Area: Accounting
Module: Specific Accounting Topics (SAT)
Lecture: Foreign Currency Accounting
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This Lecture covers finance related topics for training purposes. Principles are governed by the respective Siemens guidelines and regulations. Please be aware that a more recent version of this Lecture may be available at financetraining.siemens.com.
This Lecture explains the principles of foreign currency accounting. In particular, the **measurement** of foreign currency transactions, the **translation** of foreign currency financial statements, **foreign currency hedge accounting**, and **embedded foreign currency derivatives** are detailed. Additionally, information about foreign currency effects on **performance obligations satisfied over time** accounted for using the **percentage-of-completion (PoC) method** and an overview of the **disclosure** requirements are provided.

Almost every international company of any size and nature has to deal with **foreign currencies**. Siemens, as one of the leading industrial companies worldwide, deals in various different currencies. **Foreign currency risks result from fluctuations in foreign exchange rates in the financial markets. Currency exposure and currency risk management are therefore very important to Siemens. As foreign currencies lead to **currency risks** that strongly affect the financial statements, proper accounting for them is crucial.**

As illustrated in the following graphic, in this lecture foreign currency accounting is explained in detail. On the one hand, this includes the general rules for foreign currency accounting, on the other hand this includes specifications of other accounting rules. The **general rules of foreign currency accounting** comprise foreign currency transaction and foreign currency translation. The **specifications of other accounting rules** concern hedge accounting and accounting for embedded foreign currency derivatives as well as performance obligations satisfied over time accounted for using the PoC method. In addition to that various disclosures are required; these will be explained at the end of the Lecture. To gain an understanding of the transactions which are reported using foreign currency accounting, this Lecture also provides an overview about how Siemens determines and manages the foreign currency exposure.

### Additional Information:
- foreign currency
- hedge accounting
- cash flow hedge accounting
- embedded foreign currency derivatives
- performance obligations
- performance obligations satisfied over time
- percentage-of-completion (PoC) method

This Lecture is based primarily on the Siemens Financial Reporting Guidelines (**FRG**) and the related **IFRS**.

If in this Lecture the term fully consolidated companies is mentioned, Siemens AG and its consolidated subsidiaries are meant.
Within this Lecture, the following Sub Lectures will be covered:

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Sub Lecture: Introduction

What Is Foreign Currency Accounting?
Foreign currency accounting is applied when transactions denominated in foreign currency are carried out. It comprises the measurement of foreign currency transactions on entity level and the translation of those financial statements that are denominated in a different currency into the group reporting currency (euro). Moreover, it includes foreign currency hedge accounting, accounting for embedded foreign currency derivatives and the accounting for performance obligations satisfied over time in foreign currency, accounted for using the percentage-of-completion (PoC) method as well as disclosure requirements.

What Are the Aims of Foreign Currency Accounting?
The aim of foreign currency accounting is the appropriate recognition and presentation of foreign currency influences within Siemens' financial statements. Furthermore, foreign currency accounting enables Siemens to present its financial statements in its functional currency (euro), even if its operations occur in many different currencies worldwide.

Why Is Foreign Currency Accounting Important for Siemens?
Siemens conducts business worldwide. The company therefore concludes transactions in various currencies. This has two main implications:

- Siemens' group/consolidated financial statements present the results of all global operations as if the group is a single enterprise. Therefore, all activities performed in foreign currencies have to be translated to the reporting currency (euro). This is done by means of foreign currency accounting.

- Exposure to foreign currencies causes unwanted earnings volatility due to foreign currency fluctuations. At Siemens, this foreign currency risk is managed using different instruments and strategies. Foreign currency accounting shows a true and fair view of the remaining risk position on the financial statements.

Therefore, proper accounting for foreign currencies is crucial in order to obtain a true and fair view of the financial statements.
Sub Lecture: Foreign Currency Transaction and Translation

Siemens' consolidated financial statements present the financial statements of Siemens AG and its subsidiaries as if the group were a single enterprise. Therefore, all activities of Siemens worldwide have to be converted to the reporting currency (euro). This currency conversion takes place at two separate levels:

- Entity level
- Group level

The process of currency conversion on entity level is referred to as transaction, whereas the currency conversion performed on Business Company level is referred to as translation. Both steps are processed in different systems.

On entity level, books are kept in the functional currency of the respective entity, which is usually the local currency of the reporting entity. All assets and liabilities arising from foreign currency transactions are denominated in a foreign currency and therefore have to be converted into the functional currency. For example a Siemens entity in the US buys inventories from a Japanese supplier. As the books are kept in US dollar, the liability denominated in Japanese yen needs to be converted into the functional currency of the reporting entity (here: US dollar). This process of currency conversion on entity level is referred to as transaction and is performed by the reporting entity.

On group level, financial statements are set up in the functional currency of the Siemens Group, which is the euro. Therefore, all financial statements of fully consolidated companies which have a functional currency other than the euro have to be translated to the reporting currency of the Siemens Group. For example a Siemens entity in the US has US dollar as the functional currency. Therefore, the whole financial statements have to be converted from US dollar to the functional currency of the Siemens Group (euro) for reporting purposes. This process is referred to as translation.

The graphic below illustrates the process of currency conversion on entity and group level:

Currency conversion is performed in two steps: First, on entity level, transactions in foreign currency are measured in functional currency. Second, on group level, the separate financial statements of the entities are translated into the reporting currency (euro) in order to facilitate the preparation of the consolidated financial statements on group level.

For further information about the basics of calculating exchange rates and the methodology of converting foreign currency amounts please refer to the Details Section Basics of Calculating with Foreign Currencies.

Entity Level: Measurement of Transactions in Functional Currency
Local accounts of each entity are kept in the functional currency of the entity. Generally, the functional currency equals the local currency of the entity’s country.

Financial transactions denominated in currencies other than the functional currency of the reporting entity need to be initially measured and remeasured in the functional currency:

- **Initial Measurement**
  All financial transactions denominated in foreign currency need to be initially measured in the entity’s functional currency, at the date when the underlying business transaction is recognized in the financial statements. For initial measurement, the *spot exchange rate* (= transaction rate) is used.

- **Remeasurement**
  As of each reporting date, certain financial transactions denominated in foreign currency have to be remeasured. Monetary balance sheet items are remeasured using the *closing rate*. Foreign currency gains and losses resulting from the remeasurement at the date of the statement of financial position have to be recognized in the net income of the period.

  Please note that only **monetary balance sheet items** (e.g., cash and cash equivalents, loans and receivables) are remeasured. **Nonmonetary balance sheet items** (e.g., property, plant and equipment) are converted using the historical transaction rate, i.e., a foreign currency remeasurement at the date of the statement of financial position is not permitted.

Further information on measurement at the entity level will be provided in the Detail Section Measurement of Foreign Currency Transactions at the Entity Level.

**Group Level: Translation to the Reporting Currency (Euro)**

On group level, financial statements of the reporting entities, which have a functional currency other than the euro, are translated to the reporting currency (euro):

- **Assets and liabilities** are translated using the *closing rate*.
- **Equity** items are translated with the *historical average exchange rate*.
- **All additions and other changes** of the current period are translated with the *average exchange rate* for that period and added to the amounts in the reporting currency at the previous date of the statement of financial position.
- **Income and expenses** of the current period are translated using the *average exchange rates* for that period.

Currency translation differences – which only arise on group level – result from translating the net assets at a current *closing rate* that is different to the previous *closing rate* as well as from translating the income and expenses at an average *exchange rate* which is different to the *closing rate*.

These translation differences are recognized and accumulated under a separate item of the **other component of equity as currency translation differences**.

For further information about currency translation at the group level, please refer to the Financial Reporting Guideline (FRG).
Detail: Basics of Calculating with Foreign Currencies

**Explanation**

A basic understanding of calculating foreign exchange rates and of converting foreign currency amounts is fundamental to understanding the Foreign Currency Accounting Lecture.

For both measuring and translating amounts denominated in foreign currency, an exchange rate is needed. An exchange rate always consists of two currencies. The first currency in a currency pair is called base currency and the second is called quoted currency. An exchange rate shows the value of one unit of the base currency expressed in terms of the quoted currency. Generally, the euro (EUR) is the stronger currency and is therefore always the base currency in the exchange rate.

Please consider the following examples. In the first example, the euro is the base currency and the US dollar (USD) is the quoted currency. In the second example the Pound Sterling (GBP) is the base currency and the USD is the quoted currency.

- **EURUSD 1.32**: This means that EUR 1 is equivalent to USD 1.32.
- **GBPUSD 1.20**: This means that GBP 1 is equivalent to USD 1.20.

The conversion of foreign currency amounts is calculated as follows:

### Basics of converting foreign currencies

Converting USD 10,000.00 into EUR with an exchange rate of EURUSD 1.32

\[
\text{USD 10,000.00} \times \text{EURUSD 1.32} = \text{EUR 7,575.76}
\]

Say: EUR 1 is equivalent to USD 1.32

Converting GBP 10,000.00 into USD with an exchange rate of GBPUSD 1.20

\[
\text{GBP 10,000.00} \times \text{GBPUSD 1.20} = \text{USD 12,000.00}
\]

At Siemens, the following exchange rates are used:

- **Spot exchange rate**: Average of the buying and the selling exchange rate on any given date. It is called the spot rate because it is the rate quoted on the foreign exchange market for immediate (on the spot) settlement.

- **Average exchange rate**: Average of the spot exchange rate at the end of the previous balance sheet date and the current spot exchange rate on the balance sheet date.

For all currencies, applicable exchange rates are provided by SFS on each trading day on the [FX Daily Rate website](#).
Detail: Measurement of Foreign Currency Transactions at the Entity Level

Explanation
At the entity level, all financial transactions denominated in foreign currencies need to be converted to the entity’s functional currency. This is referred to as foreign currency transaction. This is necessary in order to show the entity’s financial statements as if all transactions were performed in one currency.

Financial transactions denominated in currencies other than the functional currency of the reporting entity need to be initially measured and remeasured in the functional currency. When a financial transaction denominated in a foreign currency is recognized, initial measurement is performed to convert the foreign currency amount to the functional currency. As exchange rates normally change between initial measurement and the reporting date, a remeasurement for monetary balance sheet items has to be performed on each reporting date.

1. Initial Measurement
The aim of the initial measurement is to bring all foreign currency amounts to one common currency – the entity’s functional currency. Initial measurement is performed when financial transaction denominated a foreign currency is recognized. For initial measurement, the spot rate as of the transaction date – which is also referred to as transaction rate – is used.

Example: On August 25, a Siemens entity in Germany (functional currency: euro) delivers a machine to a customer in the US and bills USD 10m. Initial measurement for the foreign currency receivable is performed at the spot rate as of August 25 (EURUSD 1.25). Therefore, the receivable is initially recognized with an equivalent of EUR 8m.

2. Remeasurement
On each subsequent reporting date, all monetary balance sheet items have to be remeasured. In contrast, nonmonetary balance sheet items as well as amounts in the statement of income are not remeasured at the date of the statement of financial position.

Further information on the definition and accounting treatment for both types is provided below.

a) Nonmonetary balance sheet items
Nonmonetary balance sheet items are line items which do not result in an inflow or outflow of a fixed or determined amount of money. They are generally not remeasured. Examples for nonmonetary balance sheet items are property, plant and equipment, inventories, paid or received advances or goodwill. They are reported using the exchange rate on their date of transaction.

b) Monetary balance sheet items
Monetary balance sheet items include monetary assets and monetary liabilities. Monetary assets are money held and assets to be received in fixed or determinable amounts of money. Examples are cash and cash equivalents, trade and other receivables. Monetary liabilities are money owed and liabilities to be settled in fixed or determinable amounts of money. Examples are loans, issued debt instruments, trade and other payables.

Monetary balance sheet items are remeasured by using the spot rate applicable on the respective reporting date.

Foreign currency gains or losses are caused by exchange rate differences between initial measurement and remeasurement. They are reported in the statement of income of the period in which they occur, i.e., the period in which the remeasurement causing the gain or loss is performed.

This can be illustrated by carrying on the above example:

Assuming that the USD 10m receivable is due on November 1, it is consequently still accounted for on the reporting date, September 30. As the receivable is a monetary balance sheet item, a remeasurement to the functional currency (euro) has to be performed. If the EURUSD spot rate as of September 30 amounts to EURUSD 1.3158, the receivable would therefore be remeasured at EUR 7.6m (= USD 10m / EURUSD 1.3158).
The difference amounting to EUR -0.4m between the initial recognition of EUR 8m and the remeasurement at an equivalent of EUR 7.6m is called a foreign currency loss, which has to be reported in the statement of income.

Example
The following example shows the recording of a foreign currency receivable in Spiridon.

**Issue**

The Regional Company New Zealand has concluded a sales contract with an external customer based in Spain at an amount of EUR 100,000. The Regional Company has the New Zealand Dollar (NZD) as functional currency, which is also the local currency.

Delivery takes place on May 1, 20X7 and a foreign currency receivable has to be recorded and initially measured.

The payment is due until June 15, 20X7. Therefore, the receivable has to be remeasured at the end of the next reporting period, which is May 31, 20X7.

**Step 1: Initial Measurement**

The sales price is denominated in euro, whereas the functional currency of the reporting entity is the New Zealand Dollar.

The receivable is initially measured at the spot exchange rate prevailing on May 1, 20X7. The spot exchange rate is assumed to be EURNZD 1.8579. Therefore, the sales price of EUR 100,000 is equivalent to NZD 185,790.

The corresponding journal entry is displayed in the graphic below.

**Initial measurement of foreign currency receivable**

The terms used in the graphic above can be explained as follows:

- **Account**: Accounts receivable sub-account i.e., customer account. This is the revenue account from the Spiridon SAS1 Chart of Accounts.
- **Group acct**: Account from the Siemens Chart of Accounts
- **Ast. in loc. cur.**: Amount in the functional currency (NZD) at the spot rate: EURNZD 1.8579
- **TrTy**: Development code named FR = country coding for external revenue

**Step 2: Remeasurement**

As of May 31, 20X7, the sales price has not been paid yet. Therefore, the receivable is still on the books. As it is a monetary balance sheet item, it needs to be remeasured using the current spot exchange rate. The spot exchange rate is assumed to be EURNZD 1.8462. Therefore, the EUR 100,000 receivable is equivalent to NZD 184,620 as of May 31, 20X7.

The change in the value of the receivable between initial measurement and remeasurement amounts to NZD -1,170 (= NZD 184,620 - NZD 185,790). The effect amounting to NZD -1,170 is recorded as a foreign currency loss against the respective receivable. The corresponding journal entry is displayed in the graphic below.
Additionally, when creating the journal entry displayed above, the valuation is stored in a separate document in order to enable the subsequent process, which is a readjustment to operative profit centers. This is displayed in the graphic below.
Sub Lecture: Foreign Currency Exposure and Management

Siemens' worldwide business activities involve dealing in foreign currencies. In general, all contracts which are denominated in a foreign currency cause an exposure to currency risk. In the following two types of contracts, which are often denominated in foreign currencies will be considered:

- Purchase contracts
- Sales contracts

Being exposed to foreign currencies also means being exposed to foreign currency risks. This risk is caused by fluctuations in foreign currency exchange rates. To minimize this foreign currency risk, hedging instruments can be entered into. At Siemens, the Corporate Currency Guideline defines the identification, the evaluation and the hedging of the foreign currency risk.

A general principle that should be kept in mind is the difference between hedging and hedge accounting. Hedging of foreign currency risks is the reduction or elimination of foreign currency risks, whereas hedge accounting is the transfer of the economic hedge to the financial statements.

Keep in mind that hedging aims to offset the foreign currency risk caused by foreign currency exposure, whereas hedge accounting aims to offset earnings volatility.

For further information on this relationship please refer to the Sub Lecture Fundamentals of Hedge Accounting.

To provide a general understanding of currency risk management at Siemens, this Sub Lecture will introduce the source of risk management regulations and introduce the most important features. This is done by giving an overview about the following three topics:

- Siemens Corporate Currency Guideline
- Identification of the foreign currency risk
- Evaluation and hedging, i.e., management of the foreign currency risk

Detailed information about currency management at Siemens can also be found in Training Currency Management.

Corporate Currency Guideline

The Corporate Currency Guideline provides mandatory regulations for the identification and management of foreign currency risks. The Corporate Currency Guideline has to be implemented by each Siemens unit.

The Guideline provides regulations for two issues: Identification of the foreign currency risk on the one hand and management of the foreign currency risk on the other hand.

The obligation to identify the foreign currency risk requires an ongoing and prompt recording and monitoring of all...
past and future transactions, which will most likely result in cash flows denominated in foreign currency. At Siemens, this is done by determining the foreign currency risk. It needs to be determined separately by each ARE for each foreign currency.

The Corporate Currency Guideline also provides instructions for the management of foreign currency risks. The foreign currency risk shows the currency exposure and therefore needs to be managed. The Guideline specifies the hedging requirements and the eligible hedging instruments and strategies within the Siemens Group.

Further explanations of these statements are given in the Detail Section > Siemens Corporate Currency Guideline.

Identification of the Foreign Currency Risk

An important statement of the Siemens Corporate Currency Guideline is that Siemens units have to identify their foreign currency exposure, which is referred to as the foreign currency risk.

The foreign currency risk comprises the risk from future inflows and outflows of payments in foreign currency. In general, not only the transactions already entered into are considered, but also e.g., planned transactions or contingent currency risks. However, the degree of certainty of the future payments is also taken into consideration, e.g., when dividing the planned transactions according to the time horizon of the planning.

The following graphic summarizes the identification of foreign currency risk at Siemens. Please note that three components are added to arrive at the net foreign currency position and that the net foreign currency position is itself part of the foreign currency risk. The differentiation is important as there are certain hedging requirements for the net foreign currency position, which will be explained below.

![Graph](image)

For further information on the determination of the net foreign currency position, please refer to the Detail Section > Determination of the Net Foreign Currency Position.

Please note that derivative hedging instruments used to manage these foreign currency risks have to be considered separately.

- The foreign currency risk has to be determined by the responsible Currency Manager of the ARE for each foreign currency.
Management of the Foreign Currency Risk

The Corporate Currency Guideline prescribes the **hedging requirements**:

- For the **net foreign currency position**, a hedging level on ARE-level of at least **75%** is mandatory (max. 100%). The net foreign currency position needs not be hedged if the value of the net foreign currency position is **below EUR 1m**.
- **Planned sales and planned purchase orders** in product business denominated in foreign currency within the next four to twelve months **may be hedged**.
- **Contingent** foreign currency risks **should be hedged** during the offer period, if the customer does not accept a currency clause and the probability of winning the contract is high.

At Siemens, hedging can be performed using different **hedging instruments and strategies**. A common hedging instrument is, e.g., a forward FX contract, although options can also be used.

A **forward FX contract** is a contract that locks in the exchange rate at which a currency is bought and sold at a future date. The specified amounts are swapped via a cash settlement, which means payment of both parties on the agreed future date.

At Siemens, generally all hedging instruments have to be entered into with SFS.

For further information about how hedging instruments can be used to hedge a foreign currency exposure, please refer to the Detail Section **Forward FX Contracts and Other Hedging Instruments**.

For expert information on how a forward rate is calculated, please refer to the Detail Section **Calculation of Forward Rates**.
Detail: Siemens Corporate Currency Guideline

Explanation
This Detail Section outlines the scope as well as the main content of the Siemens Corporate Currency Guideline. In addition, application of the main rules is illustrated by the case study provided on the accompanying Example page.

1. Scope
The Corporate Currency Guideline provides mandatory regulations for the identification and management of foreign currency risks. The Corporate Currency Guideline has to be implemented by each Siemens unit.

2. Content
The Siemens Corporate Currency Guideline regulates both identification and management of the foreign currency risk. This is illustrated by the following graphic:

Both pillars of the Siemens Corporate Currency Guideline are explained in more detail below.

a) Identification of Foreign Currency Risk
Regarding identification, the following two obligations are most important to remember:

- Ongoing and prompt recording and monitoring of the foreign currency risk.
- Determination of the net foreign currency position by each ARE and for each foreign currency.

All events that have a major impact on foreign currency risk as defined above must be reported to the responsible Currency Manager. Reporting has to be conducted without delay, preferably by the end of the next working day.

For further information, please refer to the Details Section Determination of the Net Foreign Currency Position.

b) Management of Foreign Currency Risk
Regarding management, the following hedging requirements are most important to remember:

- For the net foreign currency position, a hedging level of the net foreign currency position on ARE-level of at least 75% is mandatory (max. 100%). The net foreign currency position needs not be hedged if the value of the net foreign currency position is below EUR 1m.
- Planned sales and planned purchase orders in product business denominated in foreign currency within the next four to twelve months may be hedged.
- Contingent foreign currency risks should be hedged during the offer period, if the customer does not accept a currency clause and the probability of winning the contract is high.

Although a hedging level of the net foreign currency position of at least 75% is required, Business Company can issue even higher thresholds. The maximum hedging level is 100% of the net foreign currency position.

More detailed information, please refer to the Training Currency Management.
**Example**

Bonita S.A. is a Siemens entity located in Europe. All production costs are incurred in euro. Its functional currency is therefore euro. The company sells exclusively to the American and Japanese markets. Customers pay in their respective local currencies.

For Bonita S.A., sales contracts denominated in foreign currency result in currency risks. How the risk exposure is determined and managed is regulated by the Siemens Corporate Currency Guideline.

The Guideline stipulates that the net foreign currency position is determined separately for each foreign currency. In this case, this needs to be done for US dollar and Japanese yen.

**US dollar**

The US dollar net foreign currency position of the company is assumed to be USD 500,000. To determine whether or not this position needs to be hedged, it is necessary to calculate the euro equivalent. At a current exchange rate of EURUSD 1.35, the USD 500,000 amount equals EUR 370,370.

According to the Siemens Corporate Currency Guideline, a total amount in excess of EUR 1m equivalent per currency needs to be hedged by at least 75%. As EUR 370,370 is below EUR 1m, no hedging is required for the net foreign currency position in USD.

**Japanese yen**

The Japanese yen net foreign currency position of the company is assumed to be JPY 470m. At a current exchange rate of EURJPY 156.66 EUR, this equals an amount of EUR 3m.

As this exceeds the materiality limit of EUR 1m, this net foreign currency position needs to be hedged. Hedging needs to be done for at least 75% of the net foreign currency position. Therefore, at least an amount of JPY 352,500,000 (= JPY 470m x 75%) has to be hedged.
Detail: Determination of the Net Foreign Currency Position

**Explanation**

As stipulated by the Siemens Corporate Currency Guideline the determination of the net foreign currency position per currency is important, because it is the basis for some of the mandatory hedging regulations. For example at least 75% of the net foreign currency position on ARE-level must be hedged (max 100%). In addition, no hedging is necessary if the value of net foreign currency position is below EUR 1m.

In general, the risks captured in the net foreign currency position arise from **cash inflows and cash outflows denominated in foreign currencies**. As illustrated in the graphic below, it can be differentiated between items that are already captured in the **statement of financial position** and items which are not captured in the **statement of financial position** yet.

Further explanations about the elements of the net foreign currency position are given in the paragraphs below.

**1. Monetary Balance Sheet Items**

Monetary balance sheet items denominated in foreign currency include:

<table>
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<tr>
<th>Item</th>
<th>Description</th>
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<tbody>
<tr>
<td>+ cash and cash equivalents</td>
<td></td>
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<tr>
<td>+ loans and receivables (including progress billings arising from performance obligations satisfied over time accounted for using the PoC method)</td>
<td></td>
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<tr>
<td>+/- balances on current accounts</td>
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<tr>
<td>+ debt instruments classified as available-for-sale financial assets carried at fair value</td>
<td></td>
</tr>
<tr>
<td>- debt</td>
<td></td>
</tr>
<tr>
<td>- other financial liabilities</td>
<td></td>
</tr>
<tr>
<td>- refund liabilities</td>
<td></td>
</tr>
</tbody>
</table>

Netting line items means adding assets and subtracting liabilities, as shown by the plus and minus signs in the calculation above. All of the items above have to be considered before amortization, but after the write-off of uncollectible receivables.
2. Uncompleted or pending transactions (order backlog and purchase orders) and conditional rights to consideration for partially satisfied performance obligations in project and product business

This term generally includes uncompleted or pending transactions in project and product business denominated in foreign currency. Furthermore, also conditional rights to considerations for partially satisfied performance obligations in project and product business are included. As illustrated in the following table, the category comprises future inflows as well as future outflows in foreign currency:

| + | future incoming payments for orders from customers (future inflows) |
| - | future outgoing payments for orders placed with suppliers and subcontractors (future outflows) |

Uncompleted or pending transactions must be included in the net foreign currency position regardless of their term. If these future cash flows resulting from order backlog or purchase orders cannot be calculated and recorded in full without spending excessive time and effort, reasonable estimates must be made.

The contracts captured in this category are approved and legally effective, but they are not recognized in the statement of financial position until the recognition criteria for a line item are fulfilled. For instance, a purchase contract is not recognized as a trade payable until delivery of the purchased good. On the sales side, firm commitments contain order backlog.

3. Planned sales and planned purchase orders in product business for the next three months

This term comprises both planned sales and planned purchase orders in product business denominated in foreign currency which are expected to arise within the following three months.

| + | future incoming payments for planned orders from customers |
| - | future outgoing payments for planned orders to suppliers |

If a contract is approved and legally effective, the contract is not considered here, but in the category pending transactions.

