversal of accounting documents (Transaction F.80)
- The ability to delete (instead of fully depreciate or retire) assets (Transaction FSO6)
- The ability to lock planned and actual transactions for a controlling area, for a given fiscal year and plan version (Transaction OKP1)
- The ability to reverse and repost controlling documents (Transaction CFIN_CO_DOC_CRCT)

In addition to limiting access to these abilities through security, you can further strengthen controls by monitoring their usage. This monitoring should be independent of the group that's able to perform these transactions. It's ideal to show an auditor that the use of powerful transactions is limited and effectively monitored.

**Raising the Bar: Better Control over Powerful Transactions**

Organizations looking to overachieve and virtually eliminate the risks of powerful transactions should consider removing these abilities from all users, and only assigning them at time of need (particularly in the case of mass-maintenance transactions). Typically, this would be done through the use of a firefighter process, as described in Chapter 5. Once the relevant process has been completed and verified, access can once again be removed.

### 6.6.3 Establishing Controls and Security over Master Data

Master data tables drive SAP S/4HANA transaction processing. Strong controls over master data, whether it be creation, modification, or deletion, are necessary for audit success. As it relates to master data in the record-to-report cycle, you should seek to ensure that:

- The ability to change master data is limited to a core group of employees (for each type of master data)
- Employees who make changes to master data have sufficient knowledge of financial reporting and training on organizational policies and SAP S/4HANA usage to understand the issues and implications
- Procedures exist for authorizing changes to master data that can affect financial reporting (typically in advance of the change)
- Independent quality assurance processes validate master data changes
- Master data is periodically reviewed for relevance (i.e., outdated accounts are blocked for posting or marked for deletion)

Organizations may choose to manage general ledger master data centrally or locally. Auditors often view centralized maintenance as providing stronger control with more consistency; however, business circumstances will dictate which is right for your organization.

We'll walk through the key restrictions in the following sections.

#### Restricting Changes to General Ledger Master Records

SAP S/4HANA provides a variety of mechanisms to restrict changes to general ledger master records. Security permissions can be set to restrict changes based on a specific chart of accounts, on company code, and/or on a number range within a given chart of accounts. General ledger master data contains both information specific to a given chart of accounts, as well as information that can be company code specific (such as posting currency, tax category, and field status groups). Due to the impact that account assignments and other details can have on the financial reporting process and the roll-up of management information, tighter restrictions are generally preferable to more





open security models. In general, your audit should assess whether the ability to create, change, delete, block, and unblock general ledger master records has been granted to only a small handful of trained employees, and only within their defined areas of responsibility (e.g., a controller in one company code should not be able to change accounting data for all company codes). Some of the key authorization objects for doing this are shown in Table 6.1.



| Authorization Object | Name | Purpose |
|---|---|---|
| F_SKA1_KTP | GL Account: Authorization for Charts of Accounts | Restrict modifications to general ledger master data by chart of accounts. |
| F_SKA1_BUK | GL Account: Authorization for Company Codes | Restrict modifications to general ledger master data by company code. |
| F_SKA1_BES | GL Account: Account Authorization | Restrict modifications to general ledger master data by account number (this authorization object is optional). |
| F_SKA1_AEN | GL Account: Change Authorization for Certain Fields | Restrict modifications to general ledger master data to defined fields (this authorization object is optional). |

**Table 6.1** General Ledger Account Authorization Objects

#### Restricting Changes to Profit Center Master Records

Due to the effect that profit centers, and particularly their roll-up in the standard hierarchy, can have on management decision-making, access to update and modify profit center data should be controlled. SAP S/4HANA provides several authorization objects that restrict profit center master data, as shown in Table 6.2.

| Authorization Object | Name | Purpose |
|---|---|---|
| K_PCA_PRC | EC-PCA: Profit Centers | Restrict modifications to profit centers based on controlling area. |
| K_PCA_MD | EC-PCA: Authorization Object for Profit Center Master Data | Restrict modifications profit centers based on the combination of controlling area, profit center, and/or profit center hierarchy node. |
| K_PCA_PCA | EC-PCA: Responsibility Area, Profit Center | Restrict modifications to actions, such as creating master data or plan data, to cost elements of profit centers. |

**Table 6.2** Profit Center Authorization Objects

| Authorization Object | Name | Purpose |
|---|---|---|
| K_PCAP_SET | EC-PCA: Planning Hierarchy | Restrict modifications to profit center hierarchies based on controlling area. |

**Table 6.2** Profit Center Authorization Objects (Cont.)

### Restricting Changes to Cost Center Master Records

Like profit centers, due to the effect that cost centers, and particularly their roll-up in the standard hierarchy, can have on management decision-making, access to update and modify cost center data should be controlled. SAP S/4HANA provides several authorization objects that restrict cost center master data, as shown in Table 6.3.

| Authorization Object | Name | Purpose |
|---|---|---|
| K_CCA | CO-CCA: Gen. Authorization Object for Cost Center Accounting | Restrict modifications to cost centers based a series of defined actions, including create/change master data and activate/inactive cost centers. |
| K_CSKS | CO-CCA: Cost Center Master | Restrict modifications to cost center master data based on a controlling area and/or cost center number. |
| K_CSKS_SET | CO-CCA: Cost Center Groups | Restrict the maintenance of cost center groups, including the standard hierarchy. |

**Table 6.3** Cost Center Authorization Objects

### Restricting Changes to Banking Master Records

The ability to change banking (treasury) data should also be tightly restricted because bank account information can be highly susceptible to fraud. SAP S/4HANA provides a variety of mechanisms to restrict changes to banking master records. Security permissions can be set to restrict changes to a bank account. Some of the key authorization objects for doing this are shown in Table 6.4.

| Authorization Object | Name | Purpose |
|---|---|---|
| F_BNKA_BUK | Banks: Authorization for Company Codes | Restrict modifications to house banks and bank accounts by company code. |
| F_BNKA_MAN | Banks: General Maintenance Authorization | Restrict the general ability to maintain bank master data. |

**Table 6.4** Banking Authorization Objects





| Authorization Object | Name | Purpose |
|---|---|---|
| F_BNKA_MAO | Banks: General Maintenance Authorization by Country | Restrict the general ability to maintain bank master data to specific bank country keys. |

**Table 6.4** Banking Authorization Objects (Cont.)



## 6.7 Understanding and Testing Common Controls

In Chapter 3, we reviewed the typical process for auditing SAP S/4HANA and introduced a series of audit assurance layers upon which an auditor will typically build their confidence in SAP S/4HANA processing. In this section, we explore the application component-specific configuration layer related to financial accounting and controlling. Specifically, we discuss many of the common controls, supporting processes, and their related testing procedures.

This list is by no means exhaustive. Given that SAP S/4HANA has hundreds of control options, our goal is to focus not on a comprehensive set of record-to-report risks and controls, but rather those risks and controls most commonly under auditor scrutiny. In addition to common risks and controls, we have also chosen to highlight controls that, in our experience, are either commonly underutilized, misunderstood, or misconfigured.

While we personally recommend these controls, and particularly those associated with higher levels of maturity, remember that controls are intended to address organizational risks. As such, if you or your organization chooses not to implement one of these controls, the most important thing is whether the underlying risk has been reduced to a tolerance within management's risk appetite. While we truly believe that organizations using the most mature control techniques are in the best position to manage the related risk in an efficient or effective way, ultimately audit testing should be able to conclude on the right level of maturity for your organization.

**Assess Your Own Risks**

The recommendations provided here are suggestions only and should be reviewed in the context of your own business risks and anticipated value. You may find some of these suggestions unreasonable for your business environment, and you may choose to address the underlying risks in different ways. Effective SAP S/4HANA control is not a one-size-fits-all situation.

### 6.7.1 Risk: Journal Entry Posting to the Wrong Financial Accounting Period

The most common way to minimize the risk of a journal entry being posted to the wrong financial accounting period is through a series of controls and related processes associated with something called opening and closing the posting period. Effectively, an open period is one that allows postings, and a closed period is one that does not. Since SAP S/4HANA is a real-time system, automated journal entries (those posted by the SAP S/4HANA application itself) will be created as the underlying business event occurs. While manual journal entries may lag by a day or so depending on the workload of the accountant responsible for creating them, they should still be posted in the accounting period in which they occur. As such, it is common in SAP S/4HANA that only the current account period is open, and all other accounting periods are closed. The only exception may be around period end, where the period being closed is still open to allow for final closing entries, and the new period has been opened to account for new transactions.

#### Opening or Closing Posting Periods

In SAP S/4HANA, the most common method for opening and closing posting periods is through Transactions F-60 or OB52 (in Chapter 1, Section 1.4.2, we talked about a core difference between the two). While not directly apparent to the user, these transactions effectively open a screen where the user is doing direct editing of the SAP table that contains the posting period variant (table `T001B`).

For each posting period variant, the entries in this table are organized by account type. The account type is a single character, to the right of the posting period variant key when viewing the screen for opening and closing periods. Figure 6.5 shows a list of these account types, which essentially equate to the primary general ledger (account type **S**), various subledgers (all other alphabetic account types), and a **+** that represents all account types.

| A | Short Descript. |
|---|---|
| + | Valid for all account types |
| A | Assets |
| D | Customers |
| K | Vendors |
| M | Materials |
| S | G/L accounts |
| V | Contract accounts |

**Figure 6.5** Posting Period Variant Account Types

While many organizations keep these settings at a high level (in some cases we've seen organizations have a single line item using the **+**), SAP S/4HANA allows a lot of potential granularity. Not only can open or closed periods to differ by account type, but they can differ by general ledger account number, if desired. Further, by adding a value to





the **Authorization Group** field, you can limit the users that can post to the open periods from all users who are authorized to post journal entries to the related account(s), to only those users who have been granted that authorization group through SAP security.

> **Our Posting Period Wish List**
>
> The code rewrite of SAP S/4HANA unfortunately did little to improve how posting periods are open/closed. We would love if SAP presented open/closed periods in a more intuitive way (imagine a calendar with red dates representing closed periods, yellow dates representing periods where only a subset of users can post due to a posting period authorization group being set, and green dates representing open periods available to anyone with journal entry posting authorizations, as an example). From a security standpoint, it would also be useful if those who can open/close posting periods can be limited to a specific posting period variant (or defined set of posting period variants). As it stands, any user with the ability to update posting periods has the ability to do so across every posting period variant, and thus affect all company codes in the SAP system. SAP Note 2141732 recognizes this fact, but unfortunately cites a resolution of "None."