Keep in mind that the net foreign currency position needs to be calculated separately for each foreign currency.

To summarize: The net foreign currency position expresses the currency exposure of an ARE for each currency. It includes line items as well as amounts not yet recorded in the statement of financial position, such as pending or planned business.

More detailed information about the determination of the net foreign currency position can be found in the Training Currency Management.

Example

Bonita S.A. is a Siemens entity located in Europe. All production costs are in euros. Its functional currency is the euro. The company sells exclusively to the American and Japanese markets. Customers pay only in their respective currencies.

The company has to decide which of the currency positions listed below have to be included in its US dollar net foreign currency position.
Receivables from third parties  
USD  1,500,000
Receivables from third parties  
JPY  50,000,000
Cash balance bank account  
USD  -3,000,000
Cash balance bank account  
JPY  150,000,000
Payables to third parties  
EUR  1,000,000
Pending sales  
USD  500,000
Pending sales  
JPY  70,000,000
Planned sales (next three months)  
USD  1,500,000
Planned sales (next three months)  
JPY  200,000,000
Outstanding binding offers (project business)  
USD  1,000,000

The US dollar **net foreign currency position** is calculated as follows:

Receivables from third parties  
USD  1,500,000
Cash balance bank account  
USD  -3,000,000
Pending sales  
USD  500,000
Planned sales (next three months)  
USD  1,500,000
**US dollar net foreign currency position**  
USD  500,000

The USD dollar **foreign currency risk** is calculated as follows:

**US dollar net foreign currency position**  
USD  500,000
Contingent foreign currency  
USD  1,000,000
**Foreign currency risk**  
USD  1,500,000

All amounts denominated in currencies other than the US dollar are not included in the US dollar net foreign currency position. Furthermore, the outstanding binding offers are not included in the net foreign currency position as they are part of the contingent currency exposure and have to be considered when identifying the foreign currency risk for US dollar.

The net foreign currency position comprises the monetary balance sheet items as well as uncompleted or pending contracts, planned sales and planned purchase orders for the next three months. In practice, the net position is determined separately for these three categories and netted afterwards.
Detail: Forward FX Contracts and Other Hedging Instruments

Explanation
Both purchase contracts as well as sales contracts cause risk, if they are denominated in a foreign currency. Due to movements in the exchange rate, the amount of cash to be paid or received is uncertain. Hedging aims at avoiding the uncertainty of future cash flows. This is accomplished by concluding a hedging instrument whose currency risk moves in the opposite direction as the hedged item.

At Siemens, hedging is performed using different hedging instruments and strategies. The hedging instruments used are mostly derivatives.

Definition of Foreign Currency Derivatives
In accounting, a foreign currency derivative is defined as a financial instrument or other contract that meets all of the following three conditions:

- Its value changes in response to the change in a foreign exchange rate.
- It requires no initial net investment or an initial net investment that is smaller than would be required for other types of contracts that have a similar response to changes in a foreign exchange rate.
- It is settled at a future date.

As forward FX contracts are the derivatives most commonly designated as hedging instruments, the following paragraphs will give an explanation of them.

Features of Forward FX Contracts
When closing a forward FX contract, the contracting parties specify at least the following details:

- Currencies (to be exchanged)
- Amounts (to be exchanged)
- Forward rate
- Future settlement date

Forward FX contracts are binding for the buyer as well as for the seller of a currency. This means that one party to the forward FX contract, the buyer, has an obligation to buy the specified amount of currency for a certain amount of another currency, i.e., at the fixed forward rate, on the agreed future date. The other party to the forward FX contract, the seller, has to sell this specified amount of currency at the same fixed forward rate and on the same agreed future date. The specified amounts are exchanged via a physical settlement on the agreed future date.

Locking in an Exchange Rate via a Forward FX Contract
A forward FX contract, also known as a "forward" or an "FX forward", is a contract that locks in the exchange rate at which a currency is bought and sold on a future date, thereby eliminating any currency risk. This is shown in the following graphic.
As illustrated in the graphic, due to the forward FX contract, the exchange rate applicable for the contractual parties of the contract remains constant, regardless of whether the spot rate increases or decreases until the settlement of the contract.

Not all hedging instruments used for hedging are subject to hedge accounting as the requirements for hedge accounting are restrictive.

Further information on this topic can be found in the Sub Lecture Fundamentals of Hedge Accounting.

Case Study – Currency Risk With and Without Hedging

The following case study shows the risk exposure for a sales contract with and without hedging.

Issue

In January 20X3, a Siemens entity in Germany plans to sell a machine for USD 1m to a customer in the US. Delivery of the machine is planned for July 20X3, and payment in US dollars is planned to be received in August 20X3.

In order to calculate the sales offer, the forward rate for August 20X3 is used to translate the expected US dollar amount to euros. On the planning date, this forward rate is EURUSD 1.25 (this means that EUR 1 is equivalent to USD 1.25), i.e., the Siemens entity plans to receive EUR 800,000 (= USD 1m / EURUSD 1.25) for this sale.

Scenario 1: Unhedged Sale

It starts by showing a simplified scenario of an unhedged sale.

In August, when the US dollar payment is received, the exchange rate has changed to EURUSD 1.35. As a result, the Siemens entity only receives EUR 740,740 (= USD 1m / EURUSD 1.35) for the sale. The difference between the planned amount and the amount finally received is caused by exchange rate fluctuations and causes a currency loss of EUR 59,260 (= EUR 740,740 - EUR 800,000).

Please note that the currency loss is a deviation from the planned amount and therefore not recognized in the statement of income as a loss, but rather reported through the revenue, which is in this case lower than planned.

This scenario is shown in a profit and loss profile of the sales contract, displayed in the graphic below.
To avoid deviations in comparison to the planning, the Siemens entity can use hedging. This will be explained in the following scenario of a hedged sale.

**Scenario 2: Hedged Sale**

This scenario uses the same example as the former scenario but assumes that the Siemens entity uses a forward FX contract to hedge the foreign currency risk, resulting from exchange rate fluctuations. The forward FX contract locks in the exchange rate at which the US dollars to be received in August can be sold for euros. The locked-in exchange rate is the forward rate used for the sales calculation of EURUSD 1.25. The forward FX contract produces a foreign currency risk moving in the opposite direction from the currency risk of the sales contract.

This is illustrated in the profit and loss scenarios displayed in the graphic below.

As a result, the remaining foreign currency risk after netting the currency risk of the sales contract and the risk of the forward FX contract equals zero. This remaining risk is displayed in the graphic below.
This second scenario is called a **hedge**, whereas the sales contract serves as the **hedged item** and the forward FX contract serves as the **hedging instrument**. To sum up this scenario: Hedging means offsetting risk, in this case foreign currency risk.

In addition to this case study, the Example page of this Detail Section demonstrates the divergent effects arising from a forward FX contract depending on whether a sales or a purchase contract is hedged.

The explanations in this Details section only provide a general overview. To deal with hedging instruments, more detailed knowledge is essential. This information is provided in the Training > Currency Management.

**Example**

This example section illustrates how forward FX contracts can be designated as hedging instruments for two cases:

- **Sales** contract
- **Purchase** contract

Both cases are illustrated because sales as well as purchase contracts **differ regarding the effect of exchange rate movements**. For sales contracts a **devaluation** of the functional currency results in a gain, whereas for purchase contracts a devaluation of the functional currency results in a loss. In contrast, an **appreciation** of the functional currency results in a loss for a sales contract but causes a gain for the purchase contract.

**Example 1: Sales Contract**

A Siemens entity in Germany (functional currency: euro) expects to receive a USD 15m payment for a sale on June 30. When planning the sale, the entity used a forward rate of EURUSD 1.25 to calculate the expected payment of EUR 12m. A forward rate of 1.25 means, that – at planning – EUR 1 is equivalent to USD 1.25.

To eliminate the risk of a change in the exchange rate until the date of payment, the Siemens entity closes a forward FX contract. The forward FX contract obliges the entity to sell USD 15m at a forward rate of EURUSD 1.25 on June 30. Therefore, the euro equivalent of the planned sale is calculated by applying the forward rate of EURUSD.

If the entity receives the payment from its customer, it takes the USD 15m and sells it at a fixed forward rate of EURUSD 1.25 to the contractual partner of the forward FX contract. The entity thereby receives the planned EUR 12m (= USD 15m / EURUSD 1.25).

This relationship is illustrated in the graphic below.
Please note, that the currency gain/loss illustrated in the graphic above and the following graphics is a deviation from the planned amount. For example, for a sale, this means that revenue recognized in the statement of income is higher or lower than originally planned.

To summarize, it does not matter whether the spot rate for EURUSD is lower or higher than EURUSD 1.25 on June 30 because the effects of the exchange rate fluctuations on the sales contract and the forward FX contract always offset each other. This means that the currency risk of the sale equals zero.

**Example 2: Purchase Contract**

A Siemens entity in Germany (functional currency: euro) has to pay USD 15m for a purchase from a US supplier on June 30. As the purchase was planned using a forward rate of EURUSD 1.25, the entity wants to lock in this exchange rate to eliminate any currency risk resulting from an unfavorable change of the exchange rate until the payment date. The entity enters into a forward FX contract to buy USD 15m at a forward rate of EURUSD 1.25 on June 30.

On June 30, the entity buys the USD 15m at the fixed forward rate of EURUSD 1.25 and gives it to the supplier in the US. As a result, it does not matter whether the exchange rate for EURUSD has declined or increased until June 30, because the effects of exchange rate fluctuations on the purchase contract and the forward FX contract always offset each other. This means that the currency risk of the purchase equals zero.

This relationship is illustrated in the graphic below.
Please note, that the profit or loss profile for the purchase contract is exactly opposite to the sales contract.

To summarize, also in case of a purchase contract, it does not matter whether the spot rate is higher or lower than the planning forward rate because the purchase and forward FX contract exactly offset each other.
Detail: Calculation of Forward Rates

Explanation

Foreign currency forward contracts are the most commonly used financial derivatives for hedging a foreign currency risk at Siemens. Operating Siemens entities conclude forward FX contracts with SFS. In turn, SFS aggregates the risk and concludes forward FX contracts with external parties.

Besides the plain application of a given foreign currency forward rate, it is worthwhile to understand how the pricing of forward FX contracts is performed on the financial market.

In general, the prediction of future spot rates is impossible. Forward rates are expectations about future spot rates, but the spot rate observed at that future date usually deviates from the forward rate.

Example: On 27 March 20X3 the spot rate for the EURUSD exchange rate was 1.66. In contrast on the same day the rate for a EURUSD forward with maturity on 27 September 20X3 was 1.65. At the date when the forward matured, a spot rate of 1.62 is observed, which deviates from the forward rate. This is because the spot rate is influenced by diverse factors, which can hardly be predicted.

While the spot rate for a future point in time can hardly be predicted, the forward rate is observable and is calculated according to a certain mechanism. The forward rate of two currencies, for example EURUSD, is calculated from the current spot rate with an adjustment for the interest rate differential between both currencies multiplied by the remaining time until maturity of the forward FX contract. These adjustments are called forward points. A forward rate can therefore be split into a spot element (current spot rate) and an interest element (forward points).

The calculation of the forward rate is illustrated in the following graphic:

![Calculation of forward rates graphic]

The maturity of the forward is presented in days, because it needs to fit to the denominator, which is also stated in days. In turn, this is because the interest rates are stated as percentage per annum, which equals the disclosure of the time to maturity as days per year.

An example for the calculation of forward rates is provided on the Example Page of this Detail Section.

Example
Before demonstrating the calculation of a foreign currency forward rate with an example, it is important to note, that forward rates can be observed on the financial markets.

A forward rate is always determined for a particular exchange rate, at a certain point in time and for a predefined maturity.

In this sample case, the forward rate is calculated on 30 May 20X4 for the EURUSD exchange rate. The current spot rate as observed on the foreign exchange market is EURUSD 1.49. The interest rate for deposits in euro (quoted currency) is 3.5% per annum (p.a.), whereas the interest rate for deposits in US dollar (base currency) is 5.2% per annum. The forward rate is calculated for a forward with a maturity of 90 days.

The calculation of the forward rate is illustrated in the following graphic:

It is important to note that the interest rate for deposits in US dollar differs from the interest rate for deposits in euro. If there was no difference, the maturity would not have an impact. In addition, the difference between forward and spot rate is higher, for longer maturities.
Sub Lecture: Embedded FX Derivatives (FX-EDs)

The aim of foreign currency accounting for sales or purchase contracts is to report the risks arising from transactions denominated in foreign currencies in the financial statements. To achieve that goal, foreign currency accounting consists of a multitude of rules. Accounting for embedded foreign currency derivatives (FX-EDs) adds to that goal by showing foreign currency risks arising from firm commitments.

Each sales or purchase contract denominated in foreign currency contains an FX-ED. But the question is, whether the FX-ED has to be separately accounted for. The FX-ED only has to be separated from the underlying sales or purchase contract if certain criteria are fulfilled. These separation criteria can be tested by using a decision tree, which is provided in further below.

In general, accounting for FX-EDs prescribes whether, and if so, how to separately account for the FX-ED. To provide a general understanding, this Sub Lecture gives an overview of the following topics:

1. Objective and scope of accounting for FX-EDs
2. Characteristics of contracts containing FX-EDs
3. Identification and separation of FX-EDs
4. Accounting treatment of FX-EDs
5. Interaction of FX-EDs with hedge accounting

Below, the main considerations for these mentioned topics are given. More detailed information on these topics is provided in the Detail Sections ➔ Separation Criterion: Functional Currency, ➔ Separation Criterion Commonly Used Currency (CUC) ➔ Accounting Treatment and ➔ Interaction with Hedge Accounting.

1. Objective and Scope of Accounting for FX-EDs

The general rules of foreign currency accounting provide instructions how to convert line items denominated in foreign currency. However, there is a substantial number of contracts for which an approved and legally effective agreement has already been concluded, but which are not recognized in the statement of financial position yet. These contracts are referred to as firm commitments. These firm commitments are not recognized because the recognition criteria for a line item have not been fulfilled yet, e.g., because a product delivery has not been performed.

Accounting for FX-ED aims at presenting the foreign currency risk included in these firm commitments. Not accounting for them would lead to an incomplete presentation of Siemens’ foreign currency risks.

2. Characteristics of Contracts Containing FX-EDs

Embedded derivatives (EDs) are components of hybrid contracts. A hybrid contract is a combination of a non-derivative element (e.g., a sales or purchase contract in domestic currency) and an embedded derivative in one contract (e.g., a forward FX contract). The embedded derivative causes some of the cash flows of the hybrid contract to vary in a way that is similar to a stand-alone derivative e.g., a stand-alone forward FX contract.

In case of FX-EDs, the cash flow of the hybrid contract varies with respect to changes in a foreign exchange rate. Therefore, hybrid contracts containing an FX-ED are exposed to foreign currency risk.

The non-derivative element of the hybrid contract can either be a pending sales or a pending purchase contract and is referred to as host contract. The following graphic illustrates the two components of hybrid contracts:
In general, all sales or purchase contracts denominated in foreign currencies contain an FX-ED and can therefore be referred to as hybrid contracts.

The combination of the two components in one contract is illustrated by the following example:

A Siemens entity in the UK whose functional currency is pound sterling (GBP) enters into a contract to sell a machine in US dollars. The entire US dollar (USD) sales contract is a hybrid contract, because it can be split up into the host contract and the FX-ED. The host contract equals a sales contract in GBP, whereas the FX-ED equals a foreign currency forward contract (GBPUSD). The FX-ED reflects the unrealized gains or losses resulting from foreign exchange rate movements of the pending sales contract.

Continuing the example, an increase in the GBPUSD exchange rate would result in a currency loss, whereas a decline would cause a currency gain for the Siemens entity. In a scenario with no accounting for FX-EDs, these currency gains or losses are only recognized in the statement of income at the time when the respective host contract is accounted for with an effect on the statement of income e.g., as revenue. An earlier recognition of this transaction, e.g., as a firm commitment, is not possible according to IFRS.

However, not all FX-EDs have to be separated from their host contract. Separation only needs to be applied if certain criteria are met.

These criteria are set out in the next section.

For further information on forward FX contracts please refer to the Sub Lecture Foreign Currency Exposure and Management, in particular to the Details Section Forward FX Contracts and Other Hedging Instruments.

3. Identification and Separation of FX-EDs

The decision of whether an FX-ED needs to be separated, depends on the following four criteria:

- Materiality threshold
- Fully consolidated companies
- Functional currency
- Commonly used currency

The first two issues can be summarized as Siemens specific reliefs and account for cost-benefit considerations. All four criteria are discussed briefly below.

More detailed information for the last two criteria is provided in the Detail Sections Separation Criterium: Functional Currency, Separation Criterium Commonly Used Currency (CUC).

The first criterion is the materiality threshold. It refers to the contract duration as well as to the total contract volume.
This means that no FX-ED needs to be recognized, if either the foreign currency portion of the total contract volume is below the equivalent of **EUR 5m** or if the overall term of the contract is less than **6 months**.

**Operating Company Smart Infrastructure in the SI Business Units SI BP, SI RSS-DE, SI RSS-EU, SI RSS-AM, SI RSS-MA:** The recognition of FX-EDs is recommended for **all contracts** in which the portion of the total contract volume denominated in foreign currency exceeds an equivalent of **EUR 2.5m**.

**Strategic Company Mobility and Portfolio Company Siemens Logistics:** The recognition of FX-EDs is mandatory for **all contracts** in which the portion of the total contract volume denominated in foreign currency exceeds an equivalent of **EUR 2.5m**.

The materiality threshold is in line with the aim of showing foreign currency risks in pending sales or purchase contracts. If either the contract volume is low or the contract duration is short, the foreign currency risk can be neglected.

**Fully Consolidated Companies**
The second criterion refers to intercompany contracts. FX-EDs in intercompany contracts between **fully consolidated Siemens companies** balance each other out at Siemens level. To simplify matters, such derivatives are therefore not recognized. This is referred to as the **simplification rule**.

**Functional Currency**
The third criterion refers to the functional currency. An FX-ED is not separated, if the currency of the sales or purchase contract is denominated in the **functional currency** of one of the substantial parties to the contract (**SPCs**). Testing of the criterion can be done by simply comparing both the contract and the functional currency of the respective SPC.

Decisive for the application of this criterium is the question: Who is a SPC? In principle, these equal the **contractual parties** to the sales or purchase contract, but there are **exceptions** for contracts with **intercompany supplies** or when **consortia** are used to conduct business.

**Commonly Used Currency**
The fourth criterion refers to the commonly used currency (**CUC**). An FX-ED is not separated from the host contract, if the **currency of the underlying contract** is **commonly used** in the **economic environment** of the **reporting entity**. Testing this criterion can simply be done by comparing the currency of the underlying contract with the commonly used currency (**CUC**).

Decisive for testing the criterion is the question: **What is the CUC** in the economic environment of the reporting entity? Normally, the **local currency** is the CUC. But in some countries a **second** or a **third currency** is considered CUC besides the local currency.

**Decision Tree for Separating FX-EDs**
The four criteria for separating FX-EDs can be arranged within a **decision tree**. The decision tree can be used to test sales and purchase contracts which are either denominated in foreign currency or otherwise exposed to an exchange rate risk. The test ought to be conducted when Siemens **becomes party** to the sales or purchase contract. The decision tree used at Siemens is displayed below:
For further information on the application of the criteria please refer to the respective Details Section in the Sub Lecture or to the Siemens Financial Reporting Guideline.

In the case that the FX-ED does not have to be separated, no further actions need to be taken from an accounting perspective. The FX-ED will eventually not be recognized and the host contract will continue to be accounted for under the general accounting rules. In contrast, if an FX-ED has to be separated, it is treated as a separate line item. This is explained below.

4. Accounting Treatment of FX-EDs

If an FX-ED needs to be separated, it is accounted for in the same way as a stand-alone derivative. That means that the FX-ED is recognized at fair value and remeasured at fair value at every reporting period with fair value changes captured in the statement of income.

The FX-ED is initially recorded when the underlying sales or purchase contract is approved and becomes legally effective. This usually equals the date when the contract is signed. The FX-ED is derecognized when either of the following aspects applies:

- The foreign currency effects are otherwise captured in the statement of income, e.g., because a trade receivable...
or trade payable denominated in foreign currency is recognized.

- The host contract ceases to exist.

As a rule of thumb, the foreign currency effects are otherwise captured when a trade receivable or trade payable is captured in the statement of financial position.

For expert level information about the accounting treatment of FX-EDs please refer to the Detail Section > Accounting Treatment.

Regarding the timing of derecognition sales and purchase contracts need to be differentiated. For sales contracts, the FX-ED is derecognized when the revenue from the host contract is recognized. In contrast, for purchase contracts, FX-EDs are derecognized when the purchased asset or expenses is/are recognized.

For sales contracts the timing of derecognition depends on the method of revenue recognition. Thus, it matters whether the sales contract is accounted for, e.g., under the completed-performance method or the percentage-of-completion method.

5. Interaction with Hedge Accounting

If an FX-ED is separated, it is prohibited to apply hedge accounting. In addition, hedge accounting is also prohibited if an FX-ED would be separated without the Siemens specific reliefs (materiality threshold + simplification rule for fully consolidated companies).

Though hedge accounting is not allowed to be applied, if an FX-ED is separately accounted for, hedge accounting is also not needed if the economic hedging is performed by an FX derivative. This is because the FX-ED and the hedging derivative are both accounted for at fair value through profit or loss. As the fair value movements offset each other in the statement of income, there is no earnings volatility and hedge accounting is not needed.

The application of hedge accounting although an FX-ED is separated is not needed and not allowed.

For further information refer to the Detail Section > Interaction with Hedge Accounting.
Detail: Separation Criterium: Functional Currency

Explanation
Whether embedded foreign currency derivatives (FX-EDs) have to be separated from their host contracts depends on four criteria. In the decision tree for separating FX-EDs the third out of the four criteria refers to the functional currency of the substantial parties to the contract (SPCs). This section provides insights into how the SPCs are determined and how the criterion can be applied to purchase and sales contracts.

Please note, that the functional currency criterion is the third criterion from the decision tree for separating FX-EDs. Before applying this criterion the first two criteria – which are referred to as Siemens specific reliefs – should be tested. In addition, before separating an FX-ED the fourth criterion – which refers to the commonly used currency – also needs to be tested.

Subject to the other three separation criteria, an FX-ED has to be separated if the following holds: The currency of the pending sales/ purchase contract is not denominated in the functional currency of one of the substantial parties to the contract (SPCs).

This means that the two types of currencies, contractual currency and functional currency simply need to be compared. This is illustrated by the following graphic:

Comparison of testing the 'functional currency criterion'

The functional currency of an entity is usually identical to its local currency. However, as the functional currency is determined for the SPCs, the major challenge is to determine the SPCs.

In principle, only the contractual parties to the sales/ purchase contract are SPCs, i.e., the companies that signed the contract. However, there are exemptions, e.g., in case of intercompany supplies.

As at least the contractual parties are SPCs, there can be two or more functional currencies. For example, the selling Siemens entity has euro (EUR) as functional currency, whereas the external customer has US dollar (USD).

In addition, also the contractual payments can be denominated in more than one currency. For example, the sales contract provides for payments in both Pound Sterling (GBP) and euro (EUR).

The functional currency criterion is tested best by structuring the assessment into the following four steps:

1. Determine the Siemens business type
2. Determine the SPCs according to the underlying business type
3. Assess the functional currencies of the SPCs
4. Assess if one of the functional currencies equals the contractual/ payment currency

The four steps are explained below in further detail.
Step 1: Determine the Siemens Business Type

Siemens has classified the business it conducts in certain business types/models. In case of applying the functional currency criterion, determining the Siemens business type is important because it helps determining the SPCs.

The following business types and its further specifications need to be distinguished:

- Siemens Conditions (Standard/ Modified)
- End-customer conditions
- Consortium (open/ silent)

Further information on the Siemens business types/models is provided in the Corporate Business Procedures (ZRG).

Step 2: Determine the Substantial Parties to the Contract (SPCs)

In principle, only the contractual parties to the sales/purchase contract are SPCs. However, if there are intercompany supplies/sales also the internal partner may be SPC. For example, if the Regional Siemens Company in Thailand concludes a sales contract with an external customer, the Business Company headquarter – which supplies goods to fulfill the external sales contract – may also be SPC. This is important because Regional Companies and Business Company headquarters often have different functional currencies.

Whether the internal supplier(s) are – in addition to the contractual parties – also considered to be SPCs, depends mainly on the classification of the transaction according to the Siemens business type. Hence, it is explained below, whether the internal supplier is also SPC for the Siemens business type introduced in the first step.

a) Siemens Conditions

Often business is conducted on own account with Siemens conditions. It can be further distinguished whether Standard or Modified Siemens Conditions are applied. In case of business with Standard Siemens Conditions an internal supplier is not considered to be SPC. This means that only the contractual parties are SPCs.

In contrast, when Modified Siemens Conditions are agreed, the determination of SPCs is dependent on the percentage supplied from the Business Company headquarters:

- Supply ≤ 50%: End-customer and Regional Company are SPCs.
- Supply > 50%: End-customer, the Regional Company and the Business Company headquarter are SPCs.

The percentage is calculated as amount supplied from the Business Company headquarter in relation to the total contract volume.

b) End-customer conditions

In the case of business with end-customer conditions, the end-customer and both the Regional Company and the Business Company headquarter are SPCs. This is because the Business Company headquarter has a major influence on both drafting and performance of the contract.