#### Monitoring the Opening or Closing of Posting Periods

We discussed the concept of an SAP S/4HANA controls maturity model in Chapter 1. For our record-to-report cycle example, we'd like to apply it to the risk of journal entries being posted to the wrong period. From a Sarbanes-Oxley perspective, we commonly see only the inherent control that SAP prevents postings to a closed period as being called out. As you can see in Table 6.5, we believe there are several other controls that should be in place for a truly optimized set of controls covering the risk that a journal entry is posted to the incorrect period. Note when reading this table, each higher level of maturity includes all of the controls from the lower level as well.

| Maturity | Typical Controls |
|---|---|
| Level 1 | During journal entry creation or modification, SAP S/4HANA issues an error message if the "posting date" on the journal entry corresponds to a closed period. This is inherent SAP S/4HANA functionality. |
| Level 2 | As part of the period closing process, [responsible party] closes the current posting period and opens a new posting period. This activity is defined in the periodic closing accounting policy. |
| Level 3 | Data validation rules have been configured to issue a warning message if the journal entry date is more than a defined number of days from the posting period date, and trigger workflow to ensure approval is recorded in the system. |

**Table 6.5** SAP Internal Controls Maturity for the Risk of Posting to the Incorrect Period

| Maturity | Typical Controls |
|---|---|
| Level 4 | On a periodic basis (at least prior to period closing), [responsible party] reviews the table log entries associated with table T001B and verifies that (1) the prior period was closed in the timeframe expected, (2) any instance of a prior or future period being opened is supported by appropriate support and approvals, and (3) any journal entries made when a prior or future period was opened have been sufficiently documented and authorized. Any exceptions are reviewed with [accountable party] to determine if further action should be taken, as per the periodic closing accounting policy. |
| Level 5 | As part of an automated daily process, the [SAP S/4HANA controls monitoring program] notifies [accountable party] of any journal entries posted to a period not within the current posting period, and automatically flags the control as deficient if [accountable party] does not enter a defined reason code for the posting within the acceptable response period configured in the system. |

**Table 6.5** SAP Internal Controls Maturity for the Risk of Posting to the Incorrect Period (Cont.)

One of your first steps when evaluating whether only the correct posting periods are open is to determine what posting period variants have been assigned to each in-scope company code. You can do this by running Transaction OBY6, double-clicking the company code of interest, and reviewing the **Pstng period variant** field in the **Processing Parameters** section.

The next step is to look up the posting period variant, either in table T001B, or through one of the transactions we mentioned earlier (Transaction F-60 or Transaction OB52), provided you've been given display-only access to one of them. Imagine Figure 6.6 shows the results for the posting period status for posting period variant **0001** in your organization. Assuming the company codes associated with this posting period variant are also associated with a fiscal year variant that aligns posting periods to calendar months, when evaluating this figure, you could conclude the following:

- Postings to general ledger account **1** in the asset subsidiary ledger will be accepted for any posting date in September 2022.
- Postings to other general ledger accounts in the asset subsidiary ledger will be accepted for any posting date in August or September 2022.
- Postings to any general ledger account in the customer subsidiary ledger will be accepted for any posting date between September 1 and December 31, 2022. However, no postings can be made in special periods 13-16 as those are not open yet.
- Postings to any general ledger account in the vendor subsidiary ledger will be accepted for any posting date between September 1 and December 31, 2022, and postings to the special periods 13-16 will also be allowed. However, only users assigned to the **SPCL** authorization group can currently make any postings to these open periods.





- Postings to any general ledger account related to the remaining account types will be accepted for any posting date in September 2022.

| Var. | A | From Acct | To Account | From Per.1 | Year | To Period | Year | From Per.2 | Year | To Period | Year | AuGr |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 0001 | A | 1 | 1 | 9 | 2022 | 9 | 2022 | 13 | 2021 | 16 | 2021 | |
| 0001 | A | 2 | zzzzzzzzzz | 8 | 2022 | 9 | 2022 | 13 | 2021 | 16 | 2021 | |
| 0001 | D | | zzzzzzzzzz | 9 | 2022 | 12 | 2022 | 13 | 2021 | 16 | 2021 | |
| 0001 | K | | zzzzzzzzzz | 9 | 2022 | 12 | 2022 | 13 | 2022 | 16 | 2022 | SPCL |
| 0001 | M | | zzzzzzzzzz | 9 | 2022 | 9 | 2022 | 13 | 2021 | 16 | 2021 | |
| 0001 | S | | zzzzzzzzzz | 9 | 2022 | 9 | 2022 | 13 | 2021 | 16 | 2021 | |

**Figure 6.6** Open and Closed Accounting Period Examples

Now that you know the status of the posting periods, your next question might be whether they were updated when expected according to the periodic closing accounting policy. Answering this question will require table logging to be active against your productive client (a concept we discussed in Chapter 5, Section 5.2.1). Assuming it is, you would then run Transaction SCU3, click the **Analyze Logs** icon, enter a **Customizing Object/Table** value of T001B, enter the time period for which you wish to review the logs, set the **Evaluation for** setting to **Tables**, and then click **Execute** to run the report.

Continuing with our example in Figure 6.6, if the general ledger accounts (account type of **S**) entry was as expected, showing only postings in September 2022 as being allowed, you would likely be concerned when looking at the related table log entry in Figure 6.7.

Tables: Change Logs

Permitted Posting Periods

Technical Name: T001B

Client: 120

Date 09/17/2022 User: STUDENT001

| | Key Fields | | | | Function Fields, Changed | | |
|---|---|---|---|---|---|---|---|
| Time | Rec. Type | Variant | Acct Type | To Account | Field Name | Old | New |
| 20:09:48 | 0 | 0001 | S | zzzzzzzzzz | Year | 2021 | 2022 |
| | | | | | From Per.1 | 001 | 009 |
| | | | | | Year | 2021 | 2022 |
| | | | | | To Per. 1 | 012 | 009 |

**Figure 6.7** Table Log Entry for Permitted Posting Periods: Table T001B

Specifically, we can see that the change to September 2022 being the open period only happened in the middle of the month—September 17, 2022, at 8:09pm server time, to be precise. The values prior to that change tell us that any posting date on or between

January 1, 2021 to December 31, 2021, would have been accepted—the year's worth of posting periods was open shortly before your audit! Hopefully you can see from this example why having the table log turned on, and reviewing related entries, is essential to an effective audit.

**Outcome-Based Testing to Find Postings to Questionable Periods**

Setting aside the traditional control testing discussed thus far, SAP S/4HANA captures data that makes it possible to do full-population outcome-based testing related to the period to which an accounting entry posts. While not visible on any accounting document display screen or report that we're aware of, SAP S/4HANA captures the CPU date (the date on the server clock at the time of creation) whenever an accounting document is posted in table `BKPF`, field `CPUDT` (`BKPF-CPUDT`). Thus, using data analytics to identify situations where the posting period that would normally be associated with the posting period is not equal to the posting date (`BKPF-BUDAT`) entered in the document is very easy. Even detecting postings to future periods (something we've seen at a few clients) is a simple task.

#### Common Audit Observations

In our experience, the following are some of the most common observations we've had related to the risk of postings to the wrong financial accounting period:

- **Lack of effective monitoring**
  While many organizations have policies around when periods should be opened or closed, we rarely see any form of regular and effective monitoring to ensure this is happening as intended. The fact that we continue to encounter organizations that do not have SAP S/4HANA table logging turned on is an easy example of this—there's no realistic way to monitor when periods are opened/closed without table logging being active.
- **Lack of documentation supporting the reopening of periods**
  Once in a while there may be a reason to reopen a closed period. In the cases where we have seen this, we often find that the organization has maintained little-to-no documentation as to why the period had to be reopened, and what specifically was done during that window of time. Fortunately, using data analytics we can identify the entries that were made (e.g., find accounting documents where `BKPF-CPUDT` is during the window the previously closed posting period was reopened, and from those entries find the ones where `BKPF-BUDAT` = the period in question).
- **Use of unique posting period variants for each company code**
  This is more of an efficiency issue than one that affects financial reporting integrity. Where company codes follow a similar closing cycle, having them use the same posting period variant allows their periods to be opened or closed as a group in a single





entry. While this may not work for every organization, and may require several posting period variants to group company codes together by those following similar closing patterns, in organizations with many company codes, even a small reduction in the number of posting period variants requiring maintenance can be a time-saver.

- **No use of authorization groups near period-close to limit who can post**
  Many organizations we've spoken to do not understand what the authorization group in the posting period status table is used for—it's often not discussed during the implementation. We can take comfort in the fact that only users authorized to post journal entries via SAP security can do so, but since many larger corporations have policies that call for restricting accounting entries in the days leading up to period close, using this feature allows your organization to move it from a policy that employees should follow, to a control that is enforced by SAP S/4HANA.



### 6.7.2 Risk: Journal Entries Contain Data Input Errors

*Data quality* problems affect many organizations. While SAP S/4HANA supports strong data integrity checks, many of these need to be turned on and configured for your business. Failure to take advantage of these capabilities places reliance on user diligence during document entry and after-the-fact reviews to detect any errors or abuse.

#### Automatically Posting Activity to Designated Accounts Associated with that Activity

One of the best ways to reduce the risk of journal entries containing data input errors is to take the human out of the process and, wherever possible, automatically post journal entries. SAP S/4HANA enables this through a series of configurations known as automatic *account determination*. Account determination is configured in many places in the IMG, based on the subprocess for which it is being set. Seeing a full list of options is as easy as doing a "find" on the phrases "account determination" and "automatic posting" when navigating the IMG, as these are the most used key words related to this configuration.

To understand account determination, you must first understand the concept of a *transaction key* (not to be confused with the transactions we use to run program). A transaction key is sometimes also known as an event key, and essentially is a three-character unique identifier for an accounting-relevant activity. Transaction keys are inherently defined in SAP S/4HANA and can't be configured (there is no such thing as a custom transaction key). They are also hidden from end users—one generally only has visibility into transaction keys if they are involved in configuring or reviewing account determination rules.

### Defining Important Fields as Required Entries

By default, the fields that SAP S/4HANA requires for transaction processing or master data entry may not be all the fields you need to fully process accounting and controlling transactions in your environment. Configuring SAP S/4HANA to require that data be entered in these fields before the master data or transaction can be saved will help ensure a high level of data integrity. This can be done by configuring *field status groups* and setting the field to "required" (as opposed to the default of "optional" or the other options of suppress or display-only). These updated field status groups then get assigned to a *field status variant*, which gets assigned to a company code. Company code assignment allows the required fields to be different based on company code (e.g., recognize that value-added tax [VAT] tax is a concept in many countries, but not in the United States and thus VAT-related fields might be suppressed in United States companies).