If euro is the functional currency of the Business Company headquarters, this means that no FX-ED is recognized for contracts that are denominated in euro and which are concluded between a Regional Company and its customer, even if the euro is not the functional currency of either the Regional Company or the customer.

In case of internal/supplies sales, besides the end-customer and the Regional Company, also the internal supplier, i.e., the Business Company headquarter, can be SPC.

The following graphic summarizes the determination of SPCs in case either Siemens Conditions or End-customer conditions are used:
Many sales transactions are conducted by plain sales contracts, in which the Regional Siemens Company is supported by an internal supplier. However, sometimes doing business is more complicated, e.g., when consortia are set up to win and afterwards realise a project. In case of consortia special rules for determining the SPCs apply, which are explained below.

c) Consortia

Determining the SPCs can be difficult, if there are internal supplies/sales and the contract with the end-customer is concluded by means of a consortium. For example, assume that a Regional Siemens Company is the consortium leader and Siemens AG and an external supplier are silent members of the consortium.

The questions is, whether the end-customer and either all consortium members or only the consortium leader are considered as SPCs. This is explained below.

To determine the SPCs two types of consortia need to be distinguished:
- **Open consortium**: The end-customer and all consortium members are SPCs, regardless of whether the New Collaboration Model (NCM) applies. In an open consortium, there is naturally no consortium leader, which could be considered as SPC.
- **Silent consortium**: The SPCs are dependent on whether the NCM applies. If the NCM applies, the end-customer, the consortium leader and all silent consortium members are considered to be SPCs. If the NCM does not apply, only the end-customer and the consortium leader are SPCs.

The following graphic summarizes the determination of SPCs in case of a consortium:
Step 3: Assess the Functional Currencies of the SPCs

As a third step, the functional currencies of the SPCs need to be determined. This is conducted separately for each of the SPCs. For Siemens entities as well as for all external parties which may be SPCs (e.g., external customer, external supplier or external consortium member), the functional currency usually equals their local currency.

Step 4: Comparison of Functional Currency and Contract Currency

In the fourth step, the contractual/payment currency is compared to the functional currencies of all SPCs. If the contractual/payment currency equals one of the functional currencies, no FX-ED is separated. If it does not equal one of the functional currencies, an FX-ED may be separated. Whether an FX-ED is eventually separated depends on the fourth criterion from the decision tree which has to be tested next.

If an FX-ED has to be separated and more than one Siemens entity is SPC, the FX-ED generally needs to be split. For instance, in case of intercompany supplies the split is made between the Regional Company and the Business Company headquarters and depends on the onshore/offshore portion.

For further information on how the split is calculated please refer to the Siemens Financial Reporting Guidelines (FRG).

For illustrations on how to apply the functional currency criteria, please refer to the separate Example page.

Example

One of the four separation criteria for embedded foreign currency derivatives (FX-EDs) refers to the functional currency of the substantial parties to the contract (SPCs). This section provides examples how the functional currency criterion can be tested. As the main challenge is to identify the SPCs, this page especially focuses on examples which illustrate the general rule for the identification of the SPCs and its exemptions.

This section contains the following examples:

- Example 1: General Rule
- Example 2: Intercompany supplies + End-Customer Conditions
- Example 3: Intercompany Supplies + Siemens Conditions
- Example 4: Intercompany Supplies + Open Consortium
- Example 5: Intercompany Supplies + Silent Consortium

In the following examples, the abbreviation 'RC' always refers to the Regional Siemens Company e.g., RC Thailand. In addition, the ARE is mentioned for all RCs.
Please note, that before testing the functional currency criterion, the first two criteria from the decision tree for separating FX-EDs should be tested. In addition, before an FX-ED is eventually separated, the fourth criterion – which refers to the commonly used currency – also needs to be tested.

Example 1: General Rule

The Regional Siemens Company in Thailand concludes a sales contract with an external customer, which is also located in Thailand. The contractual payments are denominated in euro (EUR). The functional currency of both RC Thailand and the external customer is Thai baht (THB).

In addition, the RC Thailand has concluded a purchase contract with an external supplier, to obtain the input material necessary to fulfill the sales contract. The contractual payments are also denominated in EUR. The external supplier is located in Thailand and has THB as functional currency.

The issue is demonstrated by the following graphic:

Example 1 – issue

As there are two contracts – a purchase and a sales contract – both need to be examined.

a) Purchase Contract

According to the general rule, the substantial parties to the contract are the contractual parties. In this case, the external supplier and the RC Thailand have signed the contract and thus constitute the SPCs.

As the currency of the purchase contract (EUR) does not equal the functional currency of either SPC (both THB) the fourth criterion from the decision tree needs to be tested, before an FX-ED is eventually separated.

b) Sales Contract

According to the general rule, the substantial parties to the contract equal the contractual parties. In this case, the external customer and the RC Thailand have signed the contract and thus constitute the SPCs. As the currency of the sales contract (EUR) does not equal the functional currency of either SPC (both THB) the fourth criterion from the decision tree needs to be tested.

However, the general rule cannot be applied, if there are intercompany supplies. Depending on the Siemens business type the internal supplier may also be a SPC. The following examples demonstrate how the functional currency criterion is applied when there are intercompany supplies and different Siemens business types are used.

Example 2: Intercompany Supplies + End-Customer Conditions

The issue resembles the first example, with the exemption that the purchase contract is not concluded with an external supplier, but with Siemens AG. The issue is demonstrated by the following graphic:
In addition, the sales contract is concluded under *end-customer conditions*.

**a) Purchase Contract**
The purchase contract is now an intercompany contract. For contracts between fully consolidated Siemens entities, the simplification rule applies and no FX-ED needs to be separated. Therefore, testing the functional currency criterion is not necessary.

For further information on the simplification rule for contracts between fully consolidated companies please refer to the overview page of this Sub Lecture ➔Embedded FX Derivatives (FX-EDs).

**b) Sales Contract**
As the sales contract is fulfilled by making use of *intercompany supplies*, the general rule for determining the SPCs can not be applied. In contrast, it must be checked whether or not only the external customer and the RC Thailand, but also Siemens AG is a SPC. The sales contract is closed under *end-customer conditions*. When end-customer conditions are used, the Business Company headquarter (here: Siemens AG) is also considered to be a SPC.

As the contract currency (*EUR*) equals the functional currency of one of the SPCs (Siemens AG, *EUR*), no FX-ED needs to be separated at RC Thailand or Siemens AG.

**Example 3: Intercompany Supplies + Siemens Conditions**
In contrast to the second example, only the Siemens business type used for the sales contract is changed. The sales contract is now concluded under *Siemens Conditions* instead of end-customer conditions. However, for determining the SPCs under Siemens Conditions it further needs to be differentiated between Standard Siemens Conditions and Modified Siemens Conditions.

**a) Standard Siemens Conditions**
When there are intercompany supplies and Standard Siemens Conditions are used, only the end-customer and the RC are considered to be SPCs.

As the contract currency (*EUR*) does not equal the functional currency of one of the SPCs (both THB), the fourth criterion from the decision tree needs to be tested, before an FX-ED is eventually separated.

**b) Modified Siemens Conditions**
When there are intercompany supplies and Modified Siemens Conditions are used, the percentage supplied from the internal supplier is decisive for determining the SPCs. If the supplies from the Business Company headquarter *exceed an amount of 50% of the contract volume* the Business Company headquarter is also SPC.

In this case the supplies from Siemens AG are assumed to sum up to *EUR 15m*, whereas the sales contract has a contract volume of EUR 20m. This means that Siemens AG as the Business Company headquarter supplies *75% (= 15m / 20m)* of the volume of the sales contract. In consequence, not only the end-customer and RC Thailand, but also Siemens AG are considered as SPC.
As the contract currency (EUR) equals the functional currency of one of the SPCs (Siemens AG, EUR), no FX-ED needs to be separated at RC Thailand or Siemens AG.

If the supplies from Siemens AG where only EUR 10m or below, the Siemens AG would not be considered as SPC. Only RC Thailand and the external customer would be SPCs. In consequence, the contract currency (EUR) would not equal the functional currency of one of the SPCs (both THB) the fourth criterion from the decision tree needs to be tested, before an FX-ED is eventually separated.

However, intercompany supplies do not only occur for plain sales contracts, but also when business is conducted by using consortia. In case of consortia the Siemens business types open consortium and silent consortium are decisive for determining the SPCs. Below examples are provided for both.

**Example 4: Intercompany Supplies + Open Consortium**
Suppose an open consortium XYZ – in which Siemens participates – concludes a sales contract with an external customer located in Malaysia. The sales contract is denominated in US dollar (USD).

The consortium has three members, which are located in different regions of the world and thus have different functional currencies. Siemens participates in the consortium with the RC Malaysia, which has Malaysian ringgit (MYR) as functional currency and the Siemens AG, which has euro (EUR) as functional currency. The external consortium member is located in the US and has US dollar (USD) as functional currency.

The external customer also has MYR as functional currency.

The issue is summarized by the graphic below:

As the sales contract is concluded by means of a consortium, the general rule for determining the SPCs can not be applied. In contrast, the SPCs need to be determined with reference to the underlying business type.

When a consortium is formed as an open consortium, the end-customer and all consortium members – independent of their function within the consortium – are considered to be SPCs. Hence, the external customer, the external supplier, RC Malaysia and Siemens AG are SPCs.

As the contract currency (USD) equals the functional currency of one of the SPCs (external supplier, USD), no FX-ED should be separated at RC Malaysia or Siemens AG.

**Example 5: Intercompany Supplies + Silent Consortium**
Suppose that Siemens forms a silent consortium and concludes a sales contract with an external customer in Thailand. The sales contract is denominated in US Dollars (USD). RC Thailand is the consortium leader and contractual party to the sales contract with the external customer. Siemens AG and Siemens Corp USA are
members of the silent consortium.

All Siemens entities as well as the external customer have the respective local currency as functional currency. Therefore, for the external customer and RC Thailand the functional currency is Thai baht (THB). Siemens AG has euro (EUR) and Siemens Corp USA has US Dollars (USD) as functional currency. The issue is summarized by the graphic below:

Example 5 – issue

In this example two alternative settings are discussed:

- The New Collaboration Model (NCM) is applied for this project.
- The NCM is not applied.

a) Sales Contract – with NCM
As the sales contract is concluded by means of a consortium, the general rule for determining the SPCs cannot be applied. In contrast, the SPCs need to be determined with reference to the underlying business type.

When a consortium is formed as a silent consortium, further information on whether the NCM is applied is necessary to determine the SPCs. In this case, the NCM is applied, therefore, the end-customer, the consortium leader and all consortium members are SPCs.

As the contract currency (USD) equals the functional currency of one of the SPCs (Siemens Corp USA, USD), no FX-ED should be separated at RC Thailand, Siemens AG or Siemens Corp USA.

b) Sales Contract – without NCM
Under a silent consortium and without applying the NCM, only the end-customer and the consortium leader are considered to be SPCs. Therefore, only RC Thailand and the end-customer are SPCs. This means that RC Thailand is the only Siemens entity which is SPC. Siemens AG and Siemens Corp USA are not SPCs.

As the contract currency (USD) does not equal the functional currency of one of the SPCs (both THB), the fourth criterion from the decision tree needs to be tested, before an FX-ED is eventually separated.

Although RC Thailand is the only Siemens entity which is SPC, it does not need to recognize the full FX-ED. The FX-ED has to be split and the part of the FX-ED recognized by RC Thailand depends on the currency risk carried by RC Thailand (as consortium leader). This depends on the transfer of currency risk between the consortium members.
Detail: Separation Criteria Commonly Used Currency (CUC)

**Explanation**
Whether embedded foreign currency derivatives (FX-EDs) have to be separated from their host contracts depends on four criteria. One of the criteria refers to the commonly used currency (CUC). This section provides insights how the CUC is determined and how the criterium can be applied to purchase and sales contracts.

Please note, that the commonly used currency criterion is the last criterion from the decision tree for separating FX-EDs. Before applying this criterion, the other three criteria for separating FX-EDs have to be tested.

Similar to the 'functional currency criterion', testing the 'CUC criterion' is performed by comparing the CUC with the contractual currency of the underlying purchase/ sales contract. This is illustrated by the following graphic:

No FX-ED is separated if both currencies are the same. In contrast, if the currency underlying the purchase/ sales contract does not equal the CUC, it indicates that an FX-ED might be recognized. However, the other criteria for separating FX-EDs also need to be tested.

Normally, the CUC of the economic environment of a reporting entity is the local currency. In some countries, there are also other currencies commonly used in addition to the local currencies. Before providing a list of for these countries, the definition and process of determining the CUC is discussed.

Contractual payments can be denominated in more than one currency. In this case, the CUC is compared to all of these contractual currencies. This can result in an FX-ED being recognized for one contract currency, but not for the other.

**Definition and Determination of the CUC**
Whether a currency is considered a 'commonly used currency' is based on the economic environment of the reporting Siemens entity. In contrast, the viewpoint of the external supplier/ customer is not considered.

The term 'commonly used currency' describes a currency that is relatively stable or liquid and that is commonly used in local business transactions or external trade. A currency is commonly used when monetary amounts are viewed by the general population not in terms of the local currency, but in terms of a relatively stable foreign currency and prices may be quoted in that foreign currency.

Indeed, undertaking business transactions in a stable or hard currency is fairly common for entities operating in a hyperinflationary economy as a protection against inflation. The currency must be commonly used within the country, not just commonly used within a particular industry or particular market.

**List with CUC for Selected Countries**
CF R 1 evaluates the CUC for the countries in which Siemens conducts substantial business. The following table lists all countries with another currency, which is commonly used in that certain economic environment in addition to the local currency:

<table>
<thead>
<tr>
<th>Countries</th>
<th>Commonly used currency</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Europe</strong></td>
<td></td>
</tr>
<tr>
<td>Czech Republic</td>
<td>EUR</td>
</tr>
<tr>
<td>Turkey, Russia, Norway, Kazakhstan</td>
<td>EUR and USD</td>
</tr>
<tr>
<td><strong>Arabian countries</strong></td>
<td></td>
</tr>
<tr>
<td>Saudi Arabia, Qatar, UAE, Bahrain, Oman, Kuwait</td>
<td>USD</td>
</tr>
<tr>
<td><strong>Asia</strong></td>
<td></td>
</tr>
<tr>
<td>China (excluding Hong Kong), Vietnam, Indonesia, Malaysia</td>
<td>USD</td>
</tr>
<tr>
<td><strong>Africa</strong></td>
<td></td>
</tr>
<tr>
<td>South Africa, Tanzania, Nigeria</td>
<td>USD</td>
</tr>
<tr>
<td><strong>Latin America</strong></td>
<td></td>
</tr>
<tr>
<td>Brazil, Peru, Argentina, Mexico, Chile</td>
<td>USD</td>
</tr>
</tbody>
</table>

FX-EDs in contracts that have been closed in one of the listed countries and are denominated in a commonly used currency shall not be accounted for separately.

For instance, suppose that a Siemens entity in Malaysia concludes a sales contract with payments denominated in US dollars (USD). The contract currency does not equal the local currency which is Malaysian ringgit (MYR). However, USD is a commonly used currency in Malaysia, therefore no FX-ED has to be recognized.

**Example**

This example section illustrates how the commonly used currency criterium as one of the four criteria for separating FX-EDs is applied.

This section provides three examples, which are built up step-by-step, with the last one being the most complex. The procedure for testing the criterion is the same, independently of whether a sales or a purchase contract is examined.

The examples presented on this page illustrate the application of the commonly used currency criterion only. Before testing this criterion, the first three criteria from the decision tree have to be tested.

**Example 1 - Basic**

A Siemens entity in Russia enters into a sales contract with an external customer in Russia. The contractual payments from the sale are denominated in US dollar (USD). The Siemens entity is located in Russia.

In addition to the local currency, which is Russian ruble (RUB), the USD is a commonly used currency in Russia. As the contractual currency (USD) is a commonly used currency in Russia, the Siemens entity does not separately account for an FX-ED for the USD contract. This is illustrated by the following graphic:
Example 2 - Intermediate

Suppose the same issue as in the first example, but now the Siemens entity is located in Germany instead of Russia. That means, that a Siemens entity in Germany enters into a sales contract with an external customer in Russia. The contractual payments from the sale are again denominated in USD.

The Siemens entity in Germany has the euro (EUR) as the functional currency. In contrast, the customer is located in Russia, where the local currency is RUB.

The USD is a ‘commonly used currency’ in Russia, but it is not a ‘commonly used currency’ in Germany. The decision whether a currency is considered a ‘commonly used currency’ is based on the economic environment of the Siemens entity only. In contrast, the viewpoint of the external customers does not matter. As the USD is not a commonly used currency for the German Siemens entity, a FX-ED must be separated if the other separation criteria are also met. This is summarized by the following graphic:

Example 3 - Expert

Suppose the same issue as in the second example, but now the contractual payments are denominated partly in USD and partly in EUR.

Again only the viewpoint of the Siemens entity matters. The Siemens entity is located in Germany and there is no other CUC than the EUR. The EUR is now compared to the contract currencies:

- **EUR amount**: For the part of the contract which is denominated in EUR, no FX-ED has to be separated, because the EUR is the local currency in Germany.
- **USD amount**: For the part of the contract which is denominated in USD, a FX-ED must be separated if the other separation criteria are also fulfilled.

The following graphic summarizes the issue:
Example 3

RC Germany
EUR

Sales contract:
EUR/USD

External customer
Russia
(RUB, EUR, USD)

XYZ Ltd.

Siemens
ARE
Detail: Accounting Treatment

Explanation
When accounting for embedded foreign currency derivatives (FX-EDs) two aspects are of major importance. First, it needs to be considered whether an FX-ED has to be separated from its host contract. Second, the FX-EDs needs to be accounted for as a separate item in the financial statements.

The accounting treatment of FX-EDs is best explained by using the following phases:

- Recognition
- Measurement
- Derecognition

When it comes to determining the accounting treatment of FX-EDs, the question of whether an FX-ED has to be separated has already been answered. Therefore, for recognition the timing is crucial. From the three phases mentioned above, derecognition of the FX-ED is most challenging to apply.

Throughout the whole process of accounting for the FX-ED, the host contract is accounted for under the general rules that apply on a stand-alone basis.

Recognition
An FX-ED is recognized in the statement of financial position when the host contract is approved by the parties of the contract and becomes legally effective. As a rule of thumb a legal contract exists, i.e., the contract is approved and legally effective, when it is signed. However, enforceable rights and obligations may also be created by other means, e.g., oral agreements.

In case a contract has specified conditions that must be met before the contract comes into force, these conditions also have to be considered for the existence of a legal contract. Typical obligations of the customer may be:

- Provision of advance payments
- Provision of defined proof of financing and/or the granting of appropriate securities
- Appropriate provision and documentation of all required internal and external approvals

Master agreements entitling the customer to withdraw unconditionally at any time are only considered to be approved and legally effective if they contain an obligation of minimum quantities. Individual release orders during the term of the master agreement, for which the quantity ordered and the price are fixed and binding, count as legal contracts.

A letter of intent does not fulfill the criteria of a legal contract in any case.

Measurement
In general, FX-EDs are accounted for in the same way as stand-alone derivatives. This means that they are measured at their fair value, with fair value changes captured in the statement of income.
The fair value of an FX-ED reflects the foreign currency gains and losses on the pending sales or purchase contract that have occurred due to exchange rate movements since the underlying host contract was approved and became legally effective. Therefore, when the host contract fulfills the criteria of a legal contract and an FX-ED has to be separated, the fair value of the FX-ED is usually zero, whereas in subsequent periods the fair value can be either positive or negative.

SFS provides an intranet-based tool, the MVC Online for measuring the FX-ED.

The tool requires the following information:

- **Functional Currency**: functional currency of the reporting entity
- **Contract Currency**: currency in which the contract is denominated
- **Amount in Contract CCY**: contract amount in contract currency
- **As-of-Date**: measurement date
- **Effective Date**: date of initial recognition of the embedded foreign currency derivative
- **Posting Date**: expected date on which the foreign currency receivable/payable, the advance payment or the progress billing will have to be posted
- **Deal Type**: type of host contract (purchase/sale)

If an FX-ED needs to be split, e.g., between a Regional Siemens Company and a Business Company headquarter, the amount in contract currency entered into the intranet tool can certainly only be a part of the total contract volume.

**Derecognition**

Accounting for FX-EDs aims at presenting the foreign currency risk included in firm commitments. Therefore, separated FX-EDs are combined once again with its host contract when the foreign currency risk is accounted for, e.g., because a foreign currency denominated receivable – which is a monetary asset – is recognized.

As a general rule FX-EDs are derecognized when the underlying foreign currency influences

- are otherwise captured in the statement of income, e.g., because a trade receivable/payable denominated in foreign currency is recognized in the statement of financial position which is subsequently remeasured at every reporting period using the current spot exchange rate.
- cease to exist, e.g., because the host contract is revoked.

Determining when foreign currency influences are otherwise captured in the statement of income can be quite challenging. This is best explained for purchase and sales contracts separately.

Before derecognition, the FX-ED has to be measured one last time at its fair value through profit or loss.

**Purchase Contracts**

In case of purchase contracts, FX-EDs are derecognized when the purchased asset or expenses is/are recognized in the statement of financial position or in the statement of income. This is because the foreign currency trade payable – which is recognized simultaneously with the purchased asset or expenses – is a monetary balance sheet item and therefore remeasured at every reporting period with exchange rate movements recognized in the statement of income.

Before derecognizing an FX-ED, it has to be remeasured at fair value through profit or loss for a last time. Afterwards, the FX-ED is reclassified against the purchased asset or expenses. As a result, the acquired assets or expenses are recognized at the forward rate prevailing at the date when the criteria for the existence of a legal contract are fulfilled.
This is illustrated by the graphic below:

<table>
<thead>
<tr>
<th>Purchased asset/ expenses recognized at spot rate as of transaction date</th>
<th>Reclassification of FX-ED measured at fair value</th>
</tr>
</thead>
<tbody>
<tr>
<td>+/-</td>
<td></td>
</tr>
</tbody>
</table>

The adjusted carrying amount of an acquired asset is also the basis for depreciation and impairment in subsequent periods.

If there are advance payments, the measurement of the FX-ED is **stopped** on the date when the advance payments are paid but the FX-ED is not derecognized until the trade payable is recognized.

This applies analogously to prepayments for certain sales contracts and is further discussed below.

**Sales Contracts**

As stated above, FX-EDs are derecognized when the foreign currency influences are otherwise captured in the statement of income. For sales contracts this occurs, when **revenue** is recognized.

At the time when revenue is recognized, the derecognition of the FX-ED is performed as a **reclassification against revenue**. As a result, sales revenue is shown at the forward exchange rate prevailing at the date when the criteria for the existence of a legal contract are fulfilled.

This is illustrated by the graphic below:
As mentioned above the timing of revenue recognition is crucial for the derecognition of FX-EDs. However, in accounting there are different methods to recognize revenue. The two most important methods and its implications on timing and procedure of derecognizing FX-EDs are discussed below.

a) Completed-Performance Method
In case of sales contracts accounted for using the completed-performance method, the FX-ED is derecognized when the trade receivable is recognized. The foreign currency trade receivable is a monetary asset and remeasured at every reporting date. Hence, the foreign currency risk is captured by the trade receivable.

If there are advance payments, the measurement of the FX-ED is stopped at the date when the advance payments are received but the FX-ED is not derecognized until the trade receivable is recognized. This is because when the advance payments are received, there is no foreign currency risk from uncertain future payments anymore.

b) Percentage-of-Completion Method
When a sales contract is accounted for using the percentage-of-completion (PoC) method, the FX-ED is derecognized when the progress billing is recognized. This is because a monetary balance sheet item is then recognized in the statement of financial position, which captures the foreign currency risk.

If a contract contains progress billings which are recognized at different times, a separate FX-ED should be recognized for each progress billing.

For examples regarding the derecognition of FX-EDs in sales contracts, please refer to the Example page.
The accounting treatment of embedded foreign currency derivatives (FX-EDs) is illustrated by using one example with three different scenarios:

- Example 1: Sales Contract - Completed-Performance Method
- Example 2: Sales Contract - Completed-Performance Method + Advance Payments
- Example 3: Sales Contract - PoC Method

The scenarios aim at demonstrating the issues relevant for determining the timing and procedure of derecognition, although recognition and measurement are also discussed briefly.

Please note that the foreign exchange rates provided below are presented as EURUSD. For example, a foreign exchange rate of EURUSD 1.25 means that 1 EUR is worth 1.25 USD.

**Example 1 - Completed-Performance Method**

**Issue**

On January 15, 20X3 a Siemens entity in Germany (functional currency: euro) signs a contract for the sale of a system in foreign currency for USD 100m to a customer in Japan (functional currency: Japanese yen). The due date for the payment of the purchase price is August 30, 20X3.

Revenue from the sales contract is recognized by using the completed-performance method and the estimated posting date of the trade receivable is July 15, 20X3.

March 31, 20X3 is a reporting date for the Siemens entity.

For the EURUSD foreign exchange rate the following information is provided:

- Forward rate for July 15, 20X3 as of January 15, 20X3: EURUSD 1.25
- Forward rate for July 15, 20X3 as of March 31, 20X3: EURUSD 1.11
- Spot rate as of July 15, 20X3: EURUSD 1.00

The following graphic illustrate the information provided:

The sales contract is a hybrid contract, containing the delivery of the system for EUR 80m (= USD 100m / EURUSD 1.25) as the host contract and a buy USD/ sell EUR forward FX contract amounting to EUR 80m as the FX-ED.

**Accounting Treatment**

The FX-ED is recognized initially on January 15, 20X3, because the sales contract is approved and becomes legally effective on that date.
The FX-ED is measured at fair value with fair value changes recognized in statement of income. At contract inception, the FX-ED has a value of zero and therefore no journal entries are necessary.

On March 31, 20X3 – which is the assumed to be a reporting date – a remeasurement of the FX-ED needs to be performed. Using the forward rate prevailing at the reporting period, the remeasurement yields a fair value of the FX-ED of EUR 10.1m (= (USD 100m / EURUSD 1.11) - EUR 80m). For other reporting periods the remeasurement is performed in the same way and will not be demonstrated again.

On July 15, 20X3 revenue is recognized and a trade receivable is posted, whereas the FX-ED needs to be measured one last time and is then reclassified as an adjustment to revenue. The last measurement of the FX-ED is performed using the spot rate prevailing at the date of revenue recognition and results in a fair value of EUR 20m (= USD 100m / EURUSD 1.00) - EUR 80m).

After the remeasurement the reclassification is performed as follows:

Reclassification of the FX-ED

<table>
<thead>
<tr>
<th>Foreign currency receivable posted at spot rate: EUR 100m</th>
<th>Sales revenue recognized at spot rate as of transaction date: EUR 100m</th>
<th>Adjustment: EUR 20m</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales revenue recognized at forward rate as of signing date: EUR 80m</td>
<td>Reclassification of FX-ED measured at fair value: EUR 20m</td>
<td></td>
</tr>
</tbody>
</table>

The reclassification is performed in two steps. First, the sales revenue is recognized at the current spot rate of EURUSD 1.0 amounting to EUR 100m. Second, the sales revenue is adjusted by reclassification of the fair value of the FX-ED of EUR 20m.

As a result, the sales revenue is shown at an amount of EUR 80m, which equals the forward rate of EURUSD 1.25 applicable as of January 15, 20X3, the date of the contract inception.

Example 2 - Completed-Performance Method + Advance Payments

Issue

In contrast to example 1 (completed-performance method), payment is not due on August 30, 20X3, but made in advance on May 15, 20X3.

For the EURUSD foreign exchange rate the following information is provided:

- Forward rate for May 15, 20X3 as of January 15, 20X3 EURUSD 1.28
- Forward rate for May 15, 20X3 as of March 31, 20X3 EURUSD 1.14
- Spot rate as of May 15, 20X3 EURUSD 1.05
- Spot rate as of July 15, 20X3 EURUSD 1.00

The following graphic illustrates the issue:
The sales contract is a hybrid contract, containing the delivery of the system for EUR 78.1m (= USD 100m / EURUSD 1.28) as the host contract and a EURUSD forward FX contract amounting to EUR 78.1m as the FX-ED.

**Accounting Treatment**

The payment date is now before revenue recognition and thus also before the posting of the trade receivable, which is July 15, 20X3. Therefore, the FX-ED is measured one last time on May 15, 20X3 and stays accounted for at frozen fair value until the receivable is recognized. The last measurement is performed using the spot rate prevailing at the date of payment, which results in a fair value of EUR 17.1m (= [USD 100m / EURUSD 1.05] - EUR 78.1m).

Reclassification is not performed until the revenue from the host contract is recognized. The reclassification is again performed in two steps. First, the sales revenue is recognized at the current spot rate of EURUSD 1.00 amounting to EUR 100m. Second, the sales revenue is adjusted by reclassification of the fair value of the FX-ED of EUR 17.1m. As a result, the sales revenue is shown at an amount of EUR 82.9m (= EUR 100m - EUR 17.1m).

In comparison to example 1, the revenue is EUR 2.9m (= EUR 82.9m - EUR 80m) higher. This total effect is due to two divergent effects which cause revenue changes of EUR 4.8m and EUR -1.9m respectively:

- **EUR 4.8m** is due to difference in spot rates. On May 15, 20X3, the spot rate is EURUSD 1.05, whereas on July 15, 20X3 it is 1.00. The difference of 0.05 (= EURUSD 1.05 - EURUSD 1.00) causes the revenue to be higher by EUR 4.8m (= [USD 100m / EURUSD 1.00] - [USD 100m / EURUSD 1.05]).

- **EUR -1.9m** is due to the difference in forward rates. On January 15, 20X3 in both examples different forward rates need to be used for calculating the expected revenue from the host contract. In the first example, for July 15, 20X3 a forward rate of EURUSD 1.25 is used, whereas in the second example for May 15, 20X3 a forward rate of EURUSD 1.28 was used. This difference in the forward rates of -0.03 (= EURUSD 1.25 - EURUSD 1.28) causes the revenue to be lower by EUR 1.9m (= [USD 100m / EURUSD 1.28] - [USD 100m / EURUSD 1.25]).

**Example 3 - PoC Method**

**Issue**

In contrast to Example 1 and 2, revenue is not recognized according to the completed-performance method, but according to the percentage-of-completion (PoC) method.

Assume the contract price of USD 100m is paid in two progress billings:

- Progress billing 1: USD 60m is expected on May 15, 20X3
- Progress billing 2: USD 40m is expected on June 30, 20X3

For the EURUSD foreign exchange rate, the following information is provided:

- Forward rate for May 15, 20X3 as of January 15, 20X3: EURUSD 1.28
- Forward rate for May 15, 20X3 as of March 31, 20X3: EURUSD 1.14
- Spot rate as of May 15, 20X3: EURUSD 1.05
Forward rate for June 30, 20X3 as of January 15, 20X3  EURUSD 1.27
- Forward rate for June 30, 20X3 as of March 31, 20X3  EURUSD 1.12
- Spot rate as of June 30, 20X3  EURUSD 1.03

The following graphic illustrates the issue:

Example 3 – contract dates and foreign exchange rates

At contract inception, the contract price of USD 100m equals EUR 78.4m, which falls upon progress billing 1 in the amount of **EUR 46.9m** (= USD 60m / EURUSD 1.28) and progress billing 2 in the amount of **EUR 31.5m** (= USD 40m / EURUSD 1.27).

The sales contract is a hybrid contract, containing the delivery of the system for EUR 78.4m as the host contract and a buy USD/ sell EUR forward FX contract amounting to EUR 78.4m as the FX-ED.

**Accounting Treatment**

As the progress billings are received at different times, there are two separate cash flows and an FX-ED has to be recognized for each cash flow.

When a progress billing is accounted for, the respective FX-ED is derecognized. This means that the FX-ED is measured one last time and is reclassified as an adjustment to revenue afterwards.

On May 15, 20X3, the FX-ED for progress billing 1 is remeasured at the current spot rate of EURUSD 1.05, which yields a fair value of **EUR 10.2m** (= USD 60 / EURUSD 1.05) - EUR 46.9). The reclassification of progress billing 1 is again performed in two steps. First, the sales revenue is recognized at the current spot rate of EURUSD 1.05 amounting to EUR 57.1m (= USD 60m / EURUSD 1.05). Second, the sales revenue is adjusted by reclassifying the fair value of the FX-ED at its remeasured fair value of EUR 10.2m. As a result the sales revenue is shown at an amount of **EUR 46.9m** (= EUR 57.1m - EUR 10.2m).

On June 30, 20X3, the FX-ED for progress billing 2 is remeasured at the current spot rate of EURUSD 1.03 which yields a fair value of **EUR 7.3m** (= USD 40 / EURUSD 1.03) - EUR 31.5). The reclassification of progress billing 2 is again performed in two steps. First, the sales revenue is recognized at the current spot rate of EURUSD 1.03 amounting to EUR 38.8m (= USD 40m / EURUSD 1.03). Second, the sales revenue is adjusted by reclassifying the fair value of the FX-ED of EUR 7.3m. As a result the sales revenue is shown at an amount of **EUR 31.5m** (= EUR 38.8 - EUR 7.3m). This corresponds with the recognition of the revenue from progress billing 2 with the forward rate of EURUSD 1.27 at the inception of the sales contract.

As a result, the total sales revenue amounts to **EUR 78.4m**, whereas EUR 46.9m fall upon progress billing 1 and EUR 31.5m on progress billing 2. The revenue recognized equals the contract price in USD converted with the forward rates (EURUSD 1.28, EURUSD 1.27) applicable as of January 15, 20X3, the date when the criteria for the
existence of a legal contract were fulfilled.
Detail: Interaction with Hedge Accounting

Explanation
Hedge accounting and accounting for FX-EDs both belong to the most complex topics in financial accounting. Furthermore, it is even harder to understand the link between these two topics. The link is best explained by discussing the aims and effects of both topics first. Afterwards, the interaction between both topics is discussed and the accounting rules are shown in more detail.

This leads to the following structure of the Sub Lecture:

1. Effects of Applying **Hedge Accounting**

2. Effects of **Separating FX-EDs**

3. **Interaction** between FX-EDs and Hedge Accounting

4. Rules for the Application of Hedge Accounting when there are FX-EDs

5. Consequence for **Earnings Volatility**

In general, if an FX-ED is separated, hedge accounting is not allowed, but is usually not needed anyway. This is explained in more detail in the next paragraphs.

1. Effects of Applying Hedge Accounting

Hedge accounting aims at avoiding earnings volatility, which arises because the hedged item and the hedging instrument are treated differently under general accounting principles:

- The **host contract** is not recognized as long as it is pending. From inception of the contract until recognition of a receivable/payable foreign currency effects are not captured.
- If the **hedging instrument** is a foreign currency derivative, e.g., a forward FX contract, it is recognized at inception of the contract and accounted for at fair value through profit or loss.

This asymmetric treatment of the host contract and the hedging instrument under general accounting policies causes earnings volatility. If a sales or purchase contract is economically hedged, presenting volatile earnings would not present a true and fair view of the foreign currency risk. Therefore, hedge accounting can be used to avoid earnings volatility.

If **cash flow hedge accounting** is applied, earnings volatility is avoided by deferring the recognition of fair value changes of the hedging instrument in the statement of income.

Further information on hedge accounting is provided in the Sub Lectures Fundamentals of Hedge Accounting as well as Cash Flow Hedge Accounting.

2. Effects of Separating FX-EDs

When an FX-ED is separated, the foreign currency risk included in a sales or purchase contract denominated in foreign currency is immediately captured in the financial statements, although the underlying host contract has not been recognized yet. As the FX-ED is remeasured at every reporting period at its fair value, the fair value changes are captured in the statement of income.

3. Interaction Between FX-EDs and Hedge Accounting

As a result, if an FX-ED is separated, there is no earnings volatility and hedge accounting does not need to be applied. This is because, both the FX derivative used for the economic hedging and the FX-ED are accounted for at fair value through profit or loss and thus the fair value changes offset each other.

This is illustrated by the graphic below:
The application of hedge accounting although an FX-ED is separated is not needed and not allowed.

For instance, if cash flow hedge accounting is applied, the fair value changes of the FX derivative used for the economic hedging are not captured in the statement of income, but stored in a special position in equity. If an FX-ED was separated, the fair value changes of the FX-ED and the hedging derivative could not offset each other, which leads to earnings volatility.

4. Rules for the Application of Hedge Accounting when there are FX-EDs

Hedge accounting cannot be applied, if an

- FX-ED was separated or
- FX-ED was not separated only because the following Siemens specific reliefs are applied:
  a) Materiality threshold
  b) Simplification rule for contracts between fully consolidated companies

For further information on the Siemens specific reliefs please refer to the overview page of this Sub Lecture- Embedded FX Derivatives (FX-EDs).

The prohibition to apply hedge accounting if an FX-ED was separated is in line with the aim of hedge accounting, which is to avoid earnings volatility. Hedge accounting is also prohibited if an FX-ED was not separated only due to the Siemens specific reliefs. This is because the accounting standard setter did not consider company specific reliefs when developing the rules for the application of hedge accounting.

For contracts which contain an FX-ED, the question of whether hedge accounting can applied, can be answered by using the following decision tree:
It is apparent, that the decision tree is based on the rules presented above:

- If an FX-ED was separated, hedge accounting cannot be applied.
- Hedge accounting can also not be applied if an FX-ED was not separated only due to the Siemens specific relief (materiality threshold + fully consolidated companies). Recall that the decision tree for FX-ED comprises four criteria. When the Siemens specific reliefs, which make up the first two criteria, are not considered, only the last two criteria are left. This means that, if the Siemens specific reliefs were applied for separating FX-EDs, the last two criteria (functional currency + commonly used currency) also need to be tested to determine whether hedge accounting can be applied. If either the 'functional currency criterium' or the 'commonly used currency criterium' is fulfilled, no FX-ED needs to be separated and hedge accounting can be applied.

More information on the two separation criteria is provided in the respective Details sections.

5. Consequences for Earnings Volatility

As mentioned, for contracts which are hedged with an FX derivative, there is no earnings volatility if an FX-ED is separated. This also holds if no FX-ED is separated and hedge accounting can be applied. However, if an FX-ED is not separated and hedge accounting cannot be applied, there is periodic earnings volatility. The following flow chart can be used to evaluate...
Whether there is earnings volatility in contracts which contain an FX-ED and are hedged by an FX derivative:

### Evaluation of earnings volatility

**Contract containing an FX-ED**

**Was an FX-ED separated?**

**Yes**

**No volatility**

1. **FX-ED**: Recognized at fair value through profit or loss
2. **FX derivative**: Recognized at fair value through profit or loss

= **No volatility**

**No**

**Can hedge accounting be applied?**

**Yes**

**No volatility**

1. **FX-ED**: Not recognized
2. **FX derivative**: Fair value changes stored in OCE

= **No volatility**

**No**

**Volatility**

1. **FX-ED**: Not recognized
2. **FX derivative**: Recognized at fair value through profit or loss

= **Periodic volatility**

---

If an FX-ED is not separated and hedge accounting cannot be applied, there is periodic earnings volatility which cannot be avoided.

**Example**
Hedge accounting cannot be applied if an FX-ED is separated or would be separated without the Siemens specific reliefs. However, if an FX-ED is separated and the risk is economically hedged by an FX derivative, there is no earnings volatility anyway and hedge accounting is not needed and not allowed. To determine whether an FX-ED would be separated without the application of Siemens specific reliefs is challenging as it requires detailed knowledge of the separation criteria for FX-EDs. The major challenge lies in the testing of the two criteria referring to the functional currency of the substantial parties to the contract and the commonly used currency of the reporting entity.

The section provides two examples which illustrate the procedure of testing whether hedge accounting can be applied for contracts denominated in foreign currency.

**Example 1**

**Issue**
The Regional Siemens Company in Thailand (RC Thailand) signs a contract for the sale of a system for USD 100m to a customer in Thailand. This means that US dollar is the contract currency. Both contractual parties have Thai baht (THB) as their functional currency. In addition, in Thailand only THB is a commonly used currency. This issue is illustrated by the graphic below:

The system will be delivered seven months after signing the contract and payment of the sales price is expected one month after delivery of the system. For RC Thailand the contract is denominated in a foreign currency and causes a foreign exchange rate risk. Therefore, an USDTHB forward FX contract in the amount of USD 100m is concluded to hedge the risk economically.

**Accounting Treatment**
From an accounting point of view, the treatment of the two contracts needs to be determined:

- **Sales contract**
- **Forward FX contract**

Generally, forward FX contracts are capable of causing unwanted earnings volatility. Therefore, it needs to be checked whether there is earnings volatility and if hedge accounting can be applied.

In terms of accounting, the **forward FX contract** is a derivative financial instrument and therefore recognized in the statement of financial position at contract inception with a fair value of zero. It is remeasured at every reporting date with fair value changes captured in the statement of income.
**Sales contracts** are generally not recognized when they are pending. However, the current sales contract is denominated in foreign currency and therefore contains an FX-ED. The question is, whether the FX-ED has to be separately accounted for. Using the **four criteria decision** tree yields, that an FX-ED needs to be separated. This is because on one hand, the two Siemens specific reliefs can not be applied. On the other hand, the USD is not the functional currency of one of the substantial parties to the contract (RC Thailand or external customer Thailand) and is not a commonly used currency in Thailand.

The **FX-ED** is recognized at inception of the sales contract and remeasured at every reporting period with fair value changes in the statement of income.

As the pending sales contract denominated in a foreign currency contains an FX-ED which has to be separately accounted for, **hedge accounting cannot be applied**.

---

**Example 2**

**Issue**

To fulfill the sales contract with the external customer (see example 1), RC Thailand purchases a system for USD 40m from RC Russia. The functional currency is Thai baht (THB) for RC Thailand respectively Russian ruble (RUB) for RC Russia. In addition, in Thailand only THB is a commonly used currency, whereas in Russia besides the local currency (RUB) also euro (EUR) and US dollar (USD) are commonly used. This issue is illustrated by the graphic below:

**Example 2 – issue**

The system will be delivered three months after signing the contract and payment of the sales price is expected two weeks after delivery of the system.

For both Siemens entities involved, the USD is not the functional currency and the contract causes an exchange rate risk. Both entities decide to hedge the risk:

- RC Thailand: USD 40m forward FX contract (buy USD, sell THB)
- RC Russia: USD 40m forward FX contract (buy RUB, sell USD)

For RC Thailand an offsetting of **USD inflows** from the sales contract and **USD outflows** from the intercompany purchase contract is not possible due to **periodic differences**.
Accounting Treatment

Similar to the first example, both the underlying purchase contract as well as the forward FX contract need to be assessed. In addition, the need and legitimacy for hedge accounting is evaluated. This is done for both Siemens entities separately.

a) RC Thailand

The forward FX contract is measured at fair value, with fair value changes captured in the statement of income.

The purchase contract is not recognized until delivery of the system. An FX-ED does not need to be separated, as the simplification rule for intercompany transactions between fully consolidated companies applies.

As no FX-ED is recognized, the asymmetric treatment of FX-ED and forward FX contract causes periodic earnings volatility. In order to eliminate such effects, hedge accounting may be applied.

For the question of whether hedge accounting can be applied, the Siemens specific reliefs must not be considered. Therefore, it needs to be assessed if an FX-ED would be separated if the simplification rule would not exist. This is done by testing the two remaining separation criteria, when the two Siemens specific reliefs are not considered. These two remaining criteria are the 'functional currency criterion' and the 'commonly used currency criterion'.

As the USD is not the functional currency of one of the substantial parties to the contract (RC Thailand and RC Russia) and is not a commonly used currency in Thailand, an FX-ED would be separated, without the simplification rule. This means that hedge accounting cannot be applied.

The purchase contract causes earnings volatility at RC Thailand because the forward FX contract is measured at fair value through profit or loss and hedge accounting cannot be applied.

b) RC Russia

For RC Russia, the contract is a sales contract. However, the accounting treatment needs to be evaluated also for the forward and for the sales contract.

The forward FX contract is again measured at fair value through profit or loss. Furthermore, the FX-ED included in the contract with RC Thailand is not recognized as the simplification rule for intercompany transactions between fully consolidated companies applies.

As no FX-ED is recognized, the asymmetric treatment of FX-ED and forward FX contract causes periodic earnings volatility. In order to eliminate such effects, hedge accounting may be applied.

For the question of whether hedge accounting can be applied, the Siemens specific reliefs must not be considered. Therefore, it needs to be assessed if an FX-ED would be separated if the simplification rule would not exist. This is done by testing the two remaining separation criteria, when the two Siemens specific reliefs are not considered. These two remaining criteria are the 'functional currency criterion' and the 'commonly used currency criterion'.

The USD is not the functional currency of one of the substantial parties to the contract (RC Thailand (THB) and RC Russia (RUB)). Therefore, the commonly 'used currency criterion' needs to be tested.

The commonly used currency criterion is tested from the viewpoint of the reporting entity. This means that the commonly used currency is determined for RC Russia. In Russia, besides the local currency (RUB), also the euro (EUR) and the US dollar (USD) are commonly used. This means that the contractual currency (USD) is a commonly used currency in Russia and no FX-ED would be separated, even without the Siemens specific reliefs. Therefore, hedge accounting can be applied.
As hedge accounting can be applied at RC Russia, earnings volatility can be avoided.

For further information on the separation criteria 'functional currency' and 'commonly used currency' please refer to the respective Details sections in this Sub lecture.
Sub Lecture: Fundamentals of Hedge Accounting

At Siemens, currency risk arising from foreign currency exposure is managed using different strategies, the most important of which is hedging.

The basic principles of hedging are explained in the Sub Lecture Foreign Currency Exposure and Management. Understanding these principles is very important for understanding this Sub Lecture.

A general principle is that hedge accounting is not the same as hedging. Whereas hedging aims to offset the currency risk from an economic point of view, hedge accounting aims to eliminate currency-related – but hedged – earnings volatility from an accounting point of view.

This difference is caused by the following circumstances: Although hedging avoids currency risk from an economic point of view, the application of the general accounting rules sometimes causes unwanted earnings volatility in the statement of income, even if the currency risk has been hedged completely. This is because both the hedged item and the hedging instrument are treated differently when the general accounting rules are applied. In particular, the foreign currency derivatives used for hedging are recognized immediately (i.e., when the entity becomes a party to the contractual provisions of the instrument) and measured at fair value through profit or loss, whereas the underlying sales or purchase contract is recognized at a later point in time. This asymmetric treatment of hedged item and hedging instrument causes unwanted earnings volatility which can be avoided by applying hedge accounting.

Hedge accounting can however only be applied if certain requirements are met. This page provides an overview of the fundamentals of hedge accounting and contains the following sections:

1. Hedging and Hedge Accounting
2. Requirements for Hedge Accounting

The Details sections of this Sub Lecture provide an in depth explanation of the requirements for hedge accounting.

1. Hedging and Hedge Accounting

The aim of hedge accounting is to avoid periodic earnings volatility in the statement of income for transactions which are hedged economically. This is best illustrated using an example:

In January 20X4, a Siemens entity in Germany (functional currency: euro) enters into a sales contract in Pound Sterling (GBP) with a customer in Great Britain. The sales price of GBP 100m is expected to be paid in August, 20X4. At inception of the sales contract, the exchange rate is EURGBP 1.00. This means that the contract price of EUR 100m equals GBP 100m. As the contract is denominated in GBP and payment is expected only in a few month time the sales contract is exposed to a exchange rate risk.

a) Hedging

In order to hedge this risk the Siemens entity concludes a EURGBP forward FX contract, with a forward rate of EURGBP 1.00. This means that Siemens can sell the GBP 100m and in turn receives a fixed amount of EUR 100m for it. From an economic perspective, the risk of movements in the foreign exchange rate is hedged effectively. This is because, the exchange rate effects on the sales contract and on the forward FX contract exactly offset each other.

b) General Accounting Rules

However, when the general accounting rules are applied, there can be periodic earnings volatility although the transaction is effectively hedged. As additional information assume, that a reporting period ends in March. At the reporting date, the current spot rate is EURGBP 1.11.

As the exchange rate has changed, the expected payment of GBP 100m is now worth only EUR 90m. Therefore, the value of the hedged item, i.e., the sales contract has declined by EUR -10m (= [GBP 100m / EURGBP 1.11] - [GBP 100m / EURGBP 1.00]). However, the fair value of the hedging instrument, i.e., the forward FX contract has risen to EUR 10m (= [GBP 100m / EURGBP 1.00] - [GBP 100m / EURGBP 1.11]). Please note, that the effects exactly offset each other and the economic risk is zero.
Under general accounting rules, the loss on the hedged item of EUR -10m is not recognized, because the sales contract is still pending, i.e., it has not been fulfilled by either party. In contrast, under general accounting rules the hedging instrument, i.e., the forward FX contract, is recognized immediately (i.e., when the entity becomes a party to the contractual provisions of the instrument) and the gain of EUR 10m is recognized in the statement of income. Therefore, as at the end of March, for the hedged sale a profit of EUR 10m is shown in the statement of income, although the economic risk is zero.

**c) Hedge Accounting Rules**

The mismatch of the economic and the accounting point of view can be avoided by using hedge accounting. Hedge accounting aligns the accounting point of view with the economic point of view. For the hedged sale this means that in the statement of income no earnings volatility arises. Generally this can be achieved in two ways:

- **Cash flow hedge accounting**: The gain on the hedging instrument of EUR 10m is not recognized in the statement of income but a position in equity referred to as other components of equity (OCE). As a result, the loss on the hedged item and the gain on the hedging instrument are both not recognized in the statement of income and for the reporting period ending in March, the effect on the statement of income is zero.

- **Fair value hedge accounting**: Provided that fair value hedge accounting can be applied, the loss on the hedged item of EUR -10m – although not possible under general accounting rules – is recognized in the statement of income. As a result, the gain on the hedging instrument and the loss on the hedged item are both recognized in the statement of income and for the reporting period ending in March, the effect on the statement of income is zero.

The following graphic uses the numbers from the example above and shows the mismatch of the economic and the accounting perspective in the statement of income, when the general accounting rules are used. Furthermore, it illustrates how both types of hedge accounting solve that mismatch in the statement of income:

![Alignment of accounting with economic perspective through hedge accounting](alignment.png)

Please note that despite there is no impact on the statement of income when cash flow hedge accounting is applied, there is an impact on OCE.