As another example, if your organization uses both the financial accounting and the controlling modules of SAP S/4HANA, you may wish to require that a cost center be entered for any expense-related postings. This field is not required by default, since SAP doesn't require that every organization using SAP S/4HANA for financial accounting must also use the controlling functionality and set up related cost centers. Field status groups can be defined throughout the IMG depending on the type of data, but for this particular field, navigate to **SAP Reference IMG • Enterprise Controlling • Consolidation • Integration: Preparation for Consolidation • Preparation in the Sender System • Further Settings for Business Area Consolidations • Financial Accounting • Maintain Field Status Groups for G/L Accounts**. Select the desired field status variant, double-click the **Field Status Groups** folder, double-click the relevant field status group, and then double-click the group (of data) that contains the field of interest. As you can see from Figure 6.8, in our example, the **Cost center** field has been configured to require entry (**Req. Entry**).

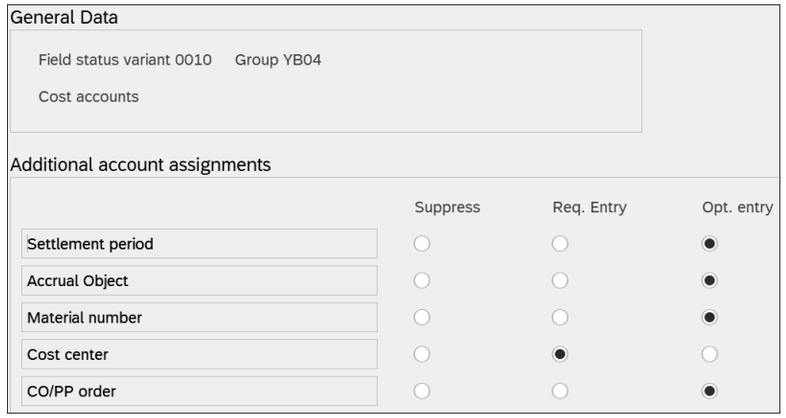


**Figure 6.8** Field Status Example







### Defining General Ledger Validation Checks

Beyond just ensuring that data is entered in specific fields, SAP S/4HANA can be configured to check data entry based on both simple and complex criteria, using a configuration called data validation. While the system already contains many very basic edit checks (e.g., you can only enter a valid document type into a data entry screen that includes the document type field), additional rules can be added through customization. In addition to strengthening financial reporting controls and limiting the potential or error, data validation rules can also be used to minimize the opportunity for fraud and abuse.

Data validation rules can be applied across a variety of different application areas, including financial accounting, cost accounting, asset accounting, consolidation, and funds management, to name a few. Data validation rules can also be applied at the document header, to line items within the document, or over the document as a whole. Data validation rules can have one or several steps.

Validation rules are set using Transaction GGB0, or by navigating the IMG through **Financial Accounting • Special Purpose Ledger • Tools • Maintain Validation/Substitution/Rules • Maintain Validation**.

There are three components to each step of a data validation rule, as shown in Figure 6.9:

1. **Prerequisite**
   This is the "if" condition, that determines if the step in the data validation rule applies. If the data on the document matches the criteria of the prerequisite, SAP S/4HANA then considers the check.
2. **Check**
   This is the condition that describes what the correct data should look like. If the data on the document matches the check criteria, then SAP S/4HANA moves to the next step in the data validation rule, or to the next data validation rule if this is the last step for the current rule.
3. **Message**
   This is one of the most important parts of the data validation rule because it tells SAP S/4HANA what to do for this document where the data has not passed the check, as well as what feedback to provide to the user. Options include **Cancel**, **Error**, **Warning**, or **Information**. **Cancel** will cancel the document without allowing the user to correct it, an **Error** message will prevent the document from being saved until the data is corrected, a **Warning** message will allow the user to determine whether to save the data as is or update it, and an **Information** message results in merely a message box (e.g., it could be used to remind the user that an accounting regulation will require this entry to be different next month, but it is fine this month). The **Message** configuration can also result in triggering a workflow.

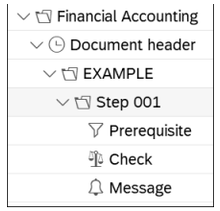


**Figure 6.9** Components to Each Step of a Data Validation Rule

A good starting point for data validation rules would be the inventory of past account-related data entry errors and how they could be caught, which might include:

- An error message for postings to accrual accounts in the middle of the period
- An error message if an invalid account combination is used (e.g., debit to depreciation expense offset by a credit to cash)
- An error message if the posting from a company code contains a business area that's not appropriate
- A warning message that also triggers workflow if a posting to a reserves account is outside the norm for that account
- A warning message if a posting to a capitalization-related account contains document header text more typical of an expense, or vice versa

**Warning versus Error**

From an audit perspective, keep in mind that there's a difference between data entry that's impossible to justify, and data entry that rarely happens, but is still possible. If SAP S/4HANA is configured with an error message, it will not be possible to save the document even if it is the rare case of one that meets the criteria but is legitimate. If the level of rarity is such that it would only be expected every several years, then perhaps the added control warrants keeping it an error and then temporarily changing the data validation rule if necessary (along with the required testing and transports). If it's something that can happen once or twice a year, a warning message with extra workflow approval may be the best option.

### Set Reasonable Posting Tolerance Group Levels

Data validation rules can be extremely powerful; however, defining a robust set of rules can be time consuming and may not be practical for small SAP configuration teams. A good early step is to use posting tolerance group functionality. Defining posting tolerances allows you to limit the maximum amount of an accounting document (the sum of all debits or credits) that can be posted by a user within a given company code.





Implementing this control is fairly straightforward. A tolerance group, defined by a four-character alphanumeric code, gets assigned to a company code and the tolerance group settings are configured. Users then get assigned to the tolerance group. There are two slightly confusing things to be aware of related to this control:

- There can be a blank tolerance group (one in which the four-character alphanumeric code assigned to the company code has no value). This is considered the default tolerance and applies to any user ID not explicitly assigned to a tolerance group. For example, in Figure 6.10, all three displayed company codes are associated with the blank tolerance group, but **Company Code 0003** is also associated with a tolerance group (**Tol. G**) called **DFLT**.
- The configuration that defines the tolerance values is based on the combination of the tolerance group and the company code, and thus two company codes assigned to the same tolerance group do not necessarily have the same tolerance values. Referring to Figure 6.10, you cannot assume that each company code assigned to the blank tolerance group has the same tolerance limits. This makes sense when you consider that amount values configured to company codes are always in company code currency, and given the variability of exchange rates, having the same value applied to each company code would mean that value would be widely different when translating to a common currency. Double-clicking on each row is required to see the related values.

| Tol. G | Company Code |
|---|---|
| | 0001 |
| | 0003 |
| DFLT | 0003 |
| | 1710 |

**Figure 6.10** Financial Accounting Tolerance Group Assignment to Company Codes Example

The configuration of assigning a user ID to a tolerance group is very straightforward, as you can see from Figure 6.11. In this case, the user ID **SMITH** is mapped to the **DFLT** tolerance group. There is also a wildcard entry mapping all other IDs to the blank tolerance group, which is technically unnecessary as we already described how the blank tolerance applies to any user ID not assigned to a tolerance group. The simplicity of this mapping, however, illustrates one of the primary challenges of this control. Since the tolerance group is assigned to a specifically named user ID, and not a user group, a role, a human resources (HR) job title, or anything more generic, it means that any time the users who will be posting accounting documents change (e.g., in the case of a transfer or a hire), then configuration needs to be updated. We would love to see SAP enhance this control in the future to allow more configuration flexibility.

| User name | Tolerance Group |
|---|---|
| SMITH | DFLT |
| * | |

**Figure 6.11** Financial Accounting Tolerance Group Assignment to User IDs

We should also mention that these financial accounting tolerance groups also contain tolerances associated with open item processing—namely accounts receivable and accounts payable postings. While we normally would include accounts receivable-related controls as part of the order-to-cash coverage in Chapter 7, and accounts payable-related controls as part of Chapter 8, given that the configuration mixes record-to-report, order-to-cash, and purchase-to-pay-related functionality, we decided to cover it here. In addition to defining the maximum amount of an accounting document, financial accounting tolerance groups can also define the following maximum thresholds for open item processing (specifically, the processing of customer accounts receivable and vendor accounts payable transactions):

- The maximum amount of an open item document line item
- The maximum cash discount percentage that can be applied
- The maximum permitted payment differences in terms of those that will result in revenue or expense, defined as the lessor of a configured amount (in company code currency) or percentage of total value

For the latter point, SAP S/4HANA will automatically clear open items processed by related users if the difference falls within the tolerance, and that posting difference will be posted to the general ledger accounts defined during automatic account determination.

**Overlapping Control Values Default to the Most Conservative (Lowest) Amount**

As it relates to open item processing, tolerances can be defined for multiple scenarios. We've been talking about tolerances assigned to users, but similar tolerances can also be assigned to general ledger accounts, as well as customer and vendor account groups. Thus, it's possible that different tolerances will apply depending not only on the user posting the entry, but also the customer from which the payment is received and/or the general ledger account to which the open item is being posted. SAP S/4HANA will take the lower of these three tolerance values when determining the maximum difference allowed.

### Define Maximum Exchange Rate Differences

Foreign currency exchange rates can have a dramatic effect on the financials for companies that operate internationally. Fluctuations in exchange rates can be dramatic,





and in larger organizations can affect the bottom line by millions, if not billions of dollars—clearly affecting operations projections and business decisions. As such, a data entry error in an exchange rate posting could have a significant affect. Fortunately, SAP S/4HANA has several configurable control settings that can help to mitigate this risk. By configuring maximum exchange rate differences (for the company code, for the currency-to-currency translation, or for both), if a user enters an exchange rate in a document that differs by more than the defined threshold, SAP S/4HANA will issue a warning message.



**Most Messages in SAP S/4HANA Are Configurable**

Be aware that most messages in SAP S/4HANA have configurable behavior. For example, while the default behavior of exceeding the configured maximum exchange rate difference is a warning message, your organization could decide to change that to an error message by changing the configuration for message area F5 (financial accounting document editing), message type 212 (exchange rate and deviates from table rate) from a value of W (warning) to a value of E (error). Note also that many message types, including this one, can also be set for a specific user ID. This would be helpful if, for example, you wanted to prevent most users from being able to enter an exchange rate difference exceeding the threshold, but you wanted one user ID able to enter after a warning message, if exchange rates happened to fluctuate drastically. The alternative would be changing configuration in the rare case a higher difference needed to be pushed through.