Further information please refer to the Details section **Hedging and Hedge Accounting** in this Sub Lecture.

⚠️ **It is prohibited to apply fair value hedge accounting due to foreign currency risk at Siemens.** To avoid earnings volatility cash flow hedge accounting must be applied.
The example above illustrated the general need for hedge accounting and provided insights how the aim of hedge accounting is achieved. In the next paragraphs, a more theoretical recap is given.

Under general accounting rules there is periodic earnings volatility, when foreign currency derivatives are used for hedging. As illustrated in the following graphic, this is because foreign currency derivatives are recognized immediately, whereas the underlying sales or purchase contract is recognized at a later point in time. This timing difference in recognition causes the periodic earnings volatility.

As mentioned, in hedge accounting there are two types of hedge accounting relationships: cash flow hedge accounting and fair value hedge accounting. Both types avoid periodic earnings volatility in the statement of income, but the aim is accomplished in a different manner.

When fair value hedge accounting is applied, the hedging instrument is still accounted for under general accounting rules, i.e., it is recognized immediately (i.e., when the entity becomes a party to the contractual provisions of the instrument). However, the accounting treatment of the hedged item is changed when fair value hedge accounting is applied. In contrast to the treatment under general accounting rules, the hedged item is now recognized immediately, i.e., at inception of the sales or purchase contract as far as it relates to the hedged risk. Therefore, the fair value changes of the hedged item and the hedging instrument offset each other in the statement of income and there is no periodic earnings volatility.

When cash flow hedge accounting is applied, the hedged item is still accounted for under general accounting rules, i.e., it is not recognized as long as it is pending. However, the accounting treatment of the hedging instrument is changed. In contrast to the treatment under general accounting rules, the fair value changes of the hedging instrument are now not recognized in the statement of income, but recognized in a special position in equity referred to as other components of equity (OCE). In consequence, the fair value changes of the hedged item and the hedging instrument are both not recognized in the statement of income and there is no periodic earnings volatility.

The following graphic illustrates how the fair value changes of the hedged item and the hedging instrument are treated in the statement of income when either the general accounting rules or hedge accounting rules are applied:

> **Impact of the application of hedge accounting on earnings volatility**

<table>
<thead>
<tr>
<th>Accounting perspective</th>
<th>General accounting rules</th>
<th>Hedge accounting rules</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Cash flow hedge accounting</td>
</tr>
<tr>
<td>Hedged item</td>
<td>Not recognized</td>
<td>Not recognized</td>
</tr>
<tr>
<td>Hedging instrument</td>
<td>Recognized</td>
<td>Not recognized (in the income statement)</td>
</tr>
</tbody>
</table>

Volatility | No volatility | No volatility

It is prohibited to apply fair value hedge accounting due to foreign currency risk at Siemens. To avoid earnings volatility cash flow hedge accounting must be applied.
Further information on cash flow hedge accounting is provided in the Sub Lecture [Cash Flow Hedge Accounting]

As hedge accounting changes the general accounting treatment to align the accounting with the economic view, certain requirements need to be met for its application. These requirements are explained in the next paragraphs.

2. Requirements for Hedge Accounting

To apply hedge accounting, certain requirements have to be met in order to ensure that hedge accounting is only applied if the hedge is highly effective, i.e., that the currency risk of the underlying hedged transaction is as far as possible mitigated. Otherwise the application of hedge accounting would lead to a deferred recognition of foreign currency gains or losses from the statement of income which is not justified as there is in fact an economic risk. There are four requirements that have to be fulfilled cumulatively. The four requirements and their dependency amongst each other are illustrated in the following graphic:

![Requirements for the application of hedge accounting](image)

Each requirement for applying hedge accounting will now be explained further:

a) Hedged Item

The hedged item is the economic transaction that causes the risk that needs to be hedged. In foreign currency accounting possible hedged items include highly probable forecast transactions and firm commitments arising from pending sales or purchase contracts in foreign currency. This will therefore be explained in further detail:

- Highly probable forecast transactions are planned sales or planned purchase orders.
- Firm commitments are purchase or sales contracts that are approved and legally effective but not yet completed by either of the parties.

Please note that internal transactions (i.e., internal firm commitments and internal forecast transactions) must only be designated as hedged items if the internal transaction is directed at sales outside the Siemens Group.

> Keep in mind, that firm commitments and highly probable forecast transactions qualify as hedged items in foreign currency cash flow hedge accounting.

In general, cash flow hedge accounting can be applied to either highly probable forecast transactions or firm commitments, whereas fair value hedge accounting applies only to firm commitments. However, as fair value hedges for currency hedges is prohibited at Siemens, for both firm commitments and highly probable forecast transactions always cash flow hedge accounting is applied.

The graphic below illustrates where firm commitments and highly probable forecast transactions apply within the different phases of an economic transaction.
A more detailed explanation of highly probable forecast transactions and firm commitments is provided in the Details section of the document.

b) Hedging Instrument

The hedging instrument is a derivative instrument used to offset the currency risk caused by the hedged item. For hedge accounting, all derivative instruments (e.g., forward exchange contracts or purchased currency options), except written options (short call, short put), may be designated as hedging instruments.

At Siemens, the most common hedging instruments are forward FX contracts, but also purchased currency options are used.

For further information about hedging instruments please refer to the respective Details section of this Sub lecture.

c) Effectiveness

An important requirement for the application of hedge accounting is the effectiveness of the underlying hedging relationship. Effectiveness means that currency-related fair value or cash flow changes of the hedged item and the hedging instrument offset each other.

To fulfill the requirements for the application of hedge accounting to be applied, it is necessary to test effectiveness:

- At the inception of the hedge accounting relationship and
- At least quarterly on the respective reporting dates

At inception of the hedge accounting relationship and at the subsequent reporting dates, the test is performed prospectively.

The actual effectiveness test is performed by using quantitative (e.g., dollar-offset method) as well as qualitative methods (e.g., critical-term match).

Keep in mind: No effectiveness – no hedge accounting! Therefore, effectiveness must be tested at the inception of the hedge accounting relationship and at least quarterly.

For a more detailed explanation of effectiveness, please see the Details section about the Effectiveness test.

d) Documentation

To fulfill the requirements for the application of hedge accounting, extensive documentation requirements have to be met. Documentation must be prepared at inception of the hedge accounting relationship and has to be updated quarterly.

The documentation requirements for applying hedge accounting are as follows:
• Nature of the **hedged risk**
• **Risk management objective** and strategy
• Clear identification and description of the **hedged item**
• Clear identification and description of the **hedging instrument**
• Methods for assessing and measuring **effectiveness** as well as result of the effectiveness test (economic relationship, potential sources of ineffectiveness).

Keep in mind: No documentation – no hedge accounting! Documentation must be provided at the inception of the hedge accounting relationship. **Retrospective preparation** of documentation is **not permitted**.

For further information, please refer to the Details section > [Documentation Requirements](#).
Detail: Hedging and Hedge Accounting

Explanation
The result of a hedge is a reduction of currency risk. This is not to be confused with hedge accounting. Hedge accounting is the accounting response to a hedge. It aims to give a true and fair view of the currency risk that remains after hedging. Hedge accounting rules are necessary because for transactions which are hedged, the general accounting rules sometimes do not lead to a true and fair view of the currency risk by themselves.

In this section, the difference between hedging and hedge accounting is illustrated using an example. The example shown here differs from the one introduced on the overview page regarding the issue, the level of detail and the way the case is visualized. For the current example, after outlining the issue, the economic point of view as well as the accounting point of view is explained. Therefore, this section comprises the following paragraphs:

1. Economic point of view
2. Accounting point of view
   2.1 General Accounting Rules
   2.2 Cash Flow Hedge Accounting

The economic and the accounting point of view is illustrated by using a planned sales contract. In particular, a Siemens entity in Spain (functional currency: euro) plans to sell goods to a company in the US. The goods will be paid in US dollars in 12 months. Due to possible exchange rate movements between the US dollar and the euro, the transaction, which is referred to as the hedged item, causes a currency risk.

1. Economic Point of View
In order to hedge this risk, a forward FX contract is used. This forward FX contract is referred to as the hedging instrument. The forward FX contract is concluded at the planning event of the transaction. It enables the Siemens entity to sell the US dollars it will receive on the payment date in 12 months time at a fixed exchange rate. As a result, even if the EURUSD exchange rate strengthens during the next 12 months, no currency loss will occur due to the hedge. If, on the other hand, the EURUSD exchange rate weakens during the project, no currency gain will occur due to the hedge.

From an economic point of view, the currency risk of this hedged sales transaction is eliminated. In the following graphic this is illustrated by the orange line. No matter how the exchange rate changes the economic risk is always zero, because the gains or losses from the hedging instrument (shown by blue line) always exactly offset the losses or gains from on the hedged item (shown by green line).

![Hedging a sale via a forward contract diagram](image)

Additional information: forward FX contract
For example, for an exchange rate of EURUSD 1.30, there is a gain on the forward FX contract and at the same time there is a loss on the hedge item. As both offset each other, there is no economic risk.

Please note, that the currency gains or losses on the hedged item have not been incurred yet, as the hedged item is a planned sales contract. Therefore, the currency gains or losses can be interpreted as deviations from the planned numbers.

This is the basic principle of a hedge as it is already explained in the Sub Lecture Foreign Currency Exposure and Management.

2. Accounting Point of View

The hedged planned sales transaction also needs to be evaluated from an accounting point of view. At first, hedge accounting rules are not applied in order to show the problems that arise when the general accounting rules are applied to the hedged planned sales transaction. Afterwards the accounting treatment is shown for the situation when cash flow hedge accounting is applied to show that the problems arising under general accounting rules are solved.

From an accounting perspective the hedged planned sales transaction comprises of two elements. For both, the accounting treatment has to be discussed:

- The sales contract (hedged item)
- The forward FX contract (hedging instrument)

As mentioned, the accounting treatment under the general accounting rules is evaluated first, whereas the treatment under cash flow hedge accounting rules is discussed afterwards.

2.1 General Accounting Rule

The hedging instrument, namely the forward FX contract, is accounted for at its fair value from the date of the conclusion of the forward FX contract until the settlement date. This means that the fair value changes caused by changes to the EURUSD exchange rate and the interest component expressed by forward points are recorded in the statement of income from the time the forward FX contract is concluded at the planning event until the settlement of the forward FX contract when the customer payment is received.

The hedged item, the planned sales transaction, is only recognized in the statement of financial position once it is not pending anymore i.e., an FX-denominated receivable is recognized from the sales transaction. An earlier recognition of the sales transaction as a forecast transaction or a firm commitment is not possible according to IFRS. As a result of this late recognition of the sales transaction, the fair value changes of the planned sales transaction caused by changes in the EURUSD exchange rate are not recognized in the statement of income until an FX-denominated receivable is accounted for. When the FX-denominated receivable is recognized, all foreign currency influences are captured because it is a monetary balance sheet item and therefore measured at the current foreign exchange spot rate applicable the end of the reporting period.

As illustrated in the following graphic, there is periodic earnings volatility, because the foreign currency effects from the hedging instrument are recognized immediately (shown by blue line), whereas the foreign currency effects from the hedged item are not recognized in the statement of income (shown by faded green line) until the FX-denominated receivable is accounted for. The problem is that the foreign currency effects do not offset each other, i.e., there is earnings volatility, although the economic currency risk is zero (which is illustrated by the orange line).
From an economic point of view, this volatility shown in the graphic above does not exist as the foreign currency risk equals zero. To avoid earnings volatility and to give a true and fair view of the currency risk, there are special accounting rules called hedge accounting.

The objective of hedge accounting is to avoid earnings volatility in the statement of income. In theory, there are two different strategies for this: cash flow hedge accounting and fair value hedge accounting. However, as it is prohibited to apply fair value hedge accounting due to foreign currency risk for contracts concluded after September 30, 2012, only cash flow hedge accounting is described further below.

2.2 Cash Flow Hedge Accounting
When cash flow hedge accounting is applied, only the accounting of the hedging instrument is changed, whereas the hedged item is still accounted for under general accounting rules.

To be more precise, the fair value changes of the hedging instrument caused by currency movements are not recognized in the statement of income but in a special position in equity known as other components of equity (OCE). In contrast to the hedging instrument, the hedged item is not recognized until the recognition of an FX-denominated receivable or payable.

This treatment of recognizing fair value changes in OCE is shown in the two graphics below.
The following graphic shows how the application of cash flow hedge accounting avoids volatility in the statement of income. As illustrated by the orange line, there is no economic risk, but there is also no earnings volatility. This is because the exchange rate effects on both the hedging instrument (shown by faded blue line) as well as on the hedge item (shown by faded green line) are not recognized in the statement of income.

For further information about cash flow hedge accounting, please refer to the Sub Lecture Cash Flow Hedge Accounting.
Detail: Hedged Items in Hedge Accounting

Explanation
Economic transactions that cause currency risk are often hedged. These transactions are then called hedged items. However, only certain transactions qualify as hedged items in hedge accounting, whereas other transactions cannot be used. In addition, even if items qualify for hedge accounting, it might be practicable to designate only a portion of a hedged item or to group several hedged items with similar risk characteristics into one hedging relationship. Therefore, this section contains the following paragraphs:

1. Forecast transactions and firm commitments as hedged items
2. Splitting and combining hedged items
3. Items that cannot be designated as hedged items for hedge accounting

1. Forecast Transactions and Firm Commitments as Hedged Items

In foreign currency hedge accounting possible hedged items include highly probable forecast transactions and firm commitments. They arise either from planned or pending purchase or sales contracts denominated in foreign currency.

However, in hedge accounting there are two types of hedge accounting relationships: Cash flow hedge accounting and fair value hedge accounting. In fair value hedge accounting only firm commitments can be designated as hedged items, whereas in cash flow hedge accounting both highly probable forecast transaction and firm commitments qualify as hedged items. At Siemens, only cash flow hedge accounting is allowed for currency risk, therefore, highly probable forecast transactions and firm commitments can be designated as hedged items. This is illustrated in the graphic below.

![Hedged items in cash flow hedge accounting](image)

a) Forecast Transactions
In general, highly probable forecast transactions are forecasted and planned sales or purchase orders.

b) Firm commitments
Firm commitments are pending purchase or sales contracts, i.e., that they are approved and legally effective but not yet completed by either of the parties.

2. Splitting and Combining Hedged Items

Under certain circumstances it might be practicable to hedge only a portion of a hedged item or to group several hedged items with similar risk characteristics into one hedging relationship. A hedged item can be split if only a portion of its currency risk is to be hedged. Therefore, only a proportion of the item, for example 45%, can be designated as a hedged item in a hedge accounting relationship.

A combination of several hedged items in one hedge accounting relationship is possible if

- the combined items have similar risk characteristics and
- combining does not lead to net positions, i.e., only future cash receipts or future cash payables are aggregated.
This **second requirement** concerning net positions is explained using an example.

A Siemens entity whose functional currency is the euro has **three firm commitments** for which the following payments are expected at the end of March 20X3:

- \( USD +100m \) Cash receipt A from pending sales contract
- \( USD + 50m \) Cash receipt B from pending sales contract
- \( USD - 75m \) Cash payment C from pending purchase order

\[
\begin{align*}
\text{Net position} &= \text{USD} + 75m
\end{align*}
\]

These positions can be combined appropriately as hedged items in a hedging relationship in the following different ways:

- Each firm commitment is designated to an individual hedge accounting relationship using a separate hedging instrument
- The two cash receipts A and B are combined to form one aggregated hedged item of USD 150m. Cash payment C is another hedged item of USD 75m.
- 50% of cash receipts A and B are designated as one hedged item of USD 75m. The remaining amounts of USD 75m from cash receipts A and B and USD 75m of cash payment C offset each other and do not need to be hedged.

Hedge accounting would **not** be permissible if the sum of all three firm commitments (A, B and C) — amounting to a **net position** of USD 75m — were designated as a **single hedged item**. The reason for this is that **hedge accounting does not permit the designation of a net position** as a hedged item.

### 3. Items That Cannot Be Designated As Hedged Items for Hedge Accounting

Some items can **never be designated** as hedged items. These are:

- General business risks
- Own equity instruments and related forecast transactions
- **Fully consolidated companies**
- Sales or purchase contracts containing embedded foreign currency derivatives (FX-ED), if an FX-ED was separated or would be separated without the Siemens specific reliefs

Further information about the application of hedge accounting when contracts contain FX-EDs is provided in the Sub Lecture [Embedded Foreign Currency Derivatives (FX-EDs)].

To summarize: **Hedged items** in foreign currency hedge accounting are always forecast transactions or firm commitments. They can be split or combined to reach an effective hedging relationship. When combining and splitting hedged items, a net position may not be constructed, as **net positions are not admissible as hedged items**.

### Example

A Siemens entity in the US (functional currency: US dollar) manufactures industrial steam turbines. For these turbines, the entity has several **sales orders** from customers in the euro zone (Germany, Spain) and has also ordered inventory from **suppliers** in France and Great Britain. All sales and purchase orders classify as **firm commitments** and their payments will be settled in euros (EUR) or, in the case of the British supplier, in pounds sterling (GBP). The foreign currency risk of these transactions will be 100% hedged.

The expected dates and amounts of cash receipts and cash payments are as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>Currency</th>
<th>Amount</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>March 3, 20X4</td>
<td>EUR</td>
<td>+ 1.5m</td>
<td>Cash receipt from customer A in Germany</td>
</tr>
<tr>
<td>March 3, 20X4</td>
<td>EUR</td>
<td>- 3.0m</td>
<td>Cash payment to supplier C in France</td>
</tr>
<tr>
<td>March 3, 20X4</td>
<td>GBP</td>
<td>- 1.2m</td>
<td>Cash payment to supplier D in Great Britain</td>
</tr>
</tbody>
</table>
These firm commitments can be either designated in individual hedge accounting relationships using separate hedging instruments or split and combined, taking into account the following considerations:

- The cash receipts from customers A and B expected on May 1 are combined into one hedged item of EUR 6m. However, the cash receipt from customer A, expected on March 3, cannot be designated in the same hedging relationship as it is not due on the same day as the others. Firm commitments that are due on different days cannot be combined into one hedging relationship.

- The cash payment to supplier C, due on March 3, can be split and only 50%, i.e., EUR 1.5m, are designated in a hedging relationship. The remaining EUR 1.5m cash payment of supplier C, due on March 3, and the cash receipt of EUR 1.5m from customer A, due on March 3, offset each other and do not need to be hedged.

- The GBP 1.2m cash payment to supplier D cannot be combined with other firm commitments as it is denominated in GBP whereas the other firm commitments are denominated in EUR. Firm commitments denominated in different currencies cannot be combined into one hedging relationship.

- The cash payment of EUR 3.0m to supplier C in France cannot be combined into a hedging relationship with the EUR 1.5m cash receipt from customer A. Even though they are both denominated in the same currency and due on the same day, combining is not possible as this would construct a net position. The hedging of net positions is not allowed for hedge accounting.
Detail: Hedging Instruments in Hedge Accounting

Explanation

Hedging instruments are used to offset the currency risk caused by the item that needs to be hedged e.g., a sales or purchase contract denominated in foreign currency. In this Detail section, further information is given about hedging instruments that can and cannot be used for hedge accounting.

Hedging Instruments that can be designated for Hedge Accounting

Hedging instruments that can be used for hedge accounting are:

- All stand-alone derivatives (e.g., forward FX contracts and purchased currency options) except written options (e.g., short calls or short puts)
- Embedded foreign currency derivatives (FX-EDs). However, FX-EDs might not qualify as hedging instruments because the critical terms of the FX-ED and the hedged item are not the same.

Further information about stand-alone derivatives is provided in the Details section Forward FX Contracts and Other Hedging Instruments within the Sub Lecture Foreign Currency Exposure and Management.

Embedded foreign currency derivatives are explained in the Sub Lecture Embedded Foreign Currency Derivatives (FX-EDs).

To achieve an effective hedging relationship it is sometimes necessary to split or combine hedging instruments. When splitting and combining hedging instruments, a hedging relationship may include:

- A partial amount of an entire hedging instrument (e.g., 50%)
- A combination of two or more derivatives (or partial amounts of them)

The following graphic illustrates how amounts of hedging instruments can be split and/or combined to match the amount of the hedged item. The hedged item shown in the graphic is a firm commitment with the amount of EUR 2m. An effective hedging relationship can for example be achieved in the two following ways:

- Combine the hedging instruments A and B with an amount of EUR 1m each.
- Split a hedging instrument with amount higher than EUR 2m, for example, designate only 80% out of the EUR 2.5m from hedging instrument C.
Note that the entire hedging instruments or a proportional amount of the entire hedging instrument may be designated in a hedge accounting relationship. In contrast, individual components in a derivative instrument (e.g., such as interest and foreign currency components) may generally not be designated as hedging instruments.

Although a proportional amount of an entire hedging instrument can be designated in hedge accounting, it is prohibited to designate only a part of the (remaining) maturity of a hedging instrument.

This will be explained in more detail in the following section, where the hedging instruments which cannot be used for hedge accounting are outlined.

**Hedging Instruments that cannot be used for Hedge Accounting**

When splitting hedging instruments in order to achieve an effective hedging relationship, the general rule is that a hedging instrument can only be designated in its entirety or a proportional amount thereof. This is because there is usually only one fair value for a hedging instrument, and each of the factors contributing to that fair value depend on each other.

Therefore, the following designations are not possible:

- A part of the remaining maturity during which a hedging instrument remains outstanding
- Separate components of a hedging instrument

**Part of Remaining Maturity**

As mentioned above, it is prohibited to designate only a part of the remaining maturity. For example if the remaining maturity is 180 days, a hedging relationship may not be restricted to the first 90 days, because it is only a part of the whole remaining maturity.

The prohibition is illustrated by the following graphic. The hedged item matures on October 30. Hedging instrument A has the same maturity and therefore qualifies as hedging instrument in hedge accounting. In contrast, hedging instrument B matures on December 14. In order for the hedge to be highly effective, the maturities of the hedged item and the hedging instrument need to match. As it is prohibited to designate only a part of the (remaining) maturity, hedging instrument B does not qualify as hedging instrument in hedge accounting.

![Matching of remaining maturities](image)

**Separate Components**

Concerning the designation of separate components of derivatives, splitting is permitted in certain exceptional cases when the fair value of a separate component can be measured separately. Components whose fair values can be separately measured and therefore can be split, are:

- **Options**: Intrinsic value and time value of an option contract
- **Forward FX contracts**: Spot element and interest element of a forward FX contract
Separating the intrinsic value and time value of an option contract means that only the **intrinsic value** of an option contract is designated as the hedging instrument.

Separating the spot element and interest element of a forward FX contract means that only the **spot element** of the forward FX contract is designated as the hedging instrument.

For further information on the elements of forward FX contracts please refer to the Details Section → Calculation of Forward Rates in the Sub Lecture → Foreign Currency Exposure and Management.

In both of these situations, the element that is not designated as the hedging instrument (i.e., the time value of an option or the interest element of a forward FX contract) will be measured at fair value through profit or loss, i.e., currency gains and losses are immediately recognized in the statement of income.

**Example**

A Siemens entity in the US (functional currency: US dollar) has a **firm commitment**. It is a sale of a grinding machine to a customer in France for **EUR 2m** that is expected to be paid on June 2, 20X4. The economic hedging for the current and other sales contract(s) have already been performed on portfolio basis.

Below the forward FX contracts concluded are listed. Please consider which hedging instrument(s) can be designated – standalone, split or combined – as hedging instrument in hedge accounting for 100% of the above firm commitment:

- **Contract A**: EURUSD forward maturing on September 15, 20X4 with a volume of EUR 2m
- **Contract B**: EURUSD forward maturing on June 2, 20X4 with a volume of EUR 1.5m
- **Contract C**: EURUSD forward maturing on June 2, 20X4 with a volume of EUR 1m

**Forward FX contract A**

This forward FX contract **cannot** be used to hedge the firm commitment, as the maturities of the forward FX contract and the firm commitment are not the same. This is illustrated by the following graphic:

![Graph showing contract A: Maturities do not match](image)

The hedging relationship would therefore **only cover a part of the remaining time period** until maturity of the hedging instrument. This means that the hedging instrument would not be designated in its entirety, which is not possible in hedge accounting.

**Contract B or Contract C**

These two forward FX contracts **cannot be used on a stand-alone basis** as their respective amounts could only be used to hedge a portion of the firm commitment. This is illustrated by the following graphic:
Combination of contract B and C

A possible hedging relationship would be a combination of forward FX contracts B and C with the firm commitment. In this case, 100% of B and 50% of C would provide a EUR 2m hedging instrument that could be used for an effective hedging relationship of the EUR 2m firm commitment. This is illustrated by the following graphic:

Furthermore, 66% of B and 100% of C or any other combination of B and C that adds up to the total of EUR 2m could also result in an effective hedging relationship.
**Detail: Effectiveness Test**

**Explanation**
One of the four requirements for applying hedge accounting is that the underlying economic hedge is **highly effective**. A hedging relationship is deemed to be highly effective, if the currency-related cumulative fair value or cash flow changes of the hedging instrument and the hedged item offset each other within a certain range. For example, a hedging relationship is highly effective if the hedging instrument is expected to offset 95% of the foreign currency gains or losses from the hedged item.

The range of effectiveness – especially how it has to be tested and documented – will be explained in this Details section. In this context, the following **key aspects** that need to be considered are outlined:

1. **Timing** of the Effectiveness Test
2. **Scope** of the Effectiveness Test
3. **Definition** of Effectiveness and **Methods** for Testing

**1. Timing of the Effectiveness Test**
The effectiveness of the hedge accounting relationship must be demonstrated at **inception** of the hedge accounting relationship and needs to be repeated at **least on a quarterly basis** at the respective reporting date over the period in which hedge accounting is applied.

**2. Scope of the Effectiveness Test**
According to their **temporal approach**, effectiveness tests can demonstrate prospective effectiveness. **Prospective effectiveness** validates whether the hedge is expected to be highly effective during the future periods for which it is designated.

As illustrated by the following graphic, at **inception** of a hedge accounting relationship and on the respective **reporting dates**, the effectiveness test is conducted **prospectively**.

![The scope of the effectiveness test depends on the timing](image)

Certain testing methods are applied. This is discussed in the following paragraphs.

**3. Definition of Effectiveness and Methods for Testing**
For testing the effectiveness of a hedging relationship, at Siemens, the following methods are used:

- **Critical-term match**
Dollar-offset method
Regression method

The critical-term-match method is a **qualitative testing** method, whereas the other two testing methods are **quantitative**. However, independently from the method used, hedge accounting can only be applied, if the hedged relationship is highly effective.

As mentioned above, effectiveness is tested at different times and with a different scope. Depending on the timing and scope, not all three testing methods may be applied. Therefore, the following table provides an overview of the applicability of the methods to demonstrate effectiveness at Siemens:

<table>
<thead>
<tr>
<th>Timing</th>
<th>At designation</th>
<th>At quarterly closing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scope</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prospective</td>
<td>Prospective</td>
</tr>
<tr>
<td>Testing method</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Dollar-offset method</strong></td>
<td>X</td>
<td></td>
</tr>
<tr>
<td><strong>Critical-term match</strong></td>
<td><strong>X</strong></td>
<td><strong>X</strong></td>
</tr>
<tr>
<td><strong>Regression method</strong></td>
<td><strong>X</strong></td>
<td><strong>X</strong></td>
</tr>
</tbody>
</table>

At the inception of the hedge, the methods used to demonstrate effectiveness must be determined and documented and must be **applied consistently over the life of the hedge**.

For all quantitative methods, a hedging relationship is regarded as **highly effective** if the cumulative fair value changes of the hedging instrument and the hedged item offset each other in a **range from 80% to 125%**. If this **range is not met**, the hedging relationship is not highly effective. As a result, hedge accounting is not applicable or, if it was applied previously, it must be terminated prospectively as of the date when the hedge was last proved effective, which is usually the previous (monthly) date of the statement of financial position.

As there are three methods to test effectiveness, these are explained in the following paragraphs.

**a) Critical-term match**

The critical-term match is a **qualitative** method for determining the prospective effectiveness of a hedging relationship. As it uses qualitative aspects, it is often **easier and faster** to test than the quantitative methods. However, it is also a less accurate method; therefore, there is detailed guidance how this method is applied.

In particular, the hedge is regarded as highly effective only, if at inception of the hedge and throughout the life of the hedge, the fair value changes of both the hedging instrument and the hedged items are expected to completely offset each other. As illustrated in the following table, this is fulfilled if, three conditions are met:

- The **principal terms** of the hedged item and the hedging instrument are completely the same
- The **fair value** of the hedging instrument at inception is zero
- The counterparty to the hedging instrument has a **first-class rating**

The **principal terms** of the hedged item and the hedging instrument are, e.g., currency, the notional amount and the maturity. A **first-class rating** of the counterparty can always be assumed for contracts settled with SFS. No
documentation is needed to prove this first-class rating.

After an initial test has proved the effectiveness, the subsequent assessments of prospective effectiveness can be limited to verifying and documenting whether the principal terms of the hedging instrument and the hedged item have changed and if the fair value of the hedging instrument or hedged item has declined.

If the critical-term match is not fulfilled, a quantitative effectiveness test, e.g., the dollar-offset method, needs to be performed.

b) Dollar-offset method

As mentioned above, the dollar-offset method is applicable to demonstrate prospective effectiveness at the respective quarterly closing. In contrast, the dollar-offset method is not applicable to demonstrate prospective effectiveness at designation.

The method compares past changes in the fair value or cash flows of the hedged item that are attributable to the hedged risk with past changes in the fair value or cash flows of the hedging instrument. The changes in the fair value of the hedged item and the hedging instrument should be measured on a cumulative basis. As mentioned, the hedge is only considered to be highly effective if hedged item and hedging instrument offset each other in a range of 80% to 125%. The formula for calculating effectiveness is displayed in the graphic below.

\[
\text{Effectiveness} = \frac{\sum \text{changes in fair value of hedging instrument}}{\sum \text{changes in fair value of hedged item}} = [80\% - 125\%]
\]

Before applying this formula, the amount of the fair value changes included in the calculation has to be defined and documented for both hedged item and hedging instrument. Concerning the hedged item, all fair value changes of the hedged item designated in the hedge have to be included in the calculation.

For the hedging instrument, there are two possibilities. Either,

- the total change in the fair value of the hedging instrument will be used to assess effectiveness, or
- the interest element or forward component of a forward contract and the time value of an option contract are excluded from the effectiveness test.

The second possibility is explained further in the Details section Hedging Instruments in Hedge Accounting.

Any portion of changes in the fair value of the hedging instrument that was excluded from the effectiveness test must be recorded immediately in the statement of income.

The fair values can be determined using the fair value calculator provided by SFS via the intranet.

Furthermore, if the hedged item is a forecast transaction using cash flow hedge accounting, it is also necessary to verify whether the timing and amount of the forecast transaction is still accurate. In this case, the best estimate of the occurrence of the forecast transaction has to be used.
c) Regression method

The regression method is appropriate to demonstrate prospective effectiveness and can be used at designation and at the respective quarterly closing.

When applying the regression method, the statistical correlation between the changes in the fair value or cash flows of the hedged item, that are attributable to the hedged risk and the past changes in the fair value or cash flows of the hedging instrument, is determined by means of a constant number of (fictitious and actual) data points.

The hedging relationship is highly effective when the slope of the regression line is within a range of 0.8 and 1.25 and fulfills certain statistical prerequisites.

SFS provides the intranet tool >Hedge Effectiveness Test Application (HETA) that can be used to conduct the effectiveness test when the regression method is applied.

To summarize: A highly effective hedge is required for applying hedge accounting. Whether a hedging relationship is highly effective, has to be tested and documented at the inception of the hedge accounting relationship and at least quarterly. Testing can be performed by using the dollar-offset method or, if certain conditions are met, by using the critical-term match. If a hedge turns out not to be highly effective, hedge accounting is not possible or, if it is already being applied, it needs to be terminated prospectively.

Keep in mind: No effectiveness – no hedge accounting! Effectiveness in this context means a highly effective hedging relationship, evidenced by means of appropriate and timely documentation.

Example

This section contains two examples that illustrate how the effectiveness test is performed in practice when the following two methods are used:

- Critical-term match
- Dollar-offset method

Example 1: Critical-Term Match

Siemens Mobility (functional currency: euro) was awarded a contract to sell trains for a total amount of South African rands (ZAR) 570m to a customer in South Africa. The contract qualifies as a firm commitment and the company decides to apply cash flow hedge accounting to hedge the ZAR currency risk of the sales contract.

The sales contract, which is the hedged item, has the following characteristics:

- Currency of contract: ZAR
- Contractual amount: ZAR 570m
- Signing date: December 1, 20X4
- Expected payment date: September 30, 20X6
- Fair value on date of inception: EUR 60m (forward rate on December 1, 20X4 for September 30, 20X6 = EURZAR 9.5)

The hedging instrument, which is a EURZAR forward FX contract, has the following characteristics:

- Hedging instrument: EURZAR forward FX contract (sale) at forward rate 9.5 EURZAR
- Contractual partner: Siemens AG, SFS TRE, Munich
- Closing of contract: December 1, 20X4
- Contractual amount: ZAR 570m
- Maturity date: September 30, 20X6
Fair value on date of inception: 0 EUR

Siemens designates and documents 100% of the forward FX contract in the hedge accounting relationship. Only the spot element of the forward FX contract is included when determining effectiveness.

This example discusses the effectiveness test at the inception of the hedge accounting relationship because the critical-term-match method is often used for the test for the effectiveness at the inception of a hedging relationship.

All critical terms of the hedged item and the hedging instrument, such as currency, notional amount and maturity date, are the same. Furthermore, the fair value of the hedging instrument is zero at the inception of the hedge accounting relationship and the hedging counterparty has a first-class rating. The latter can be assumed because the hedging instrument is closed with SFS.

As all terms match, the hedge accounting relationship can prospectively be judged as being highly effective and hedge accounting can be applied.

**Example 2: Dollar-Offset Method**

Compared to the scenario described in the first example, one crucial term is changed: On November 1, 20X5, it becomes evident that the payment of the hedged item will be postponed until October 31, 20X6. Therefore, it needs to be evaluated, whether the hedge is still effective. This is illustrated by the following graphic.

For simplification, discounting is not applied when calculating fair values. Forward rates for the different dates are as follows:

<table>
<thead>
<tr>
<th>Date</th>
<th>September 30, 20X6</th>
<th>October 31, 20X6</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 1, 20X4</td>
<td>EURZAR 9.5</td>
<td>n/a</td>
</tr>
<tr>
<td>November 1, 20X5</td>
<td>EURZAR 9.55</td>
<td>EURZAR 9.56</td>
</tr>
</tbody>
</table>

The critical-term match is no longer applicable, as the critical terms of the hedging instrument and the hedged item are no longer the same. Therefore, effectiveness has to be tested using the dollar-offset method. As of November 1, 20X5, prospective effectiveness is measured as follows:

Calculation of the cumulative change in the fair value of the hedged item:

- Fair value as of Dec. 1, 20X4: EUR 60,000,000
- Fair value as of Nov. 1, 20X5: EUR 59,623,431 (= ZAR 570m / EURZAR 9.56)

Cumulative changes in the fair value: EUR - 376,569

Calculation of the cumulative change in the fair value of the hedging instrument:
Fair value as of Dec. 1, 20X4: EUR 0
Fair value as of Nov. 1, 20X5: EUR 314,136 (= [ZAR 570m / EURZAR 9.55] - EUR 60m)
Cumulative changes in the fair value: EUR 314,136

Inserting these amounts into the formula of the dollar-offset method gives the following result.

\[
\text{Effectiveness} = \frac{\sum \text{changes in fair value of hedging instrument}}{\sum \text{changes in fair value of hedged item}} = [80\% - 125\%]
\]

\[
= \frac{\text{EUR 314,136}}{\text{EUR 376,599}} = 83.42\%
\]

As the cumulative changes in the fair value are expected to offset each other within the range of 80% to 125%, the hedging relationship can be judged as being retrospectively highly effective.
Detail: Documentation Requirements

Explanation
An appropriate documentation is one of the four requirements necessary for hedge accounting to be applied.

All of the documentation requirements need to be fulfilled at inception of the hedging relationship. At the end of each quarter during the life of the hedging relationship, the documentation needs to be updated by performing and documenting an effectiveness test.

The general rule is: **No documentation – no hedge accounting.** All of the documentation requirements need to be fulfilled at inception of the hedging relationship. Retrospective preparation of documentation is not permitted.

Classification of Documentation Requirements
The requirements for the documentation of a hedge accounting relationship belong to different areas:

1. Hedged item
2. Nature of hedged risk
3. Risk management objective and strategy
4. Hedging instrument
5. Effectiveness of the hedge (economic relationship, potential sources of ineffectiveness)

These areas show how the risk arises and how it is managed. The risk arises from the hedged item, which is either a sales or a purchase contract denominated in foreign currency. The nature of the hedged risk is an uncertainty in cash flows or fair values arising from exchange rate movements. The currency risk is managed in accordance with the risk management objective and strategy by concluding hedging instruments. To achieve an economic hedge the hedge must be effective. This is illustrated by the following graphic:

![Documentation requirements for a currency hedge](image)

Detailed Information on Documentation Requirements
The extensive documentation requirements that have to be met for designating a hedge accounting relationship for foreign currency transactions are illustrated in the following graphic.
Further explanations of the special requirements for cash flow hedge accounting can be found in the Sub Lecture > Cash Flow Hedge Accounting.

Keep in mind that no documentation means no hedge accounting. Documentation needs to fulfill two criteria. It must be performed right at inception of the hedge accounting relationship and must include all information necessary for the comprehensive documentation of the hedging relationship.

Example
The Siemens DF hedged a firm commitment regarding a sale amounting to 4m Kuwaiti dinars (KWD) to a Regional Siemens Company in Kuwait. Siemens applied cash flow hedge accounting to this hedging relationship. The documentation set up at the inception of the hedge accounting relationship is as follows:

General information:
Division: DF
Project manager: Mr. Hedgeman
ARE: 0070

Hedged item:
Contract name: Kuwait Adela Project
Contract ID: AZ123456789
Contractual partner: Siemens Kuwait
Date of contract: November 15, 20X3
Currency of contract: Kuwaiti dinar (KWD)
Contractual amount: KWD 4m  
Expected payment date: December 1, 20X5

**Hedging instrument:**
- **Hedging instrument:** EURKWD forward FX contract (sale)  
- **Hedging instrument ID:** FC123456789  
- **Contractual partner:** Siemens AG, SFS TRE, Munich  
- **Date of contract:** November 15, 20X3  
- **Contractual amount:** KWD 4m  
- **Maturity date:** December 1, 20X5

**Nature of hedged risk:**
The company designates the EURKWD forward FX contract as a hedge of the currency risk from the change in the EUR equivalent of the revenue from the underlying sales contract amounting to KWD 4m.

**Risk management objective and strategy for undertaking the hedge:**
The company expects cash flows of KWD 4m from sales in foreign currency (KWD). This exposes the company to a currency risk resulting from the change of the EUR equivalent in relation to changes in the KWD exchange rate. The objective of risk management is to hedge this currency risk. The objective is achieved by entering into forward exchange contracts (forward sales of KWD).

**Effectiveness test:**

**a) Method for testing effectiveness:**
- Prospective effectiveness at designation:  
  The **critical-term match** is applicable, as the principal terms, such as the currency, notional amount and maturity of the hedging instrument and the hedged item are completely equal, and the fair value of the hedging instrument at inception is zero. The requirement of a first-class rating for the counterparty of the hedging instrument is automatically fulfilled, as the hedging instrument is closed with SFS. The documentation requirements for a critical-term match are therefore fulfilled as of the inception of the hedge accounting relationship.

- Prospective effectiveness at quarterly closing:  
  Once a quarter, quantitative effectiveness tests must be performed using the dollar-offset method. Thereby, the accumulated changes in fair value of the hedging instrument are compared with the accumulated changes in fair value of the underlying hedged item. If the hedging relationship is still highly effective (within an 80%-125% range) the prospective effectiveness test is also considered as being fulfilled and cash flow hedge accounting continues.

**b) Basis for assessing effectiveness:** The fair value of the forward FX contract as a whole is used as basis for the effectiveness test. This means that the spot element of the forward FX contract, i.e., EURKWD currency rate movements, as well as the interest element of the forward FX contract are included.

**c) Potential sources of ineffectiveness:** In order to apply hedge accounting, a documentation of the hedge accounting relationship must be prepared at the inception of the hedge accounting. Documentation requirements for potential sources of ineffectiveness are:
- Change in timing of the hedged item
- Proxy hedges
- Time value (option), forward points (forward contract), foreign currency basis spread (financial instruments)
Hedge accounting avoids unwanted earnings volatility caused by timing differences in recognizing currency-related fair value changes of the hedged item and the hedging instrument. Hedge accounting can be divided into fair value hedge accounting and cash flow hedge accounting. This Sub Lecture deals with cash flow hedge accounting.

Cash flow hedge accounting can only be applied, if certain requirements are fulfilled. These requirements relate to 1. the hedged item, 2. the hedging instrument, 3. the effectiveness test and 4. the documentation. For further information on these requirements as well as on the basic principle of cash flow hedge accounting – which is to recognize the effective fair value changes of the hedging instrument in other components of equity (OCE) – please refer to the Sub Lecture Fundamentals of Hedge Accounting.

This Sub Lecture explains the accounting treatment of both the hedged item and the hedging instrument when cash flow hedge accounting is used. The accounting treatment consists of at least four phases. In some cases there can be an additional phase, which is referred to as prolongation. Therefore, this Sub Lecture contains the following paragraphs:

1. Inception of Hedge Accounting
2. Continuation of Hedge Accounting
3. Termination of Hedge Accounting
4. Reclassification of Amounts Recognized in OCE
5. Prolongation of Hedge Accounting

Further information about these subjects is also provided in the Details sections of this Sub Lecture.

1. Inception of Hedge Accounting

In general, hedge accounting can be applied when the hedging instrument is concluded and the hedging relationship is formally designated.

In comparison to the general accounting rules, cash flow hedge accounting changes the accounting treatment of the hedging instrument. This means that the hedged item, which is either a forecast transaction or a firm commitment, is accounted for under general accounting rules and therefore not recognized in the statement of financial position. Hence, currency-related fair value changes of the hedged item are not recognized in the statement of income, which causes the need for hedge accounting.

Cash flow hedge accounting achieves the aim of avoiding earnings volatility by providing special rules for the accounting treatment of the hedging instrument. However, these special rules are not relevant at inception as most hedging instruments, such as forward contracts usually have a fair value of zero at inception. The fair value is zero because hedging instruments are concluded under arm’s length conditions i.e., at market conditions. The special accounting treatment of the hedging instrument becomes relevant at the end of the following quarterly reporting periods. This is explained in the next paragraphs.

2. Continuation of Hedge Accounting

If cash flow hedge accounting is applied, the hedging instrument is accounted for at the fair value. To avoid earnings volatility, fair value changes of the hedging instrument are not recognized completely in the statement of income. They are split as follows:

- The effective portion of the fair value changes is recognized in a special position of equity referred to as other components of equity (OCE), i.e., the fair value changes are not immediately recognized in the statement of income as it would be the case under general accounting rules.
- The ineffective portion is recognized in the statement of income.

The described treatment of the hedged item and the hedging instrument is shown in the graphic below.
The Details section > Determination of the Effective and Ineffective Portion provides further information on how the fair value changes of the hedging instrument are determined.

Following the explanation of how to account for a cash flow hedge during the hedging relationship, accounting for the termination of a cash flow hedge will now be explained.

3. Termination of Hedge Accounting

Regarding the termination of a hedge accounting relationship the **timing** as well as the **procedure** are important.

The **procedure** is as follows: At termination of the hedge accounting relationship, the hedging instrument is **revalued** and the fair value changes are recognized in OCE one last time. Fair value changes in subsequent periods are recognized directly in the statement of income.

The **timing** of termination can be difficult to determine. This is because there are a number of events that can lead to a termination of the hedge accounting relationship. These can be divided into ordinary and early termination.

**a) Ordinary Termination**

In general, hedge accounting is terminated when the transaction underlying the hedged firm commitment or the hedged highly probable forecast transaction (i.e., the hedged item) is realized and a foreign currency **receivable or payable is recognized** in the statement of financial position. As the foreign currency receivable or payable is a monetary balance sheet item, it is revalued at every reporting period using the spot exchange rate. Therefore, the foreign currency influences on the hedged item are now recognized in the statement of income.

From this point in time, **fair value changes** of the **hedging instrument** and the **hedged item automatically offset each other** in the statement of income, and hedge accounting is no longer necessary. This is illustrated in the graphic below.
Since the change in the forward rate (for the measurement of the derivative) and the change in the spot rate (for the measurement of the monetary balance sheet item) are not identical, there may be still some minor volatility in the statement of income.

b) Early Termination

A hedge accounting relationship is terminated early, when the termination occurs before the receivable or payable related to the hedged item is recognized in the statement of financial position. Hedge accounting cannot be terminated on a voluntary basis.

There are situations, in which an early termination is mandatory. In general, an early termination is always mandatory, when one of the four requirements for hedge accounting is no longer met. This means that hedge accounting has to be terminated early if either of the following occurs:

1. The hedged item is not expected to occur anymore (forecast error).
2. The hedging instrument is closed out (expired, sold, terminated or exercised).
3. The hedging relationship is no longer effective.
4. The documentation requirements are not fulfilled anymore.

A common cause for an early termination is the ineffectiveness of the hedging relationship due to a postponement of a forecast transaction. In a planned sales contract, a postponement can occur for example due to technical problems.

Further information on a postponement of a forecast transaction can be found in the respective Detail sections.

4. Reclassification of Amounts Recognized in OCE

Reclassification means that the gains or losses recognized in OCE are reclassified from OCE (which is a part of equity) to the statement of income. For example, the revenue recognized for a sales contract is reduced by the loss recognized in OCE, which was accumulated during the hedge accounting relationship.

As a general rule, the amounts recognized in OCE are reclassified to the statement of income in the period in which the hedged item also affects the statement of income. This means that the timing of reclassification depends on the hedged item:

- **Hedged sales**: The total amount accumulated in OCE should be reclassified in the same period in which revenue is recognized.

- **Hedged purchases of non-current assets**: The entire accumulated amount is not reclassified in one transaction on a particular date, but rather in partial amounts over the periods in line with the depreciation/amortization period for the acquired asset.
- **Hedged purchase of inventories:** The reclassification from OCE takes place in the period(s) in which the cost of goods sold and services rendered is recognized.

Reclassification of the amounts recognized in OCE may be carried out in the **same period** as the termination of the hedge accounting relationship (e.g., ordinary termination of a hedged sales), but it may be carried out in a **later period** (e.g., in case of ordinary termination of a hedged purchase).

When amounts recognized in OCE are not reclassified immediately at termination, these amounts need to be considered when conducting an **impairment test**. For example the carrying amount of inventories needs to be adjusted by related losses recognized in OCE. If an impairment test yields an impairment, losses recognized in OCE should be reclassified to the statement of income.

Further information on the timing and procedure of the reclassification is provided in the Details section >Termination and Reclassification.

If it is considered probable that a **hedged item will not occur anymore** and therefore will never be recognized with effect on the statement of income (**forecast error**), the amount accumulated in OCE has to be **reclassified immediately** to the statement of income.

5. **Prolongation of Hedge Accounting**

A prolongation of a hedge accounting relationship may be conducted when the hedged item (e.g., a forecast transaction) is postponed. This means that a new hedging instrument is designated (and documented accordingly) in a hedge accounting relationship with the hedged item.

In addition, the prolongation can also be planned from the inception of the first hedge accounting relationship, e.g., when the initial hedging instrument only covers a part of the time period until payment. In this case, hedge accounting can be applied as usual, if the planned prolongation was documented at the inception of the first hedge accounting relationship.

How to perform a prolongation is further explained in the Details section >Prolongation.
Detail: Determination of the Effective and Ineffective Portion

Explanation
The Detail section provides information about the determination of the effective and ineffective portion in a hedge accounting relationship. This is important because they are treated differently when cash flow hedge accounting is applied. The effective portion is recognized in a special position of equity referred to as other components of equity (OCE) and reclassified to the statement of income at a later point in time. In contrast, the ineffective portion is recognized in the statement of income immediately.

This split into the effective and ineffective portion is not to be confused with the general effectiveness test described in the Sub Lecture Fundamentals of Hedge Accounting. The general effectiveness test is used to test whether a hedging relationship is highly effective, which is a general requirement for the application of hedge accounting.

However, any portion of changes in the fair value of the hedging instrument that was not designated into the hedge accounting relationship must be recognized immediately in the statement of income. For example, this could be the interest element of a forward FX contract or the time value of an option contract.

For further information on the effectiveness test, please refer to the Sub Lecture Fundamentals of Hedge Accounting, Details section Effectiveness Test.

In contrast to the general effectiveness test, the fair value changes of the hedging instrument are only split into an effective and an ineffective portion when cash flow hedge accounting is applied. The aim is to keep all fair value changes of the hedging instrument that are effective hedges out of the statement of income to reduce earnings volatility. Therefore, the effective fair value changes are recognized in OCE. In contrast, the ineffective portion is recognized immediately in the statement of income.

The Fair Value Calculator provided by SFS can be used for determining the fair value of the hedged item. It can be accessed on the SFS intranet applications overview page. The Fair Value Calculator (ACURAT) can be found under Embedded Derivatives/ Market Value Calculator/ Hedge Effectiveness Test Application.

1. Calculation of the Effective Portion
Fair value changes of the hedging instrument are effective if they offset the respective fair value changes of the hedged item. In order to contain only this currently effective portion, the hedge related component of OCE should always be adjusted to the lower of the following amounts (in absolute amounts):

- Cumulative change in the fair value of the hedged item from the inception of the hedge.
- Cumulative change in the fair value of the hedging instrument from the inception of the hedge.

This is illustrated by the following graphic:
2. Calculation of the Ineffective Portion

The total fair value changes of the hedging instrument are divided into the effective and the ineffective portion. Therefore, the ineffective portion is calculated as the remaining gain or loss on the hedging instrument after the effective portion is subtracted from the total fair value changes. This is illustrated in the following graphic:

As mentioned, the ineffective portion is recognized in the statement of income in the same period it occurs.

Example

The following example illustrates how the effective and ineffective portion of a hedge accounting relationship are determined and how it is accounted for during the cash flow hedge accounting relationship.