### Testing the Risk

We just outlined several potential controls related to journal entries that contain data input errors, including:

- Account determination
- Field status configuration
- Data validation
- Document tolerances
- Maximum exchange rate differences

Let's look at how you can assess these controls.

For account determination, until you become familiar with the related transaction keys and where each is configured, we'd strongly recommend working with one of your power users who is involved in account determination maintenance (your alternative is searching for phrases like "account determination" and "automatic posting" in the IMG). For illustrative purposes, we are going to focus on account determination associated with foreign currency differences. In organizations that deal with multiple currencies, foreign currency differences can create the need for small entries to ensure

journal entries are balanced, and by defining related account determination rules, your organization tells SAP S/4HANA to automatically post those differences. You can view related account determination rules by running Transaction SPRO and then navigating to the **SAP Reference IMG • Financial Accounting • General Ledger Accounting • Periodic Processing • Valuate • Foreign Currency Valuation • Prepare Automatic Postings for Foreign Currency Valuation**.

As you can see in Figure 6.12, there are six standard transaction keys related to posting exchange rate differences. We are going to focus on payment differences related to alternative payment currencies (which, if configured, allow payment in a different currency than the related invoice, which can result in exchange rate differences due to currency fluctuations between the time of invoicing and payment). To see the related value for this type of currency fluctuation, you would double-click on the line containing the **KDW** transaction key, allowing you to see the related general ledger accounts configured to receive postings, like in Figure 6.13. You can see in this example that a different account is associated with debit differences versus credit differences. Of course, you would want to also ensure those accounts are appropriate based on your accounting policy.

Group: FWA Exchange rate differences

Procedures

| Description | Transaction | Account Determ. |
|---|---|---|
| Document Split for Currency Exchange | CEX | ☑ |
| Exch. Rate Diff. using Exch. Rate Key | KDB | ☑ |
| Exchange Rate Dif.: Open Items/GL Acct | KDF | ☑ |
| Payment difference for altern.currency | KDW | ☑ |
| Payment diff.for altern.curr.(offset) | KDZ | ☑ |
| Internal currencies rounding differences | RDF | ☑ |

**Figure 6.12** Account Determination for Exchange Rate Differences: Transaction Keys

Chart of Accounts: INT Sample chart of accounts

Transaction: KDW Payment difference for altern.currency

Account assignment

| Debit | Credit |
|---|---|
| 230000 | 280000 |

**Figure 6.13** Example of General Ledger Accounts to Receive Postings Resulting from the KDW Transaction Key







**Potential for Account Determination to Be Disabled**

In SAP ERP, there were several places that required account determination to be enabled (for specific transaction keys) before related accounts were defined, and that checkbox (shown previously in Figure 6.12) could subsequently be unchecked. While we haven't yet seen this ability in SAP S/4HANA (the **Account Determ.** checkbox is greyed out and is unable to be changed for the account determination keys we have reviewed), that doesn't mean it is no longer possible to disable account determination. If during an audit you see that checkbox is not checked for a transaction key, assume (unless testing proves otherwise) that account determination is disabled even if related accounts have been defined in the subsequent screen.

Similar to our recommendation for testing account determination, we would encourage you to work with one of your power users involved in maintaining field status settings when auditing for required fields. The number of places these can be set, as well as the related field status variant assignments (e.g., to company codes or account groups) makes it easy to miss a potential variation. To audit this setting completely, you'll need to identify all of the assigned field status variants, determine which fields should be required for each (i.e., as mentioned earlier, requiring a VAT tax ID for a United States based business partner that only operates in the United States would not make sense), and then review the relevant field settings within each field status variant separately.

To audit data validation rules, you can run Transaction SPRO and then navigate to the **SAP Reference IMG • Financial Accounting • Special Purpose Ledger • Tools • Maintain Validation/Substitution/Rules • Maintain Validation**. You can also access them directly via Transaction GGBO. In addition to ensuring the rule is set up correctly (the prerequisite properly describes the scenarios where the validation rule should apply, and the check properly describes what the data should look like when correctly entered), pay attention to the message configuration, and in particular the message type, message text, and workflow option. In some cases, an error message makes sense over a warning message and vice versa. In cases where the condition resulting in a warning message would be rare or introduce additional risk to the organization, triggering a workflow to then ensure another authorized individual has a chance to approve the transaction may be a prudent choice.

For example, we can see in Figure 6.14 that the data validation rule message configuration is set to an error (**E**) message, and does not trigger a workflow because the **Trigger Workflow** checkbox is unselected (which is likely unnecessary for an error, as transactions returning error messages cannot be saved). Having said that, the message text doesn't really tell the user what they are doing incorrectly, so while the overall control

may be working as intended, it could be improved by providing the user with better feedback, thus allowing them to avoid entering a transaction in this way in the future.

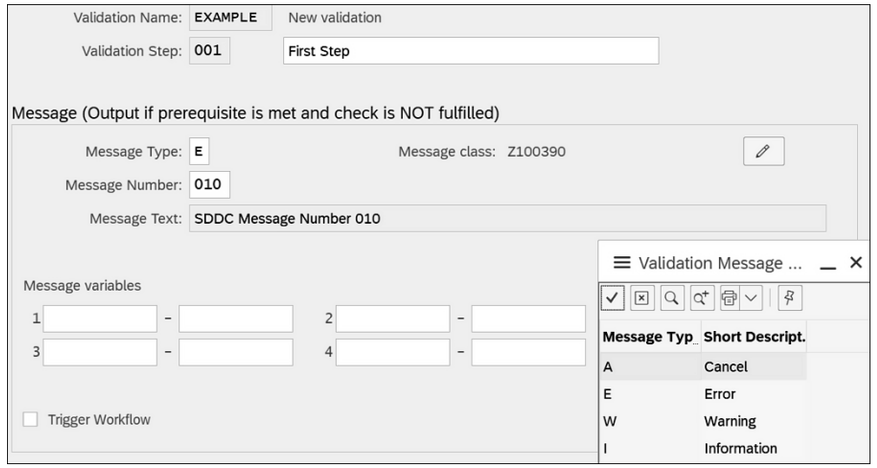


**Figure 6.14** Data Validation Rule Message Configuration Example

Document tolerances can be audited from Transaction SPRO by navigating to **SAP Reference IMG • Financial Accounting • Financial Accounting Global Settings • Document • Tolerance Groups • Define Tolerance Groups for Employees** and then double-clicking the tolerance group + company code combination. Because the blank tolerance group applies to any employee who has not been assigned a tolerance group (with a similar concept applying to general ledger account tolerances and customer or vendor tolerances), if a company code is associated with more than one tolerance group, then the blank tolerance group should be the most restrictive.

If you were auditing financial accounting tolerance groups for users associated with company code **0003** as defined previously in Figure 6.10, you would double-click on the blank tolerance group to see those values, and then separately double-click on the **DFLT** tolerance group to see its values. As you can see from Figure 6.15, the tolerance limits any user ID associated with the **DFLT** tolerance group to a maximum accounting document value of $1 million USD (along with separate values for open item-related document items, cash discounts, and payment differences).

You can also see from Figure 6.16 that the blank tolerance group settings are even less restrictive, allowing a maximum document value of $1 trillion USD. You would want to document this as an audit finding, is that it creates a risk that a new accountant joins the accounting department, and if their ID inadvertently doesn't get correctly configured to the **DFLT** tolerance group, then they will default to the blank tolerance group and thus be able to post documents well outside of management's intent.





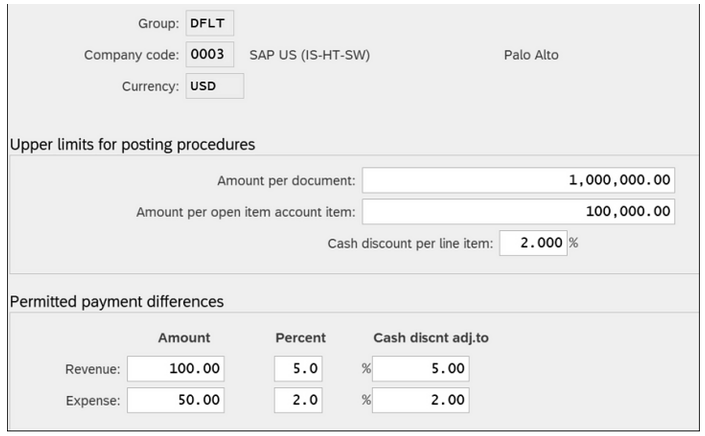


**Figure 6.15** Tolerance Group Values for the DFLT Tolerance Group for Company Code 0003

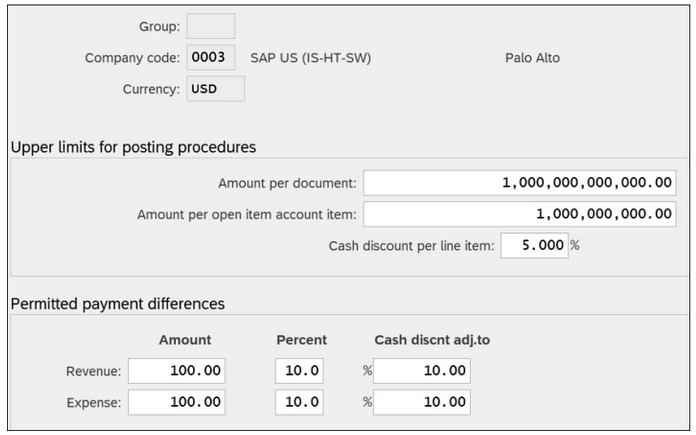


**Figure 6.16** Financial Accounting Tolerance Group Values for the Blank Tolerance Group for Company Code 0003

**Many Default Control Values Are Not Appropriate for Most Organizations**

Figure 6.16 is a great example of something we've mentioned before, that in cases where SAP S/4HANA has controls that are technically turned on by default, often times the related default values are not reasonable for most organizations. The blank tolerance group shown in that illustration is actually showing the default values provided by SAP S/4HANA out of the box. We can only think of a handful of organizations where billion-dollar manual journal entries would be likely, and yet the default value allows up to a trillion-dollar posting. Hopefully an error of that magnitude would get caught by manual review processes, but why not catch it before the erroneous entry event gets saved!

When auditing maximum exchange rate configuration, run Transaction SPRO and navigate to **SAP Reference IMG • SAP Customizing Implementation Guide • Financial Accounting • Financial Accounting Global Settings • Global Parameters for Company Code • Currencies • Maximum Exchange Rate Difference** and then separately review the settings under **Define Maximum Exchange Rate Difference per Company Code** and **Define Maximum Exchange Rate Difference per Foreign Currency**, as shown in Figure 6.17 and Figure 6.18, respectively. Remember that when more than one configuration setting affects the same item with different values, SAP S/4HANA generally takes the most conservative value. For example, if a document is posted in company code 0001 with an exchange rate that's more than 10% different from what's stored in the SAP exchange rate table, it will result in a warning message for all currencies except the USD and EUR values, which will result in a warning message at 7%.

| CoCd | Company Name | City | Max.exch.rate dev. |
|---|---|---|---|
| 0001 | SAP A.G. | Walldorf | 10 % |
| 0003 | SAP US (IS-HT-SW) | Palo Alto | 10 % |
| 0046 | Comapany code Student 046 | Germany | 10 % |
| 0MB1 | IS-B Musterbank Deutschl. | Walldorf | % |

**Figure 6.17** Maximum Exchange Rate Difference by Company Code

Max.Exch.Rate Deviation for Postings in For.Curr.

| FCurr. | LCurr. | Max.ex.dev |
|---|---|---|
| EUR | USD | 7 |
| USD | EUR | 7 |
| USD | GBP | 12 |

**Figure 6.18** Maximum Exchange Rate Difference by Currency

### Common Audit Observations

In our experience, the following are some of the most common audit observations related to the risk of journal entries containing data input errors:

- **Incomplete use of account determination procedures**
  We often see organizations that have not defined accounts for all available account determination procedures, thus necessitating manual entry prone to data entry errors and inconsistency. Unless there's a clear business reason for not utilizing automatic account determination, we would suggest that all available rules should be leveraged.
- **Field status configuration left at default values**
  We commonly see organizations that try to rush their SAP S/4HANA implementation, or that use low-cost system integrators, leave field status settings at default values. This means they have to rely on policies and after-the-fact reviews to ensure fields requiring data entry are populated—something that increases the risk of





control failure, but also becomes an expensive proposition over time. Thoughtful use of account groups and other characteristics by which field status can be associated can allow organizations to overcome the "but we have this exception" objection. We also believe that suppressing those fields which are not used can streamline data entry.

- **Poor use of data validation rules**
  Similar to field status configuration, we frequently see organizations not leveraging data validation functionality, sometimes due to lack of awareness. While we wouldn't immediately raise an audit observation if we saw no use of data validation, we do believe this control technique is often a great answer to situations where consistent mistakes are made that could be prevented.
- **Use of only a single document tolerance group**
  In our mind, this misses the point of what can be achieved through document tolerances. Given that many accounting organizations already divide employees based on common types of accounting entries (e.g., individual posting large reserves adjustments are often not the same as those posting expense payments), determining reasonable maximum document amounts (based on analysis of history with some projection of the future) should be achievable.
- **Not making the "blank" tolerance the most restrictive**
  We previously noted the risk of setting tolerances in this way, but it's common enough that we believe it's worth calling out again. In our opinion, if multiple tolerance groups are being used, the blank tolerance should be the most restrictive (likely only allowing minimal postings).
- **Maximum exchange rate differences set the same across all company codes and currencies**
  While it is true that this setting is comparing to the currency tables in SAP S/4HANA, which most organizations update on a regular basis, the volatility of currency rates in some countries, in our opinion, justifies putting reasonable thought into these values. Even countries with historically stable and strong currency values are susceptible (as we are writing this, the British pound has hit a value relative to the US dollar that hasn't been seen in over 30 years).

### 6.7.3 Risk: Unauthorized or Unapproved Manual Journal Entries

Many organizations care not just about the accuracy of journal entries, but also that journal entries have been reviewed and approved by appropriate personnel in the organization. While SAP S/4HANA security will control what users have the ability to make journal entries, depending on organizational policy, additional levels of review may be desired. In Section 6.1, we introduce the SAP Fiori apps named Verify General Journal Entries (designed for requestors and approvers). While we've seen some organizations implement this set of apps, more commonly we still see traditional workflow functionality used for journal entry routing and approval.

### Understanding SAP Business Workflow

SAP Business Workflow is essentially a custom development platform embedded in SAP S/4HANA that allows for transactions to be routed to one or many people in the organization via a series of rules, ultimately leading to the transaction being rejected or released (upon final approval). SAP Business Workflow has been built into SAP applications for decades, and historically has been developed using Transaction SWDD. SAP S/4HANA introduces additional workflow capabilities, including something commonly termed flexible workflow management (accessed via Transaction SWDD_SCENARIO), or through an SAP Fiori app called Manage Workflow. Unlike classic workflow, which is typically developed by IT developers, flexible workflow is intended for power users within the business, and allows for additional workflow scenarios including:

- Conditional workflows, which are triggered based on defined criteria being met
- Ad hoc workflows intended for one-off scenarios
- Templates, allowing workflow components to be reused more easily

**Alternative Workflow Option for SAP S/4HANA Cloud Deployments**

When running SAP S/4HANA Cloud, SAP Workflow Management is used for workflow modeling and management, instead of the flexible workflow management transaction used with on-premise deployments.

### Testing the Risk

When testing whether controls sufficiently address this risk, the most important thing to understand is which control option(s) is expected in your organization. If the intended means for approving journal entries is via the Verify General Journal Entries SAP Fiori app, then you will want to verify that users do not have other journal entry SAP Fiori apps (such Post General Journal Entries) or the ability to enter journal entries directly in the SAP S/4HANA SAP GUI. This would all be controlled via SAP security as discussed in Chapter 5.

Similarly with workflow, you will need to first determine whether classic SAP Workflow via Transaction SWDD is being used, or whether flexible workflow scenario development is being used via Transaction SWDD_SCENARIO/SWDD_SCENARIO_DISP, whether the Manage Workflow app is being used, whether SAP Workflow Management is used, or whether workflow is developed using a combination of two or more of these tools.

Because workflow is essentially a set of custom code developed for your organization's specific scenarios, using a variety of potential tools, it is difficult to outline an "auditing workflow" concept that will fit every organization. As such, our recommendation is to sit down with a workflow specialist in your organization to walk through workflow configuration, if it's relevant for your audit procedures. In addition to understanding





whether the workflow tasks and assignments are appropriate for the process in question given your organizational policies, you should also ask questions related to the maintenance of workflows when employees move in or out of the department.

### Common Audit Observations

Whether using legacy park and post, classic workflow, or flexible workflow management, we regularly see the following audit observations related to the risk of unauthorized/unapproved manual journal entries:

- **Not defined for all manual journal entries**
  Sometimes due to lack of critical thinking when defining workflow rules, we find that some journal entries never triggered park and post or workflow, and thus were saved to the general ledger directly by the original poster. We've found this condition most easily identified using data analytics.
- **Workflow gets "stuck," resulting in timing issues related to valid postings**
  Whether because a workflow approver is unexpectedly out for a period of time and hasn't assigned a delegate, because someone is not monitoring their inbox, or for a variety of other conditions, we sometimes see entries that should have been posted get stuck in the workflow process. This can be solved via monitoring, and should be part of the closing checklist.
- **Workflow rules outdated**
  As organizations change and evolved, often policies such as approval limits or delegation of authority get changed, but corresponding changes are not made to workflow rules. It's important to ensure that those responsible for updating these types of policies know that relevant personnel must be informed in order to adjust configuration appropriately.
- **Workflow going to the wrong individual**
  Most commonly, we see this situation when someone moves to a different department and the workflow rules were not updated to change the flow from the originally assigned individual to their replacement. We've also seen the scenario, however, where two people in an organization have the same or similar names, and the workflow was inadvertently coded to the wrong user ID. This should be caught during testing, but we've seen it enough time to feel as if some organizations don't sufficiently test their workflow rules.

## 6.7.4 Risk: Assets Are Not Properly Valued

From an accounting perspective, recording assets in an appropriate manner can be challenging. Depending on the countries in which you operate, asset valuation rules can vary greatly. Even in low-complexity organizations, the treatment of issues like depreciation (where the value of an asset is reduced to recognize the decreasing real value over time) can be highly error prone. Whether dealing with large, fixed assets like

property, plants, and equipment, or small assets that are eventually used in production the asset management functionality within SAP S/4HANA financial accounting has a number of configurable characteristics that can help improve overall control. For organizations where asset management has a significant effect on financial reporting, the following configuration options may be helpful.

### Setting Default Values for Asset Classes

Typically, items within a given asset class follow a common set of accounting rules, especially when it comes to depreciation activities. Screen layouts can be defined and associated with asset classes. These screen layouts are essentially extensions of the field status groups discussed earlier in this chapter. In addition to setting the field to required, optional, suppressed, or display only, you can also configure whether the field is maintained at the asset class, the main asset number, and or the asset subnumber, as well as whether related field values are copied over when creating an asset using another asset as reference, as shown in Figure 6.19.

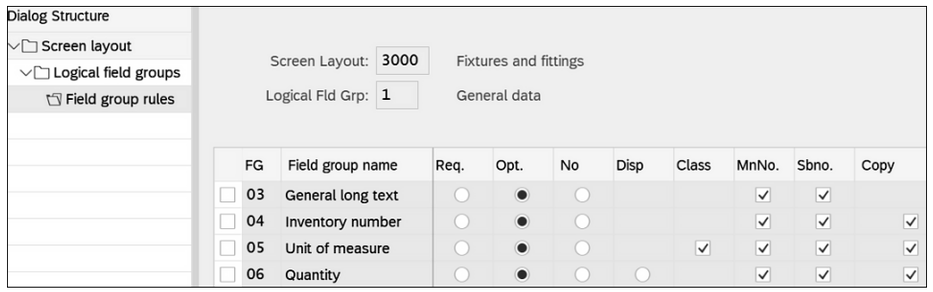


**Figure 6.19** Asset Screen Layout Example

As part of asset-related configuration, asset classes can also be associated with account determination procedures to automatically select the appropriate general ledger accounts for asset transaction postings (no different from the automatic account determination rules we discussed in Section 6.7.2). Additionally, asset class configuration associated with the depreciation areas of a chart of depreciation allows your organization to define the depreciation key to be used, as well as the related useful life (in years and fiscal periods) and screen variant. Configuring SAP S/4HANA to default to the appropriate depreciation key is useful for any new assets added to the asset class and helps to ensure consistency as well as minimize the potential for error.

### Configuring Asset Transfer and Retirement Transaction Types

SAP S/4HANA comes preconfigured with asset transaction types related to retirements and transfers, and SAP recommends that these standard transaction types be used. It is possible to define custom asset transaction types, however. The help associated with this retirement configuration in the IMG (**SAP Reference IMG • Financial Accounting • Asset Accounting • Transactions • Retirements • Define Transaction Types for Retirements**) provides good information on considerations when creating custom transaction types.