The example spans over three periods: Inception in t0 and continuation of the hedge accounting relationship on two quarterly reporting dates (t1, t2). The graphic below illustrates the determination of the effective portion in the example case. How the numbers are calculated, is explained in the text below the graphic.
Period 0
The date of inception of the hedge accounting relationship t0 is also the starting date for measuring the fair value changes of the hedged item and the hedging instrument. However, the fair value of the hedging instrument equals zero, as it is just entered at market conditions. Therefore, as of the inception date, there are no fair value changes to be recognized in other components of equity (OCE).

Period 1
At the end of period 1, the fair value of the hedged item decreased to EUR 90, which means a change in the fair value of EUR -10. As the hedged item is a firm commitment or a forecast transaction, this change in the fair value is not recognized in the financial statements.

The fair value of the hedging instrument increased to EUR 11. The change in fair value is also EUR 11 (= EUR 11 - EUR 0) because the value in period 0 was zero. The fair value of the hedging instrument needs to be recognized in the statement of financial position as the hedging instrument, for example, a forward FX contract, is accounted for with its fair value. However, only the ineffective portion is recognized in the statement of income, whereas the effective portion of the hedging relationship is recognized in OCE.

The recognition of the fair value changes of the hedging instrument is performed as follows:
- The effective portion of the fair value changes is recognized in OCE. This effective portion is measured in absolute amounts and is the lower of the two changes in fair value of the hedging instrument and the hedged item. Therefore, EUR 10 is recognized in OCE. This is illustrated by the following graphic:
The remaining EUR 1 – the ineffective portion – has to be recognized in the statement of income. The ineffective portion is calculated as follows:

**Period 2**

At the end of period 2, the fair value of the hedged item increased by EUR 5 to EUR 95, which means a cumulative change in the fair value of EUR -5.

The fair value of the hedging instrument decreased to EUR 5.5, which means an accumulated change in the fair value of EUR 5.5. Compared to period 1, the fair value of the hedging instrument decreased by EUR 5.5 (= EUR 11 - EUR 5.5).

This decrease in the fair value of the hedging instrument needs to be accounted for as follows:

- The effective portion of the overall changes in the fair value of the hedging instrument is the lower of the two accumulated fair value changes of the hedged item (EUR 5 in absolute amounts) and the hedging instrument (EUR 5.5). Therefore, an overall amount of EUR 5 should be recognized in OCE. This is illustrated by the following graphic:
At the end of period one, OCE amounted to EUR 10; therefore, an amount of EUR 5 is booked from the hedging instrument against OCE, reducing it to EUR 5.

- The remaining changes in the fair value of the hedging instrument of EUR 0.5 (= EUR 5.5 - EUR 5) are considered as ineffective and are recognized directly in the statement of income. This is illustrated by the following graphic:

```
0.5 = 5.5 - 5
```
Detail: Termination and Reclassification

Explanation
For both sales and purchase contracts, cash flow hedge accounting can be divided into four phases: Inception, continuation/duration, termination and reclassification. The last two phases are difficult to understand because there are many set-ups to consider. To be more precise, the termination of a hedging relationship can be triggered by a number of events. In addition, the reclassification depends on the reason for termination (e.g., early or ordinary termination) and on whether the underlying contract is a sales or a purchase contract.

In particular, the linkage between termination and reclassification is complicated. Therefore, below the rules for termination are explained first, whereas afterwards the reclassification is discussed for the various termination reasons.

1. Termination of a Hedge Accounting Relationship
Once a foreign currency receivable or payable is recognized for a hedged item, hedge accounting is terminated in an ordinary way. This is because hedge accounting is not needed anymore, as the underlying sales or purchase contract is now recognized in the statement of financial position. As the foreign currency receivable or payable is remeasured at the current spot rate at every reporting period, the effects of exchange rate movements are recognized as gains or losses in the statement of income. Therefore, there is a "natural offset" of the effects from the remeasurement of the hedged item and the fair value measurement of the hedging instrument in the statement of income.

Furthermore, a hedge accounting relationship has to be terminated early (i.e., even before a foreign currency receivable or payable is recognized), when the requirements for hedge accounting are no longer fulfilled. These requirements relate to the following four issues: Hedging instrument, hedged item, effectiveness of the hedging relationship and documentation of the hedge accounting relationship. If the requirements are no longer met, it is mandatory to terminate hedge accounting.

The hedge accounting relationship cannot be terminated on a voluntary basis. The following graphic summarizes the reasons for terminating a hedge accounting relationship:

The following paragraphs explain when and how the amounts recognized in OCE are reclassified for all the termination reasons discussed above.

2. Reclassification of Amounts Recognized in OCE
As the termination was divided into ordinary and early termination, this split is also used here to illustrate the
reclassification for the various termination triggers.

2.1 Reclassification for Ordinary Termination
In general, the amounts that have been accumulated in OCE are reclassified to the statement of income in the same period in which the hedged transaction is recognized in the statement of income. However, the timing of the recognition in the statement of income differs between sales and purchase contracts.

a) Hedged Sales
In the case of hedged sales, the reclassification takes place in the period in which the revenue is recognized. The amount reclassified from OCE is shown as revenue.

Termination and reclassification for hedged sales contracts are conducted at the same time because ordinary termination for hedged sales contracts also takes place, when the foreign currency receivable is recognized (and revenue is recognized).

In the case of a 100% effective hedging relationship, this leads to a correction of the amount that was initially recorded as revenue at the current spot rate in order to arrive at the amount to be recognized as revenue at the hedged rate.

Since the change in the forward rate (for the measurement of the derivative) and the change in the spot rate (for the measurement of the foreign currency receivables or payables) are not identical, there may still be some minor volatility in the statement of income.

For further information on the elements to be included in calculating the fair value of hedging instruments, please refer to the Sub Lecture > Fundamentals of Hedge Accounting, Details section > Hedging Instruments in Hedge Accounting.

The example section illustrates ordinary termination and reclassification for a sales contract.

b) Hedged Purchases
If the hedged item is a purchased asset, i.e., a fixed asset or inventory, the hedged item does not affect the statement of income when the purchased asset is received from the supplier. Therefore, the reclassification of the amounts recognized in OCE does not take place in the period in which the purchased asset is received from the supplier.

For the timing of reclassification this means:

- In the case of acquisitions of non-current assets, the entire accumulated amount is not reclassified from OCE in one transaction on a particular date, but rather in partial amounts over the periods in line with the depreciation/amortization period for the acquired assets.
- As far as purchases of inventories are concerned, the reclassification from OCE take place in the period(s) in which the cost of goods sold and services rendered is recognized.

Termination and reclassification for purchase contracts are not conducted at the same point in time because ordinary termination happens at delivery, whereas the acquired assets are recognized in the statement of income at a later point in time.

If the amount recognized in OCE is a loss, an impairment problem can arise if the total of a loss reported in OCE and the carrying amount of inventories exceed the expected sales price.

Consider the following example: If the carrying amount of an inventory is EUR 10m and a loss of EUR 3m has been recognized in OCE, the basis for the impairment test is EUR 13m. If the expected sales price is EUR 11m, an amount of EUR 2m needs to be reclassified to the statement of income.
2.2 Reclassification for Early Termination

If one of the early termination scenarios defined above is met, hedge accounting needs to be terminated early.

The next paragraphs discuss the termination and reclassification for the case of mandatory early termination.

a) Hedged Item

For hedged items, there are two reasons that lead to a termination of hedge accounting: Either the hedged item is postponed or the hedge item is not expected to occur anymore at all.

A postponement of the hedged item only leads to a termination of the hedge accounting relationship, if the hedge accounting relationship is no longer effective. In this case, hedge accounting is terminated, but the gains or losses on the hedging instrument recognized in OCE remain in OCE until the hedged item is recognized in the statement of income.

In general, if it is not considered probable that the hedged item will occur, i.e., never be recorded with effect on the statement of income (forecast error), the amount accumulated in OCE has to be reclassified immediately to the statement of income.

b) Hedging Instrument

Hedge accounting is terminated if the hedging instrument is closed out (expired, sold, terminated, exercised) before the end of its life. In this case, the gains or losses on the hedging instrument accumulated in OCE remain in OCE (since up to this stage the change in fair value of the hedging instrument has offset the change in the cash flows from the hedged item).

The amounts accumulated in OCE are reclassified to the statement of income in the same period in which the hedged item is also recognized in the statement of income.

c) Effectiveness

Hedge accounting has to be terminated. if the hedging relationship is not highly effective anymore. For example this can happen, because the hedged item is postponed.

The reclassification is performed as follows: Changes in the fair value of the hedging instrument accumulated in OCE between designation and the last time the hedging relationship was highly effective remain in OCE. They are reclassified to the statement of income in the same period in which the hedged item is recognized with an effect on the statement of income.

d) Documentation

As documentation is one of the four requirements: No documentation means no hedge accounting. However, the amounts previously stored in OCE remain in OCE until the hedged item is recognized with an effect on the statement of income.

Example

In hedge accounting, the timing and process of termination and reclassification depends on the hedged item, i.e., when it is recognized in the statement of income. This is important to note, because sales as well as purchase contracts can be hedged items and thus are terminated and reclassified in a different manner and at different times. Therefore, this section contains the following two examples:

1. Sales Contract
2. Purchase Contract

As termination and reclassification are the last two phases in the accounting treatment of a cash flow hedge accounting
1. Sales Contract

Bonita S.A., a Siemens entity in Spain whose functional currency is the euro, applies cash flow hedge accounting. The hedged item is a firm commitment for a USD 12m sale of a machine to a customer in the US, which is concluded on April 20. The company expects to receive EUR 10m from the sale and has therefore hedged the sale at a forward exchange rate of EURUSD 1.20. The hedging instrument is therefore a EURUSD forward FX contract that enables the entity to sell USD 12m at a forward exchange rate of EURUSD 1.20 on the same date the payment from the sales revenue is received. For simplification, discounting is not applied when calculating fair values.

The following graphic summarizes the issue for the sales contract, whereas the accounting treatment from inception to reclassification of the cash flow hedge is explained below the graphic:

### Example 1: sales contract

**a) Inception of Hedge Accounting**

At the inception of the hedge accounting relationship, i.e., at contract inception, the fair values of the hedged item and the hedging instrument are calculated using a forward rate of EURUSD 1.20 as follows:

- **Hedged item:** EUR 10m (= USD 12m / EURUSD 1.20)
- **Hedging instrument:** EUR 0m as closed at current market conditions

**b) Continuation of Hedge Accounting**

As of the closing date June 30, a valuation of the cash flow hedge accounting relationship needs to be performed. The current forward rate is EURUSD 1.30.

The fair values of the hedged item and the hedging instrument are therefore as follows:

- **Hedged item:** EUR 9,230,769 (= USD 12m / EURUSD 1.30)
- **Hedging instrument:** EUR 769,231 (= [USD 12m / EURUSD 1.20] - [USD 10m / EURUSD 1.30])

However, only the effective portion of the hedging relationship can be recognized in OCE. For determining the effective portion, the cumulative fair value changes of both the hedged item and the hedging instrument need to be compared. The cumulative fair value changes are as follows:

- **Hedged item:** EUR 769,231 (= difference EUR 9,230,769 to EUR 10m)
- **Hedging instrument:** EUR 769,231 (= difference EUR 769,231 to EUR 0m)

As the fair value changes exactly offset each other, all fair value changes of the hedging instrument are effective. Therefore, the hedging instrument is recognized in the statement of financial position with a fair value of EUR 769,231 against OCE.
c) Termination of Hedge Accounting

When the delivery of the machine is performed and a foreign currency receivable is recognized, the hedge accounting relationship is terminated. This is as of August 15. The current forward rate as of August 15 is EURUSD 1.35.

The fair values of the hedged item and the hedging instrument are as follows:
- Hedged item: EUR 8,888,888 (= USD 12m / EURUSD 1.35)
- Hedging instrument: EUR 1,111,112 (= [USD 12m / EURUSD 1.20] - [USD 12m / EURUSD 1.35])

Therefore, the cumulative changes in fair value are as follows:
- Hedged item: EUR -1,111,112 (= difference EUR 8,888,888 to EUR 10m)
- Hedging instrument: EUR 1,111,112 (= difference EUR 1,111,112 to EUR 0m)

As all fair value changes are effective, an amount of EUR 1,111,112 is accumulated in OCE. As, from the last valuation of the hedging instrument, an amount of EUR 769,231 is already recognized in OCE, the amount to be recognized in OCE is EUR 341,881 (= EUR 1,111,112 - EUR 769,231).

d) Reclassification

For sales contracts, amounts stored in OCE are reclassified against revenue. When hedge accounting is terminated in an ordinary way, termination and reclassification is carried out at the same time. This means that also on August 15, the amount recognized in OCE of EUR 1,111,112 is reclassified to revenue:

Recognition of the receivable at the current spot rate of EURUSD 1.349:
- Debit Receivable EUR 8,895,478
- Credit Revenue EUR 8,895,478

Reclassification of the amount stored in OCE:
- Debit OCE EUR 1,111,112
- Credit Revenue EUR 1,111,112

As a result, the overall amount recognized in revenue amounts to EUR 10,006,590 (= 8,895,478 + 1,111,112).

The amount recognized in revenue approximately equals the hedged sale of EUR 10,000,000. The deviation arises because the receivable is recognized with the current spot rate, whereas for determining the fair value of the hedging instrument the current forward rate is used.

The minor difference in expected and realized revenue can be avoided by excluding the interest element of a forward FX contract, when calculating the fair value of the hedging instrument.

For further information please refer to the Sub Lecture Fundamentals of Hedge Accounting. Details section Hedging Instruments in Hedge Accounting.

For further information on the elements of forward rates please refer to the Sub Lecture Foreign Currency Exposure and Management. Detail section Calculation of Forward Rates.

2. Purchase Contract

Ekia A.S., a Siemens entity in Italy (functional currency: euro), applies cash flow hedge accounting. The hedged item is a firm commitment for a USD 12m purchase of inventories from a supplier in the US. The company expects to pay EUR 10m for the inventories and therefore hedges the purchase at a forward exchange rate of EURUSD 1.20. The hedging instrument is therefore a EURUSD forward FX contract that enables the entity to buy USD 12m at a forward exchange rate of EURUSD 1.20. For simplification, discounting is not applied when calculating fair values.
The following graphic summarizes the issue for the purchase contract, whereas the accounting treatment from inception to reclassification of the cash flow hedge is explained below the graphic. Please note, that in contrast to the example for the sales contract, termination and reclassification do not occur at the same time.

Example 2: purchase contract

a) Inception of Hedge Accounting
At the inception of the hedge accounting relationship the forward rate is EURUSD 1.20 and the fair values of the hedged item and the hedging instrument are as follows:

- Hedged item: EUR -10m (= USD -12m / EURUSD 1.20)
- Hedging instrument: EUR 0m as closed at current market conditions

b) Continuation of Hedge Accounting
As of the closing date June 30, a valuation of the cash flow hedge accounting relationship needs to be performed. The current forward rate is EURUSD 1.30.

The fair values of the hedged item and the hedging instrument are therefore as follows:

- Hedged item: EUR -9,230,769 (= USD -12m / EURUSD 1.30)
- Hedging instrument: EUR -769,231 (= [USD -12m / EURUSD 1.20] - [USD -12m / EURUSD 1.30])

However, only the effective portion of the hedging relationship can be recognized in OCE. For determining the effective portion, the cumulative fair value changes of both the hedged item and the hedging instrument need to be compared. The cumulative fair value changes are as follows:

- Hedged item: EUR 769,231 (= difference EUR -9,230,769 to EUR -10m)
- Hedging instrument: EUR -769,231 (= difference EUR -769,231 to EUR 0m)

As the fair value changes exactly offset each other, all fair value changes of the hedging instrument are effective. Therefore, the hedging instrument is recognized on the balance sheet with a fair value of EUR -769,231 against OCE.

c) Termination of Hedge Accounting
When the inventory is delivered, the hedge accounting relationship is terminated. This is as of August 15. The current forward rate is EURUSD 1.35. The fair values of the hedged item and the hedging instrument are as follows:

- Hedged item: EUR -8,888,888 (=USD -12m / EURUSD 1.35)
- Hedging instrument: EUR -1,111,112 (= [USD -12m / EURUSD 1.20] - [USD -12m / EURUSD 1.35])

Therefore, the cumulative fair value changes are as follows:

- Hedged item: EUR 1,111,112 (= difference EUR -8,888,888 to EUR -10m)
Hedging instrument: EUR -1,111,112 (= difference EUR -1,111,112 to EUR 0m)

As all fair value changes of the hedging instrument are effective, a currency loss of EUR -1,111,112 is accumulated in OCE. As, from the last valuation of the hedging instrument, an amount of EUR -769,231 is already recognized in OCE, the amount to be recognized in OCE is EUR -341,881 (= EUR -1,111,112 - [-EUR 769,231]).

The journal entries are recorded as follows:

1. Valuation of the hedging instrument
   DR OCE EUR 341,881
   CR Hedging instrument EUR 341,881

2. Recognition of inventory (hedged item) at the current spot rate of EURUSD 1.349:
   DR Inventory EUR 8,895,478
   CR Cash EUR 8,895,478

**d) Reclassification**

As the delivery of the inventory has no effect on the statement of income, the amounts recognized in OCE are not reclassified at termination of the hedge accounting relationship. The amounts in OCE are reclassified when the cost of goods sold and services rendered is recognized.

However, in this example, even at the reporting period ending September 30, an impairment problem arises as the loss recognized in OCE and the carrying amount of inventories exceed the expected sales price, which is EUR 9.5m as of September 30.

<table>
<thead>
<tr>
<th>Book value of inventory:</th>
<th>EUR 8,895,478</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss recognized in OCE:</td>
<td>+ EUR 1,111,112</td>
</tr>
<tr>
<td>Expected sales price:</td>
<td>- EUR 9,500,000</td>
</tr>
<tr>
<td>Impairment:</td>
<td>= - EUR 506,590</td>
</tr>
</tbody>
</table>

Therefore, the currency loss accumulated in OCE needs to be split. Only an amount of EUR 604,522 can remain in OCE. The amount of EUR 506,590 should be reclassified from OCE to the statement of income.

This is recorded as follows:

<table>
<thead>
<tr>
<th>Debit</th>
<th>Statement of income</th>
<th>EUR 506,590</th>
</tr>
</thead>
<tbody>
<tr>
<td>Credit</td>
<td>OCE</td>
<td>EUR 506,590</td>
</tr>
</tbody>
</table>

The remaining amount recognized in OCE is reclassified when the inventory is recognized in the statement of income or when another impairment arises.
Detail: Postponement of a Forecast Transaction

**Explanation**

In order to designate a highly probable forecast transaction as a hedged item, it is necessary to specify when the forecast transaction – the hedged item – is expected to arise. Therefore, an **expected date** or a **specified time period** in which the hedged item is expected to occur has to be documented at the inception of the hedge accounting relationship.

In reality, it might happen that the hedged item is postponed, i.e., it is expected to arise later than originally planned. In particular, a delay of a highly probable forecast transaction is quite common. If there is a postponement of the hedged item, the **critical terms are not the same anymore** and a quantitative effectiveness test must be carried out at least quarterly to determine **whether a highly effective hedging relationship still exists**. This is illustrated in the following graphic:

![Postponement of a forecast transaction](image)

If the effectiveness test shows that the hedging relationship is still highly effective, hedge accounting can be continued. If the hedge accounting relationship is **no longer highly effective**, hedge accounting has to be **terminated**.

In either case, however, any gains or losses from the hedging instrument accumulated in OCE up to that point remain in OCE until the transaction underlying the hedged item is recognized in the statement of income.

The postponement of the hedged item **does not per se lead to a forecast error**. A forecast error has occurred and, as a consequence, the gains and losses from the hedging instrument accumulated in OCE shall be reclassified to the statement of income, if and only if, the hedged item is no longer expected to occur.

Within the example section of this Sub Lecture the above considerations are illustrated for a hedged sale.

When the hedged item was postponed and a new hedging instrument was entered into, then the new hedging instrument is designated (and documented accordingly) as a cash flow hedge. The replacement or rollover into another hedging instrument is **not a termination** if such a replacement or rollover is **part of the entities documented hedging strategy**.

For further information on the prolongation of a cash flow hedge accounting relationship, please refer to the Details section **Prolongation** in this Sub Lecture.

**To summarize**: When a forecast transaction is delayed/postponed and it is still highly effective, hedge accounting can be continued. If it is no longer highly effective, hedge accounting is terminated early. However, the fair value changes of the derivative recognized in OCE remain there until the underlying hedged item is recognized in the statement of income, if the occurrence of the hedged item is still expected.
**Example**

In August 20X3, BonitaS.A., a Siemens entity in Spain, entered into a forward FX contract #1 (sale of USD 100m) at a forward rate of EURUSD 1.20 to 100% hedge a highly probable forecast sale with an original settlement date of October 31, 20X3 (identical to the end of the originally specified time period). For simplification, discounting is not applied when calculating fair values.

1. **Inception of Hedge Accounting**

At the inception of the hedge accounting relationship, the EURUSD forward rate for October 31, 20X3 is EURUSD 1.20.

The **fair values** are therefore as follows:

- Hedged item: EUR 83,333,333 (= USD 100m / EURUSD 1.20)
- Hedging instrument: EUR 0 (= [USD 100m / EURUSD 1.20]) - [USD 100m / EURUSD 1.20])

2. **Continuation of Hedge Accounting**

As of the closing date September 30, 20X3, the EURUSD forward rate is EURUSD 1.35.

The **fair values** are therefore as follows:

- Hedged item: EUR 74,074,074
- Hedging instrument: EUR 9,259,259

The **accumulated fair value changes** are:

- Hedged item: EUR -9,259,259
- Hedging instrument: EUR 9,259,259

The hedge accounting relationship is 100% effective, i.e., all changes in the fair value of the hedging instrument are effective. The entity recognizes the hedging instrument at the fair value in the statement of financial position and recognizes an amount of EUR 9,259,259 in other components of equity (OCE).

3. **Delay of Forecast Transaction and Early Termination**

On October 5, 20X3 it becomes probable that the highly probable forecast transaction will be delayed/postponed to December 20, 20X4. This is illustrated by the following graphic:

![Example: postponement of a forecast transaction](image)

If the hedged item is postponed and the hedge accounting relationship is no longer considered highly effective, hedge accounting has to be terminated early.

When the cash flow hedge accounting relationship is terminated on October 5, 20X3 the fair value changes of the hedging instrument recognized in OCE remain in OCE. This is the amount of EUR 9,259,259 calculated above.

4. **Reclassification of Amounts Recognized in OCE**

The fair value changes of the hedging instrument recognized in OCE are reclassified to revenue in the same period in
which revenue is recognized.

The amount stored in OCE is booked against revenue, i.e., reclassified to the statement of income when revenue is recognized for the sale.

An example for a prolongation of this hedge accounting relationship is given in the Example section of the Details section of this Sub Lecture.
Detail: Prolongation of a Hedge Accounting Relationship

Explanation
Prolongation of a hedge accounting relationship means that an existing hedge accounting relationship is continued with a newly concluded hedging instrument.

There are two different reasons for the prolongation of a hedging instrument in a hedge accounting relationship:

- **Planned prolongation**: If at inception of the hedge accounting relationship it is already clear that the first hedging instrument does not cover the whole term of the hedged item, the first hedging instrument may be rolled over into a second hedging instrument.

- **Unexpected prolongation**: If a hedged item, e.g., a forecast transaction is postponed, the hedge accounting relationship may be continued with a newly entered hedging instrument. This means that the newly concluded hedging instrument replaces the former hedging instrument.

A prolongation is not a termination of the hedge accounting relationship if such replacement or rollover of the hedging instrument is part of the documented hedging strategy and if the hedge is highly effective.

A hedge accounting relationship can only be prolonged, if the prolongation is part of the entity's documented hedging strategy. Therefore, the intention to prolongate has to be documented right at inception of the hedge accounting relationship.

As the unexpected prolongation due to the postponement of a forecast transaction is the more common reason for a prolongation, this is discussed below in more detail.

**Unexpected Prolongation Due to a Postponement of a Forecast Transaction**

If a postponement of a forecast transaction becomes apparent, often new derivative instruments are entered into to hedge the transaction economically to the new forecasted date of payment and to offset the existing hedging instrument.

Hedge accounting can be only prolonged if the following conditions are fulfilled cumulatively:

- The intention to prolongate the hedge accounting relationship is part of the documented hedging strategy.
- The newly entered hedging instrument is an effective hedge for the risk arising from the postponed hedged item.
- The hedged item is still expected to occur.

The graphic below illustrates how an unexpected prolongation due to a postponement of a forecast transaction is performed. A second derivative instrument is concluded (#2) to offset the first hedging instrument (#1). E.g., if the first hedging instrument is a forward FX contract in which USD is sold, a second forward FX contract in which USD is bought is entered into. Both forward FX contracts have the same maturity and the same amount.

In addition, a new hedging instrument in which USD is sold is concluded (#3) to hedge the currency risk arising from the postponed hedged item. To perform an effective economic hedge, this hedging instrument has a settlement date which equals the date when the postponed hedged item is expected.