### Defining Low-Value Asset Maximum Amounts

Assets defined as low-value assets (LVAs), sometimes referred to as "pooled" assets. If relevant, certain asset classes would be configured for LVAs, and the assets would be depreciated in the same year as acquisition. SAP S/4HANA should be configured with maximum thresholds to ensure that asset postings or purchased do not exceed a specified amount (if above, the asset should be treated as a standard asset instead of an LVA). This setting is defined by deprecation area within a company code.

### Testing the Risk

To audit asset class general data, run Transaction SPRO and navigate to **SAP Reference IMG • Financial Accounting • Asset Accounting • Organizational Structures • Define Asset Class**, and then double-click the asset class of interest. From an auditing standpoint, the most important settings to verify are the following:

- Account determination procedure
- Screen layout rule
- Checkbox indicating whether assets in that class are included in inventory (a field that determines whether the asset will be included in the standard inventory list within asset accounting)
- Setting defining treatment of assets under construction (AuC)

Similar settings can be defined by the combination of asset class and depreciation area, if business conditions dictate.

Another key asset-related setting relates to depreciation key values associated with an asset class for a given chart of depreciation. You can view these settings in **SAP Reference IMG • Financial Accounting • Asset Accounting • General Valuation • Depreciation Areas • Determine Depreciation Areas in the Asset Class**, clicking the checkbox to the left of the asset class of interest, and then double-clicking the **Depreciation areas** folder in the left panel. As shown in Figure 6.20, the **DepKy** field contains the depreciation key, and the **Use** field contains the useful life in years. If the useful life also includes a fraction of a year, the **Per** field would be used to capture the additional fiscal periods. When auditing these settings, it's important to confirm that the depreciation keys and useful lives are both consistent with company policy and appropriate for the asset class. Double-clicking on the depreciation area allows you to see additional settings, including minimum and maximum useful lives (a setting we encourage configuring to minimize the potential for data entry errors).

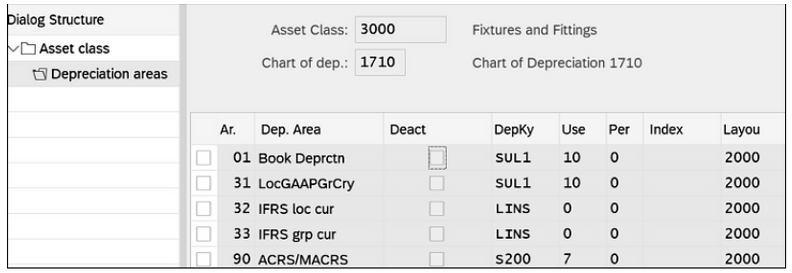


**Figure 6.20** Depreciation Key and Useful Life Assignment to the Depreciation Area within a Chart of Depreciation Associated with an Asset Class

When auditing asset retirement transaction types, run Transaction SPRO and navigate to **SAP Reference IMG • Financial Accounting • Asset Accounting • Transactions • Retirements • Define Transaction Types for Retirements**. Double-click the transaction type to view the configuration details, as shown in Figure 6.21. Unless there is a compelling business reason otherwise, the **Deactivate Fixed Asset** flag should be set for all retirement transaction types. When this flag is set, when a retirement posting leads to an acquisition value of zero, SAP S/4HANA sets the retirement date as the current system date and changes the status of the fixed asset to **Deactivated**. You should also verify the **Retirement with Revenue** and **Post gain/loss to asset** flags are consistent with your asset accounting policies.

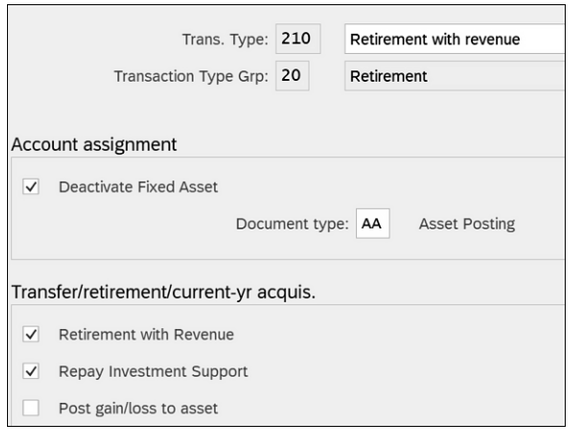


**Figure 6.21** Asset Retirement Transaction Type Configuration Example

Similar procedures should be performed for asset transfer transaction keys (following menu path **SAP Reference IMG • Financial Accounting • Asset Accounting • Transactions • Transfer Postings • Define Transaction Types for Transfers**).

If LVAs are part of your audit scope, you can view which asset classes are configured for LVAs, as well as the related maximum amounts, by running Transaction SPRO and





navigating to **SAP Reference IMG • Financial Accounting • Asset Accounting • General Valuation • Amount Specifications (Company Code/Depreciation Area) • Specify Max. Amount for Low-Value Assets + Asset Classes**, as shown in Figure 6.22. The **LVA Amount** column indicates that SAP S/4HANA will prevent postings to the related asset class in company code **1710** that would cause the acquisition value to exceed $2,500 in depreciation areas **01** and **31**. The **MaxLVA Pur** column indicates that SAP S/4HANA will prevent a purchase order from being created in excess of $2,750 for the LVA. During your audit, you should ensure these amounts are consistent with your asset accounting policies.

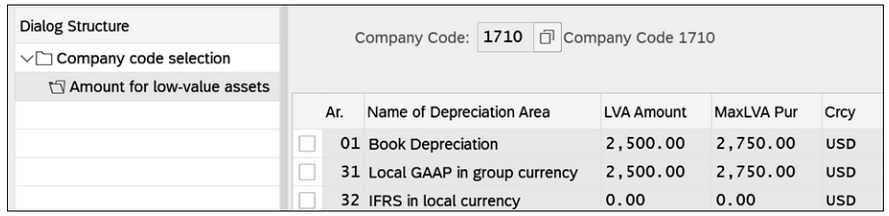


**Figure 6.22** LVA Configuration Example

#### Common Audit Observations

The most common audit observation we have related to this risk is the failure to configure many of the options we have discussed, such as automatically deactivating a retired asset, or defining the expected asset class useful life, along with minimum and maximum amounts. This means that manual entries and checks will have to be made, increasing the risk of user error.

### 6.7.5 Other Configurable Controls

There are several record-to-report-related configurable controls that do not cleanly fit into the risks we've identified so far, but for which you might want to consider testing, based on the objectives of your audit.

#### Marking the Company Code as Productive

One of the final steps before going live with SAP S/4HANA should be setting an indicator that tells the system which company codes are now considered productive. Once this indicator is set, certain functions intended for development and testing environments (generally related to deleting data in the company code) are now prevented, even if a user ID technically has authorization to run these functions. Of course, deleting transactions is not proper from an accounting and audit trail standpoint—rather erroneous entries should be reversed.

This is a straightforward setting to audit. Run Transaction SPRO and navigate to **SAP Reference IMG • Financial Accounting • Financial Accounting Global Settings • Global**

**Parameters for Company Code • Set Company Code to Productive**. Company codes with a checkmark in the **Productive** column, as shown in Figure 6.23, have been set correctly. Only template company codes as well as company codes not currently in use should have this checkbox left blank.

| CoCd | Company Name | City | Productive |
|---|---|---|---|
| 0001 | SAP A.G. | Walldorf | ☑ |
| 0003 | SAP US (IS-HT-SW) | Palo Alto | ☐ |
| 0MB1 | IS-B Musterbank Deutschl. | Walldorf | ☑ |
| 1710 | Company Code 1710 | Palo Alto | ☐ |

**Figure 6.23** Company Code Productive Indicator

A missing productive indicator is one of the most common audit observations, and we have noted it in nearly half of the SAP S/4HANA audits we have done. In addition to recommending this gets set, if you find company codes lacking this flag, you should also consider performing some exposure testing. The first step would be to determine if any user IDs have the ability to run the following deletion transactions:

- Transaction AS91 (Create Old Asset)
- Transaction AS92 (Change Old Asset)
- Transaction OABL (Reset Posted Deprecation)

In SAP ERP, you would also check access to Transaction OAGL (Reset Posted Depreciation), which does not exist in SAP S/4HANA. The second step would be to determine if any user IDs have the ability to run one of the following programs (`S_PROGRAM` program group = `F_002` and action = `SUBMIT` or `BTCSUBMIT`, or `S_PROGNAM` for the following program names, with related action = `SUBMIT` or `BTCSUBMIT`):

- SAPF019 (Delete Master Data)
- SAPF020 (Reset Transaction Data)
- SAPF023 (Reset Bank Data)

If any user ID active during the period had access to one of the above transactions or programs, then you should determine if they were actually run during the period. This would require the security audit log (discussed in Chapter 5) to be enabled for transaction and program starts for these users.

### Preventing Field Changes after Initial Posting

Subsequently changing a document that had previously been posted to the general ledger can affect the ease of following the related audit trail. The general rule of thumb from a control perspective is that the original document should be reversed, and the correcting document posted. This process allows full transparency into all transactions affecting the general ledger. If document fields are changed after the fact, determining what information was initially entered and approved by management can be difficult,





as this data now sits within change logs instead of the final transaction itself. While SAP S/4HANA won't inherently allow any change to an accounting-related document that affects the integrity of the entry (a user cannot inherently change the amount, the currency, the general ledger accounts, posting periods, company code, or business area), configuration does exist for controlling changes to other fields. Additionally, this configuration can allow changes to posted accounting documents even if the period to which they are posted has been closed.

To review the fields that can be changed after posting, run Transaction SPRO and navigate to the **SAP Reference IMG • Financial Accounting Global Settings • Document • Rules for Changing Documents** folder. From there, select either **Document Change Rules, Document Header**, or **Document Change Rules, Line Item**, depending on the field you are most interested in. At this point, double-clicking the field name will show the related configuration.

If the **Field Can Be Changed** flag is set, then the field is eligible for changes after initial posting. The criteria under which the field can be changed will then be defined in the **Stipulations for changing** section. If nothing is checked in that section, then there are no criteria restricting when the field can be changed, and thus it can always be changed after initial posting. Examining Figure 6.24, you can see that field **BSEG-ZDBDT**, which relates to the baseline payment date associated with vendor invoices, can be changed after initial posting, but only if the line item is not closed, the document is not an invoice-related credit memo, and the document is not a credit memo from a down payment. This setting applies to that field across all company codes.

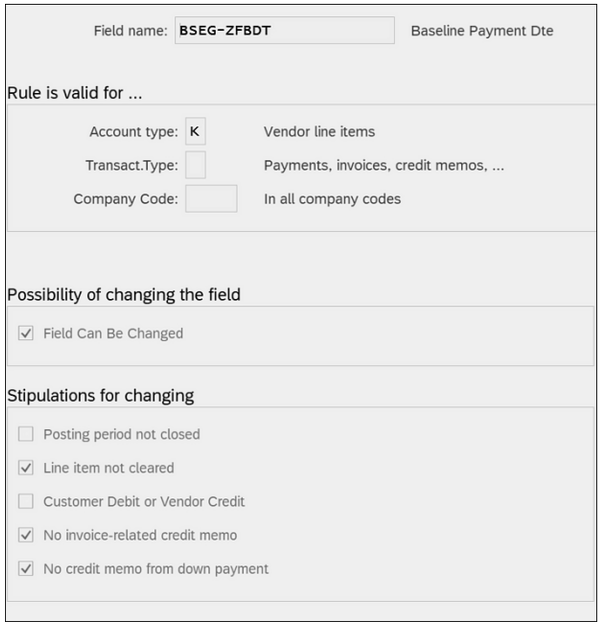


**Figure 6.24** Document Change Rule for Vendor Invoice Baseline Date

While we do recognize that the system inherently won't allow changes to any field that affects the accounting integrity, we do question some of the default values provided in SAP S/4HANA. For example, as shown in Figure 6.25, the document header text (i.e., the description entered at the header of the accounting document) can not only be changed, but it can be changed even for an accounting document associated with a closed period. We acknowledge that changing the text description of the document doesn't change how it shows up on the financial statements; however, given that approvers typically use the description field to help determine if the accounting entry is appropriate, we would question that setting in most organizations.

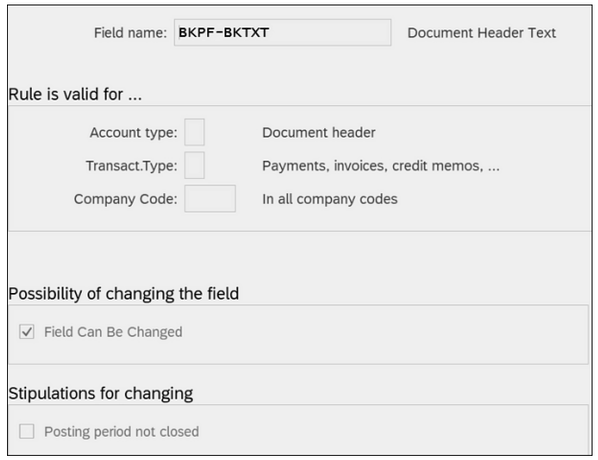


**Figure 6.25** Default Document Change Rules for the Document Header Text Field

#### Enabling Additional Authorizations

Financial accounting contains several optional authorization objects that can be enabled to further restrict access to account documents. These settings can be viewed by running Transaction SPRO and navigating to **SAP Reference IMG • Financial Accounting • Financial Accounting Global Settings • Authorizations**. Within this folder, there are separate activities for enabling business area display authorizations and document type display authorizations, however executing either of them takes you to the same configuration screen, as shown in Figure 6.26. An additional configuration option allows you to enable the optional profit center authorization, based on controlling area (not shown).

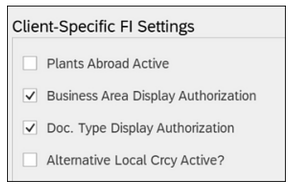


**Figure 6.26** Enabling Business Area and Document Type Display Authorizations





## 6.8 Additional Procedures and Considerations

As we have discussed earlier in this book, configuring SAP S/4HANA the "right" way is often not enough. User interaction with the SAP S/4HANA system plays a large part in the effectiveness of business processes managed by SAP. This section highlights additional procedures and considerations that can help you further strengthen your record-to-report processes and withstand audit scrutiny.



### 6.8.1 Optimizing the Closing Process

Even in smaller organizations, the closing process can be complex, with a lot of dependencies and potential for error. As a result, many organizations create closing checklists of all steps, and their relative order, required to close the books at required intervals (daily, monthly, quarterly, and/or yearly depending on business circumstances). These procedures typically include items such as:

- Ensuring parked or held journal entries have been assessed and posted, where appropriate
- Reviewing and reconciling key reports (a number of which we discuss later in this chapter)
- Revaluing open accounts paid in foreign currency
- Posting accrual entries and depreciation

Early versions of SAP ERP used a functionality called the Schedule Manager (Transaction SCMA) for this purpose, with enhanced functionality available through the Closing Cockpit in later versions of SAP ERP. SAP S/4HANA recently introduced even more enhanced functionality called the SAP Financial Closing cockpit for SAP S/4HANA. This suite of tools allows for creation of a centralized task list with enhanced control over automatic processes. A series of SAP Fiori analytical apps allow for monitoring key performance indicators (KPIs) throughout the closing process, and all activity is logged in a robust audit trail.

**Third-Party Tools Are Common**

While SAP S/4HANA provides much better functionality for coordinating the activities involved in closing the books, certain processes (such as those related to reconciliations) can still be time consuming and manually intensive. As such, we continue to see the use of third-party products, such as BlackLine, for automating reconciliations and the financial close process itself.

### 6.8.2 Implement Procedures to Resolve All Parked and Held Documents Prior to Closing

SAP S/4HANA journal entries that have been put on hold or parked will not update any general ledger accounts until they have been posted. This can lead to incomplete financial statements and reports if these issues are not resolved before period close. Your closing procedures should include processes to ensure that all relevant parked or held documents have been processed (as appropriate) before period close.

Designated employees should run reports showing parked documents and ensure that any documents relevant to the current period have been resolved and posted. This may include running reports like the Compact Document Journal (Transaction S_ALR_87012289), with the **Parked Documents** option checked. Unfortunately, held documents can only be seen by the user who put them on hold (there is no standard report for viewing held documents), so communicate to all employees reminding them to clear any holds before period close so that the amounts can be posted in the correct accounting period.

### 6.8.3 Confirm Receivables and Payables Account Balances

For financial statement auditing, most auditors send out what are known as *confirmation letters* to independently verify the balances of customer receivables accounts (and sometimes vendor payable accounts as well). Confirmation letters help the auditor independently validate the value of the account balance, ensuring that there are no disputed or missing items included in the total.

SAP S/4HANA has built-in functionality for this. Transaction F.17 generates customer confirmations, and Transaction F.18 generates vendor confirmations. Both forms of confirmations are similar, allowing you to select customers or vendors meeting certain criteria (e.g., those with balances between specified amounts, those with recent postings, etc.) or even take a random sample. SAP S/4HANA supports the three most common types of confirmations:

- Balance notifications
- Balance requests
- Balance confirmations

While the system fully supports this functionality, we rarely see organizations using it.

## 6.9 Useful Audit-Relevant Report Highlights

SAP S/4HANA contains numerous reports that you can use to identify and monitor potential risks within the record-to-report cycle. Diligent management review of these reports and investigation of suspicious items complements the configured controls





within SAP, and further helps to mitigate record-to-report-related risks. This section highlights a few examples. Note that we've intentionally chosen not to include very basic reports (such as the balance sheet or statement of cash flows), as these are well-known and can easily be found via the SAP main menu under **Accounting • Financial Accounting • General Ledger • Information System • General Ledger Reports**.



### 6.9.1 Reports Identifying Changed Data

SAP reports that monitor changes to sensitive data are valuable for ensuring that all changes (including initial creation) have been authorized and entered accurately. These reports provide valuable information, because they show both the old values and the new values that replaced them. From an audit perspective, these reports are useful from several perspectives. You could:

- See all recent master data changes done by a new employee to determine if they were done accurately.
- See changes to specific master data that have been made since your last audit.
- Select a sample of all changes that have been made within a specific timeframe.
- Select only changes made to data associated with a specific company code that was recently called out on a hotline tip.

We'll further explore the key change reports in the following sections.

#### General Ledger Account Changes

Review the *Display Changes to G/L Accounts* report both for general ledger accounts as well as sample accounts used for creating new master data records (if used by your organization). This report can be accessed via Transaction FS04. From the main menu, selecting **More • Environment • Multiple Display** will allow you to run it without first being required to specify a general ledger account. Reviewing Figure 6.27, you can see that the deletion flag was added to a general ledger account, both at the general data level and for the company code-specific data for company code **0046**. Adding a deletion flag may not be a concern, but if you saw an old value of **X** and a new value of a blank, indicating the deletion flag was removed, that might be something of audit interest.

Client 120 Display Changes to G/L Accts Time 20:22:41 Date 09/25/2022
Gulfport RFSABL00/STUDENT001 Page 1

| Date | Time | G/L acct | Changed By | Description | ChAc | CoCd | Language | New value | Old value |
|---|---|---|---|---|---|---|---|---|---|
| 04/20/2021 | 14:49:05 | 52510 | STUDENT001 | Deletion Flag | GKR | 0046 | | X | |
| 04/20/2021 | 14:49:05 | 52510 | STUDENT001 | Deletion Flag | GKR | | | X | |

**Figure 6.27** Changes to General Ledger Accounts Report Example

### Accounting Document Changes

Review the *Display of Changed Documents* report (Transaction S_ALR_87012293) to display changes to accounting documents. Pay particular attention to changes made to recurring entry documents (one of the document type selection options). Given that recurring entries post automatically over time, inappropriate changes can have a lasting impact on financial reporting. Additionally, if you use park and post, you can select **Docs which were once parked** to ensure that the individual who posted did not make any other changes.

### Bank Master Data Changes

Review the *Display of Bank Changes* report with Transaction S_P00_07000008 to display changes to banking master data (your company's own banks). Reviews can be performed by country; however, since the number of banking changes should be minimal (except in the case of specific known business events), you're unlikely to use this filter.

## 6.9.2 Incomplete Information

Some SAP S/4HANA reports highlight situations where data is missing. In some cases, missing data may indicate processing problems, and in other cases, missing data could result in transactions that have not been fully captured in the general ledger. The frequency that these reports should be reviewed will depend on the risks that having incomplete data could pose to your operations.

We'll take a look at these reports in the following sections.