A prolongation of the hedge accounting relationship is performed by replacing hedging instrument #1 by instrument #3. In this case, forward FX contracts are designated as hedging instruments. The fair value changes of the three forward FX contracts are recognized as follows:

- **Forward FX contract #1**: Fair value changes that occur since the prolongation are recognized in the statement of income. The fair value changes that have occurred until the prolongation remain in other components of equity (OCE) until they are reclassified, if the hedged item is still expected to occur. For a hedged sale the reclassification is performed when the revenue is recognized.
- **Forward FX contract #2**: This forward FX contract should offset the forward FX contract #1 and therefore, the fair value changes are recognized in the statement of income.
- **Forward FX contract #3**: Forward FX contract #3 replaced the forward FX contract #1 in the hedge accounting
relationship. Therefore, the fair value changes of forward FX contract #3 are recognized in other components of equity (OCE).

An example for a prolongation following a postponement of a forecast transaction is provided in the Example section of this Detail section.

Example
Postponement of the Forecast Transaction

Bonita S.A., a Siemens entity in Spain (functional currency: euro), entered into a forward FX contract to hedge a highly probable forecast transaction that was originally expected to be settled on October 31, 20X3. The highly probable forecast transaction is a planned sales contract denominated in the amount of USD 100m. The forward FX contract used for hedging has the following terms:

- **Forward FX contract #1**: sale of USD 100m with settlement date on October 31, 20X3

On October 5, 20X3, it becomes known that the forecast transaction will be postponed to December 20, 20X3 but it is still expected to occur.

Prolongation of the Hedge Accounting Relationship

The Siemens entity concludes new forward FX contracts and prolongates the hedge accounting relationship for the forecast transaction. As the prolongation is part of the documented hedging strategy and the newly concluded hedging instruments effectively hedge the risk from the forecast transaction, a prolongation can be performed.

On October 5, 20X3, two new forward FX contracts are entered into:

- **Forward FX contract #2**: purchase of USD 100m with maturity on October 31, 20X3
- **Forward FX contract #3**: sale of USD 100m with maturity on December 20, 20X3

The gains or losses from forward FX contract #1, that have been accumulated in OCE during the hedge accounting relationship up to the time of the prolongation, remain there, as the hedged item is still expected to occur.

As illustrated in the graphic below, from October 5, 20X3 until maturity the gains and losses of the three forward FX contracts are recognized as follows:

- **Forward FX contract #1**: For this forward FX contract, the hedge accounting relationship has been terminated on October 5, 20X3. Therefore, all fair value changes which occur from this date on until maturity are recognized in the statement of income.
- **Forward FX contract #2**: This forward FX contracts offsets the forward FX contract #1 by recognizing the fair value changes in the statement of income.
- **Forward FX contract #3**: The forward FX contract is designated in the new hedge accounting relationship, therefore, the fair value changes are recognized in OCE.

Example: Prolongation of a Postponed Forecast Transaction

As a result, the gains and losses from forward FX contracts #1 and #2 offset each other in the statement of income. In
As forward FX contract #3 is recognized in OCE, there is no periodic volatility in the statement of income.

Please note that this prolongation is not a termination of the existing hedge accounting relationship. This means that hedge accounting is applied without changes as if there had been no change in the hedge accounting relationship. This also applies in case of a planned prolongation.
Sub Lecture: Foreign Currency Effects on Performance Obligations Satisfied Over Time (PoC Method)

This Sub Lecture explains the treatment of foreign currency influences in accounting for performance obligations satisfied over time accounted for using the percentage-of-completion (PoC) method.

The PoC method is one of two methods used within accounting for performance obligations satisfied over time in construction business. It recognizes income as the work on the project progresses, whereas the other method, which is referred to as the completed-performance method, recognizes income only at the end when the project is completed.

If the PoC method is used, the total planned revenue and costs are recognized over the project duration as revenues and expenses in the statement of income according to the progress of the project. The timing of the recognition of both revenues and expenses in the statement of income throughout the performance obligation term is determined by the PoC of the project. In general, Siemens applies the input-oriented cost-to-cost method for determining the PoC.

Further information about the PoC method in general is provided in the Training > Step 5: Performance Obligations Satisfied Over Time and in the Sub Lecture > Percentage-of-Completion (PoC) Method.

Reasons for the Influence of Exchange Rate Changes

When using the PoC method, the calculation of revenues and expenses to be recognized in the statement of income at each reporting period requires three fundamental parameters:

- Total planned revenue
- Total planned costs
- Percentage of completion (PoC)

Exchange rate fluctuations can have an influence on income, because all three fundamental parameters are potentially affected by exchange rate fluctuations. Total planned revenue is affected if the sales price is denominated in a foreign currency. Similarly, total planned costs are affected if purchase prices are denominated in a foreign currency.

In general the progress of the project is within Siemens determined by applying the cost-to-cost method. The PoC can be therefore affected by exchange rate fluctuations, as the cost-to-cost method calculates the percentage of completion as the ratio of

- costs of a performance obligation incurred to date, and
- total planned costs.

Both costs of a performance obligation already incurred and expected to be incurred upon completion can be denominated in foreign currency and are in this case affected by exchange rate fluctuations.

Keep in mind that all three fundamental parameters mentioned above can be influenced by foreign exchange rate fluctuations.

Methods to Account for Exchange Rate Fluctuations

After discussing the question of how foreign exchange rate fluctuations can possibly impact performance obligations satisfied over time accounted for using the percentage-of-completion method, the question of how to account for these performance obligations arises.
Please note that with order income after September 30, 2012, the **ICN method should not be applied anymore.** Only one method (the former **PG Method**) remained within Siemens Group to account for performance obligations satisfied over time accounted for using the PoC method and with order income after September 30, 2012. This method will be introduced in the following.

The PG method can be applied if there is an effective economic hedge of the project. This can be either a hedge of the individual project or part of a global hedge of the net foreign currency position.

When the PG method is applied and the foreign currency risk is completely hedged, fluctuations in the exchange rate during the life time of the project have **no effect on the amount of income** recognized. In addition, the **percentage of completion** should remain unaffected by any exchange rate fluctuations. This is because according to the PG method, the total planned revenue and the total planned costs (including the costs incurred to date) denominated in foreign currency should be measured by using the **PoC calculation rate** which is determined at the beginning of the project.

For PoC projects denominated in foreign currency which are hedged individually by using forward FX contracts, the PoC calculation rate is equal to the **forward rates** agreed underlying these forward currency contracts.

Further information about **hedging** in general can be found in the Sub Lecture [Foreign Currency Exposure and Management](#).

Further details on calculating the **project progress** according to this method are provided in the Detail Section [PG Method](#).

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In rare cases, if an effective economic hedge **does not exist** and an embedded foreign currency derivative was **not separated**, for PoC projects with a foreign currency portion of the total performance volume exceeding **EUR 5m**, special rules for the accounting treatment of the total planned revenue in foreign currency exist.

Keep in mind that **only the former PG method is allowed at Siemens**. When it is applied, exchange rate movements do not have an influence on the revenues and expenses recognized in the statement of income.
Detail: PG Method

Explanation

Performance obligations satisfied over time accounted for using the PoC method are exposed to foreign currency risks if either the sales price received from the customer (cash inflow) or the costs paid to suppliers (cash outflows) are denominated in foreign currency.

Purpose of the PG method

When the PG Method is applied, changes in currency exchange rates during the course of a project are not taken into account when calculating the project progress.

Avoidance of Foreign Currency Effects in General

The influence of exchange rate movements is eliminated by using a constant exchange rate (= PoC calculation rate) to convert all amounts denominated in foreign currency. For PoC projects denominated in foreign currency which are hedged individually by using forward FX contracts the PoC calculation rate is equal to the forward rates agreed underlying these forward currency contracts.

Further information on the computation of the PoC calculation rate is provided in the subsequent Detail section.

When the cost-to-cost method is applied, the PoC is calculated on the basis of the ratio of the costs of a performance obligation incurred up to the reporting date and the total planned costs. This is illustrated in the graphic below:

![Calculation of the PoC when the cost-to-cost method is used](image)

The total planned costs can further be divided in costs of a performance obligation incurred until the reporting date and the costs not yet incurred, but expected to incur until the completion of the project. According to the PG method, all costs of a performance obligation denominated in foreign currency are converted into the functional currency of the reporting entity with the PoC calculation rate.

For PoC projects denominated in foreign currency which are hedged individually by using forward FX contracts, the PoC calculation rate is equal to the forward rates agreed underlying these forward currency contracts. Therefore, the costs incurred to date and the total planned costs are both measured at the PoC calculation rate. The PoC calculation rate is the rate at which all costs of the performance obligation are hedged. Due to the PoC calculation rate being constant, foreign currency movements do not influence the PoC. This is demonstrated in the graphic below:
It becomes apparent, that all costs of a performance obligation independent from the timing of the occurrence are converted with the PoC calculation rate.

**Example**

Siemens receives an order to automate a large chemical plant for a customer in the USA. The contract comprises one performance obligation denominated in US dollars. Income on the project is recognized under the **PoC method**, whereas the PoC is measured by using **cost-to-cost method**.

The Siemens entity, which has concluded the contract, has the **euro** as functional currency. In contrast, both revenue as well as the costs occur in **US dollars**, since the customer and the suppliers for this project are located in the USA. The sales contract is concluded for a contract price of USD 50m, which also equals the total planned revenue. The total planned costs amount to USD 40m.

All supplies as well as the sales contract are individually **hedged** at a forward rate of EURUSD 1.35. The hedging relationship is effective. Therefore, the PoC calculation rate corresponds with the forward rate of EURUSD 1.35.

**Period 1**

The actual **costs of a performance obligation incurred** in period 1 amount to USD 23m. The total planned costs still remain unchanged at USD 40m, therefore, USD 17m are still expected to arise until completion of the project.

The total planned revenue also still remains unchanged at USD 50m.

The **current EURUSD spot rate** for the payment of the costs in period 1 is EURUSD 1.15. However, when using the PG method, the PoC is calculated using the **PoC calculation rate** for currency conversion. In this case the PoC calculation rate equals the forward rate of EURUSD 1.35. The calculation of the PoC for period 1 using the PG method is illustrated by the following graphic:

The result of 57.5% expresses the progress of completion of the project. Hence, at the **end of period 1** 57.5% of the total planned revenue and total planned costs are recognized as revenue and costs in the statement of income:
• Revenue recognized: EUR 21,296,296 (= [USD 50m / EURUSD 1.35] x 57.5%)
• Costs recognized: EUR 17,037,037 (= [USD 40m / EURUSD 1.35] x 57.5%)

This leads to a profit recognized for the project of EUR 4,259,259 in period 1, which has not been influenced by the fluctuation of the EURUSD exchange rate.

**Period 2**

The actual costs of a performance obligation incurred at the end of period two have risen to USD 35m. In addition, to the costs of USD 23m incurred in period 1, USD 12m incurred in period 2. The total planned costs still remain unchanged with USD 40m, therefore, USD 5m are still expected to arise until completion of the project.

The total planned revenue again still remains unchanged at USD 50m.

The PoC of the performance obligation at the end of period 2 is again calculated using the PG method. In consequence, the costs already incurred (USD 35m) and the costs still expected to incur until completion of the project (USD 5m) are converted with the constant PoC calculation rate. This is done as follows:

![Percentage-of-completion (period 2)](image)

The result of 87.5% expresses the percentage of completion of the project: At the end of period 2, 87.5% of the work on the project are finished. Hence, 87.5% of the total planned costs and total planned revenue have been recognized as revenue and costs in the statement of income:

• Revenue recognized: EUR 32,407,407 (= [USD 50m / EURUSD 1.35] x 87.5%)
• Costs recognized: EUR 25,925,925 (= [USD40m / EURUSD 1.35] x 87.5%)

This leads to income recognized for the project at the end of period 2 of EUR 6,481,482. Thereof, EUR 4,259,259 were already recognized in period 1. Hence, the difference in the amount of EUR 2,222,223 was recognized in period 2. The income recognized in period 2 has again not been influenced by movements of the exchange rate.
Detail: Determination of PoC Calculation Rate

**Explanation**
When using the PG method for performance obligations satisfied over time accounted for using the PoC method, all amounts denominated in a foreign currency are converted into the functional currency by using the PoC calculation rate. Generally, the PoC calculation rate equals the forward rate, if being fully hedged by forward FX contracts. The PoC calculation rate is applied to convert the total planned revenue as well as the total planned costs.

**Timing of Determination**
The PoC calculation rate is determined at the **beginning** of the project. It will **not be adjusted** over the life time of the project, in order to ensure that the percentage of completion remains unaffected by any exchange rate fluctuations.

**Level of Determination**
The PoC calculation rate is determined separately for each foreign currency and can be determined separately for the sales and the cost side. This is illustrated by an example:

- **Issue:** Siemens sells a locomotive to a customer based in the USA. The functional currency of the Siemens entity is euro whereas the sales contract is denominated in US dollar. The costs occur mainly in US dollar, but also in Norwegian Kroner and Japanese Yen.
- **PoC calculation rate:** It is determined separately for the following exchange rates: EURUSD for the sales contract and EURUSD as well as EURNOK and Japanese EURJPY for the purchase contract.

**Basis for Determination**
The basis for the determination of the PoC calculation rate depends on the type of hedging used for the project:

- For projects which are **heded individually** by using foreign currency forwards, the PoC calculation rate equals the forward rates as stated in these contracts.
- For the unhedged part of a PoC project, in the case of **natural hedges** as well as for **global hedges**, the spot exchange rate prevailing at the date when the contract is approved and becomes legally effective should be used.
- If **exchange rate clauses** are contractually agreed these exchange rates should be applied.

If multiple hedging instruments are used, a weighted average of the applicable exchange rates is used to determine the PoC calculation rate.

Keep in mind that the PoC calculation rate is determined **separately for each foreign currency** and can be determined **separately for the sales and cost side**. The basis for computation depends on the type of hedging used for the project.
Foreign currency accounting

Foreign currency transaction and translation

Embedded foreign currency derivatives
- Identification and separation
- Accounting treatment
- Interaction with hedge accounting

Foreign currency hedge accounting
- Hedging and hedge accounting
- Requirements for hedge accounting
- Cash flow hedge accounting

Foreign currency effects on performance obligations satisfied over time (POC method)
### Glossary

**advance payment:** An advance payment is a contractually agreed amount that is paid by the customer before the delivery of goods or services is performed, in order to finance the order.

**amortization:** Amortization is the systematic allocation of the depreciable amount of an intangible asset over its useful life. The depreciable amount is the cost of an asset less its residual value.

**cash and cash equivalents:** Cash and cash equivalents are short-term liquid assets and fixed-interest securities with a remaining term of three months or less at the time of their acquisition.

**cash flow hedge accounting:** Cash flow hedge accounting is a special set of accounting rules that helps transfer an economic effective hedge to the financial statements. If this method is used, only the accounting for the hedging instrument is changed. Earnings volatility is avoided by recognizing the fair value changes of the forward FX (=foreign exchange) contract - i.e., the hedging instrument - in OCE (=other components of equity). As a result, the fair value changes of both the hedged item and the hedging instrument that occur before delivery are not recognized.

**completed-performance method:** Under the completed-performance method, revenue, costs and income are only recognized when the performance obligation is (substantially) satisfied, i.e., when control of the promised goods or services is transferred to the customer. The completed-performance method can be considered for performance obligations satisfied over time as a simplification of the percentage-of-completion method only in certain cases.

**consolidated company:** This refers to a Siemens company that is included in the consolidation group.

**consolidated financial statements:** This is a combination of all the financial statements of the legal entities of a consolidation group, e.g., Siemens Group. The consolidated financial statements present the financial information of a group as those of a single economic entity.

**critical-term match:** This is a qualitative method for testing prospective effectiveness of a hedge accounting relationship. It is only applicable for testing effectiveness if the hedging relationship fulfills certain restrictive criteria.

**currency risk:** Foreign currency risks result from fluctuations in foreign exchange rates in the financial markets. Currency exposures arise on any currency position (open foreign exchange position) that is not the functional currency of the ARE (HB II).

**debt instrument:** This is a written agreement in which the issuer promises to reimburse a debt. In contrast to equity instruments, the issuer of a debt instrument has contractually agreed to make fixed payments to the holder of the instrument. Examples are treasury bills, notes and bonds, banker’s acceptances, commercial papers and certificate of deposits.

**derivatives:** These are financial instruments with all three of the following characteristics: (i) its value changes in response to the change of an underlying price or index, e.g., an interest rate, a foreign exchange rate, a commodity price, credit rating, price index or other variable, (ii) it requires no initial net investment or little net investment and (iii) it is settled at a future date.

**dollar-offset method:** This is a quantitative method for testing the effectiveness of a hedging relationship. According to the dollar-offset method, a hedging relationship is highly effective if cumulative currency-related fair value changes of the hedged item and hedging instrument offset each other in a range of 80% to 125%.

**earnings volatility:** Earnings volatility reflects changes in earnings between the different
accounting periods. In order to show a constant earnings situation, Siemens aims to avoid all negative earnings volatility.

**embedded foreign currency derivatives (FX-ED):** This is a special currency feature in which a contract for the sale or purchase of goods and services (host contract) is settled within a certain economic environment. Each pending sales and purchase contract denominated in foreign currency contains an FX-ED; the question is whether the FX-ED has to be accounted for separately at fair value through P/L.

**equity instrument:** An equity instrument is a contract that evidences an interest in an entity’s equity. Examples of equity instruments include shares, stock options, and equity futures.

**fair value:** The fair value of an asset or liability is generally understood to be the amount at which two independent, knowledgeable and willing parties would be prepared to exchange the asset or settle the liability, provided that the transaction is entered into at arm’s length and without coercion.

**fair value hedge accounting:** This is a strategy for hedge accounting that avoids earnings volatility during the hedge accounting relationship by showing certain fair value changes in the hedging instrument and hedged item in the balance sheet as well as the income statement. For contracts concluded after September 30, 2012, all Siemens entities except for SFS entities should use cash flow hedge accounting rather than fair value hedge accounting to avoid currency-related earnings volatility.

**firm commitment:** A firm commitment is a purchase or sales contract that is approved and legally effective but not yet completed by either of the parties.

**forecast transaction:** These are planned sales and planned purchases. They comprise external forecast transactions (e.g., forecast sales to third parties in foreign currency) as well as intragroup forecast transactions and intragroup firm commitments (e.g., pending sales to a consolidated subsidiary in a foreign currency).

**foreign currency:** A foreign currency is a currency of another country. That can, from the German perspective, be the U.S. dollar, the Japanese yen or the British pound, for example.

**forward foreign exchange contract:** Forwards are individually agreed unconditional contracts obligating the holder to buy or sell the underlying at a certain price and at a certain future date that are both predetermined in the contract. One type of forward that is frequently used by Siemens is the foreign currency exchange contract, in which the underlying is a certain amount of a foreign currency.

**Group level:** The Siemens Group comprises Siemens AG and all its consolidated subsidiaries.

**hedge accounting:** This is a special set of accounting rules that aims to avoid unwanted earnings volatility caused by applying general accounting rules to an economic hedge. Two hedge accounting strategies are cash flow hedge accounting and fair value hedge accounting.

**hedged item:** A hedged item is a transaction that causes an economic risk, such as a currency risk that needs to be hedged. Common hedged items in hedge accounting are forecast transactions and firm commitments.

**hedged rate:** This is the exchange rate applied to a forward contract with settlement at an agreed future date, based upon the current spot exchange rate, plus or minus the forward points resulting from the interest rate differential of both currencies exchanged.

**hedges:** Hedges or hedge instruments are designated derivatives or designated non-derivative financial assets or non-derivative financial liabilities whose fair value or cash flows are expected to offset changes in the fair value of the cash flows of the hedged items.

**hedging instrument:** This is an instrument used in hedging to offset a risk exposure caused by the
hedged item, e.g. derivative contracts such as forward FX contracts.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td>host contract:</td>
<td>This is a non-derivative element that is part of a hybrid contract. Non-derivative means its value does not vary with the value of the underlying asset (such as a stock, bond, commodity or currency) or index such as interest rates.</td>
</tr>
<tr>
<td>hybrid contract:</td>
<td>A hybrid contract is a combination of a non-derivative element (e.g. a sales/purchase contract in domestic currency) and an embedded derivative in one contract (e.g. a FX forward contract).</td>
</tr>
<tr>
<td>interest element of a forward FX contract:</td>
<td>The fair value of a forward contract is constructed of two elements, the spot element and the interest element. The spot element is the basic price of the forward contract and the interest element expresses the interest yield of the contracting parties over the duration of the forward contract.</td>
</tr>
<tr>
<td>intrinsic value of an option contract:</td>
<td>This is the in-the-money portion of the option's premium. For example, if a call options strike price is $15 and the underlying stock's market price is $25, then the intrinsic value of the call option is $10.</td>
</tr>
<tr>
<td>local currency:</td>
<td>The local currency is the currency of a country. For example, the U.S. dollar is the local currency of the United States of America.</td>
</tr>
<tr>
<td>materiality threshold:</td>
<td>This is the threshold above which an amount is considered material. Omissions or misstatements of items are material if they could, by their size or nature, individually or collectively, influence the economic decisions of users.</td>
</tr>
<tr>
<td>monetary balance sheet item:</td>
<td>Generally, monetary assets and liabilities are held or settled in money, i.e. the company has the right to receive or the obligation to pay a number of units of currency.</td>
</tr>
<tr>
<td>net foreign currency position:</td>
<td>This is the currency exposure of an entity that causes foreign currency risk and therefore needs to be managed by hedging.</td>
</tr>
<tr>
<td>New Collaboration Model (NCM):</td>
<td>Guideline for cooperation between Business Unit (BU) und Regional Unit (RU) to align risk and profit allocation in international (=cross-border) inter-company business and further standardize internal cooperation. NCM is applicable for projects where the RU needs substantial contribution from the BU and it is mandatory for category A-, B- and C-projects (according to PM@Siemens). Due to transfer pricing issues the RU shall earn a profit margin for its on-shore portion that independent companies would earn for a comparable activity - according to predefined function and risk profiles. NCM also reduces internal negotiation efforts by standardizing business types, contracts and practices.</td>
</tr>
<tr>
<td>option:</td>
<td>A purchased option grants the holder (long position) the right, but does not oblige him, to buy or sell the underlying (e.g., contractually agreed amount denominated in foreign currency) at a specified price on a specified date (European option) or within a specified period of time (American option). Accordingly, the seller of the option (short position) has the obligation to sell or buy the underlying on demand of the holder of the option at the contractually defined terms.</td>
</tr>
<tr>
<td>other components of equity (OCE):</td>
<td>The position other components of equity (OCE) is a special position within equity, used to e.g., store certain fair-value changes of a hedging instrument during a cash flow hedge accounting relationship.</td>
</tr>
<tr>
<td>percentage of completion (PoC):</td>
<td>Under the application of the percentage-of-completion method, income is reported according to the percentage of completion achieved for the performance obligation satisfied over time. In principle, the percentage of completion can be measured either input-oriented (e.g. cost-to-cost method) or output-oriented (e.g. contract-milestone method).</td>
</tr>
<tr>
<td>percentage-of-completion (PoC)</td>
<td>An accounting method for performance obligations satisfied over time that recognizes revenue, costs and income over the entire duration of a...</td>
</tr>
<tr>
<td>Method</td>
<td>Performance obligation as it is being satisfied.</td>
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<tr>
<td>------------------------</td>
<td>--------------------------------------------------</td>
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<tr>
<td>Performance obligation</td>
<td>A performance obligation is either an explicitly stated or implied promise in a contract with a customer to transfer a distinct good or distinct service (or a distinct bundle of goods or services) to the customer or a series of distinct goods or services that are substantially the same and that have the same pattern of transfer to the customer.</td>
</tr>
<tr>
<td>Performance obligation satisfied over time:</td>
<td>A performance obligation is satisfied over time if the customer obtains control of the promised goods or services over time. As a result, revenue is recognized over the entire performance-obligation term. Consequently, revenue must be recognized even if the performance obligation is not completely satisfied.</td>
</tr>
<tr>
<td>Put option (short put):</td>
<td>If the buyer of an option acquires the right to sell the underlying at the predefined contractual terms, the transaction is known as a put option.</td>
</tr>
<tr>
<td>Reporting date:</td>
<td>This is the date as of which financial statements or management reports are prepared.</td>
</tr>
<tr>
<td>Siemens Corporate Currency Guideline:</td>
<td>This Siemens guideline defines how to handle exposure to foreign currencies, i.e. how to determine currency exposure and to hedge the potential risk.</td>
</tr>
<tr>
<td>Time value of an option contract:</td>
<td>The fair value of an option is equal to the sum of the intrinsic value and the time value of the option. The time value of an option results from the chance/risk that the market price of the underlying may increase/decrease during the remaining maturity. The time value of an option is at its maximum when the market price of the underlying is equal to the strike price. The shorter the remaining term of the option is, the more the time value decreases.</td>
</tr>
<tr>
<td>True and fair view:</td>
<td>True and fair view is one of the most prominent principles of accounting. It suggests that an enterprise should provide a true and fair view about its financial conditions and operating results. Financial statements are a product of management's judgments and estimates. The principle of true and fair view requires comparative truth about the enterprises' picture. True and fair view is rather defined operationally; it is thought to be accomplished by complying with all other lower accounting principles.</td>
</tr>
<tr>
<td>Written option:</td>
<td>This describes an option from the viewpoint of its seller. A written option obliges the option seller to buy (call) or sell (put) a security or other financial asset at an agreed-upon price (the strike price) during a certain period of time or on a specific date (exercise date).</td>
</tr>
</tbody>
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