### Incomplete General Ledger Postings

For a variety of reasons, accounting-related documents may not fully post to the general ledger, resulting in something called an *update termination*. While the user will typically receive a warning message, if they aren't paying attention, they may miss it. Alternatively, they may not know what to do with it. While the Basis team should be monitoring for update terminations and taking appropriate corrective actions, you can also review the system for any update terminations by running Transaction SM13 with the **Canceled** status checked. Update terminations will display as shown in Figure 6.28. Double-clicking an entry will show where in the process the termination occurred, as show in Figure 6.29, and double-clicking the error message will provide additional details.

We can see from Figure 6.30, that a runtime error occurred. From an audit perspective, it's important to ensure that update terminations are investigated and resolved in a timely fashion.





725 Update records found

| Client | User | Date | Time | TCODE | I | n | f | o | | | | Status |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 100 | STUDENT012 | 09/10/2022 | 07:37:35 | ZST12_02 | | | | | | | | Error (no retry) |
| 100 | STUDENT131 | 09/01/2022 | 08:36:54 | VL02N | | | | | | | | Error |
| 100 | STUDENT131 | 09/01/2022 | 08:02:48 | VL02N | | | | | | | | Error |
| 100 | STUDENT131 | 09/01/2022 | 07:51:31 | VL02N | | | | | | | | Error |
| 100 | STUDENT316 | 08/12/2022 | 13:32:35 | VL02N | | | | | | | | Error in V2 Part |
| 100 | STUDENT316 | 08/12/2022 | 13:22:35 | VA01 | | | | | | | | Error in V2 Part |

**Figure 6.28** Update Termination List from Transaction SM13: Canceled Status

**User:** STUDENT131 **Client:** 100 **Transaction:** VL02N
**Date** 09/01/2022 **Time:** 08:36:54 **Report:** SAPMV50A
**Update key:** BE2A9B2A36280010E00630FE154C2526 **Status:** Error

| Number | Module name (function) | Execution Mode | Status |
|---|---|---|---|
| 1 | XSI_TABLE_UPDATE_DB | V1 | Initial |
| 2 | RV_DELIVERIES_SAVE | V1 (no retry) | Initial |
| 3 | HAZMAT_L_UPDATE_TASK | V1 | Initial |
| 4 | MCV_STATISTICS_UPD_V2_DELIVER | V2 | Initial |
| 5 | MCV_UPDATE_CM_DELIVERY | V1 | Initial |
| 6 | LIEFERUNG_WRITE_DOCUMENT | V2 | Initial |
| 7 | SD_CRM_ORDERDATA_FROM_DLV_INV | V1 | Initial |
| 8 | RV_MESSAGE_UPDATE | V1 | Error |

**Figure 6.29** Update Termination Screen 2

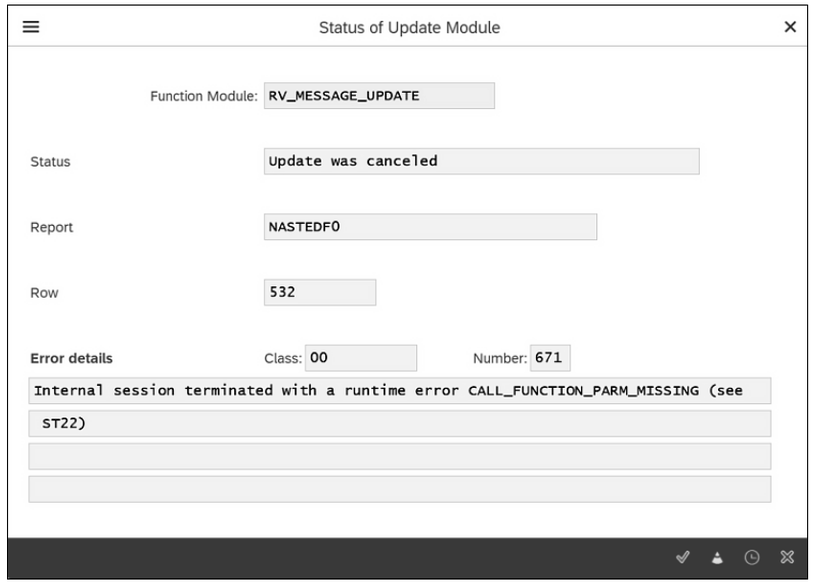


**Figure 6.30** Update Termination Screen 3

### Incomplete Assets

Review the Incomplete Assets report by running Transaction AUVA. The **Completeness Indicator** field will allow you to choose assets with various levels of incompletion,

including those that are incomplete but can still be posted, and those that are incomplete and cannot be posted. Results will display the opening date of the asset, the user who created the asset, and the asset description. Follow up on noted items to ensure that appropriate postings have been made to the general ledger before period close.

### 6.9.3 Potential Issues

Certain SAP S/4HANA reports highlight potential issues that should be investigated. These issues could result from processing problems, fraud, or errors. One of the most common record-to-report-related reports shows gaps in document numbers (Transaction S_ALR_87012342). Gaps can occur due to changes in number ranges, deleted documents (which we wouldn't expect in a productive environment, but could be identified in the Changes to Documents report mentioned previously), update terminations, or failure to stay abreast of SAP Notes. Regardless, if any gaps in document number appears you should verify there is a reasonable explanation.

### 6.9.4 Other Useful Reports

The reports we've discussed thus far are mostly geared towards finding potential problems related to the record-to-report cycle. The reports shown in Table 6.6 can also be used to display general information that could be useful for audit planning or execution.

| Area | Transaction | Use |
|---|---|---|
| Assets | AW10N | Display details about a fixed asset |
| Assets | S_ALR_87011964 | Display assets by asset class |
| Assets | S_ALR_87012048 | Display asset transactions |
| General ledger entry | FB03 | Display journal entries |
| General ledger entry | FAGLB03 | Display general ledger balances |
| General ledger entry | FAGLL03H | Browse general ledger line items |

**Table 6.6** Other Useful Record-to-Report-Related Reports

## 6.10 Summary

In this chapter, we discussed the record-to-report enterprise structure and master data. We also reviewed risks within the SAP S/4HANA record-to-report cycle. To mitigate those risks, we highlighted a series of controls and outlined audit steps and considerations when evaluating those control configurations. Related to security and master





data, we explored critical transactions and important authorization objects. We ended with a review of various SAP S/4HANA reports that could be useful during a record-to-report audit.

In the next chapter, we will look at the order-to-cash process and examine similar control categories related to sales and distribution, as well as accounts receivable within financial accounting.

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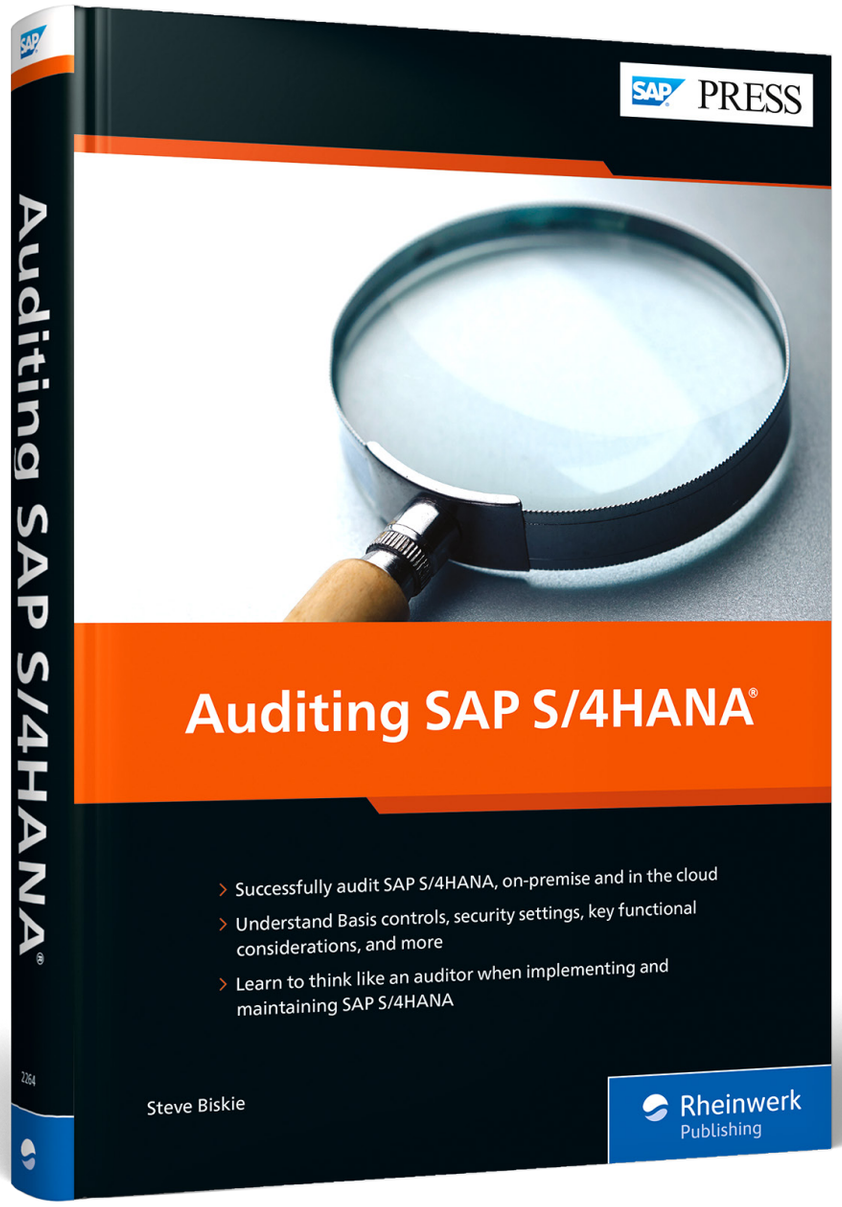


**Steve Biskie**, principal at RSM US LLP, is an internationally recognized expert on SAP audit, risk, and compliance issues. In addition to this book, he is the author of *Surviving an SAP Audit* (SAP PRESS, 2010) and was an expert reviewer for the book *Security, Audit, and Control Features: SAP ERP* (ISACA, 3rd and 4th editions). Steve teaches beginner through advanced SAP auditing courses, and has traveled to more than 18 countries to share his expertise. Steve was first introduced to SAP in the mid-1990s while working as an external auditor for one of the Big Four. Since then, he has been involved with SAP systems in a variety of roles, including as an internal auditor, consultant, implementation team member, compliance team lead, and SAP steering committee chair. He has worked directly with SAP as part of the SAP Influence Council for the Management of Internal Controls (MIC) tool, the first iteration of what is now SAP Process Control. He has also served as an advisor to SAP on optimizing SAP Process Control, SAP Audit Management, and SAP Business Integrity Screening (formerly known as SAP Fraud Management).

Steve Biskie

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