

Guide  
August 1999



**WORLD SOFTWARE®**

**Euro  
Implementation  
Guide**



Release  
A7.3 CU11

**JDEdwards®**





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## Release A7.3 CU11... What's in It for Me?

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Release A7.3 CU11 includes significant enhancements for the new European common currency, the euro, as well as general corrections.

Although many of the enhancements in A7.3 CU11 were designed for countries participating in the European common currency, companies in other countries might want to use the enhancements, which include alternate currency receipt and payment processing. Consult with your accounting department to determine whether the enhancements are applicable to your business.

Release A7.3 CU11 includes enhancements for over 170 programs (these enhancements were first available in A7.3 CU9). One of the enhancements that has widespread impact is the no inversion/triangulation method of exchange rate calculations. If you implement no inverse/triangulation, you *must* implement all 170 programs.



Make sure that you fully understand the implications of loading this cumulative update and how it might affect your custom programs and system environment. Even if you do not need the new functionality that is in this cumulative update, you will want to do an impact analysis before upgrading to CU11, especially if your environment is heavily customized.



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## Glossary

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## Euro Overview



The European Union (EU) has introduced a new monetary unit called the euro. The euro will eventually phase out the national currencies of all Economic and Monetary Union (EMU) member nations.

This overview describes the following:

- Economic and Monetary Union implementation
- EU and EMU member nations
- Accounting requirements for the EMU
- Preparation for the monetary union
- Issues related to the introduction of the euro
- J.D. Edwards software solution
- The purpose of this guide

## Economic and Monetary Union Implementation

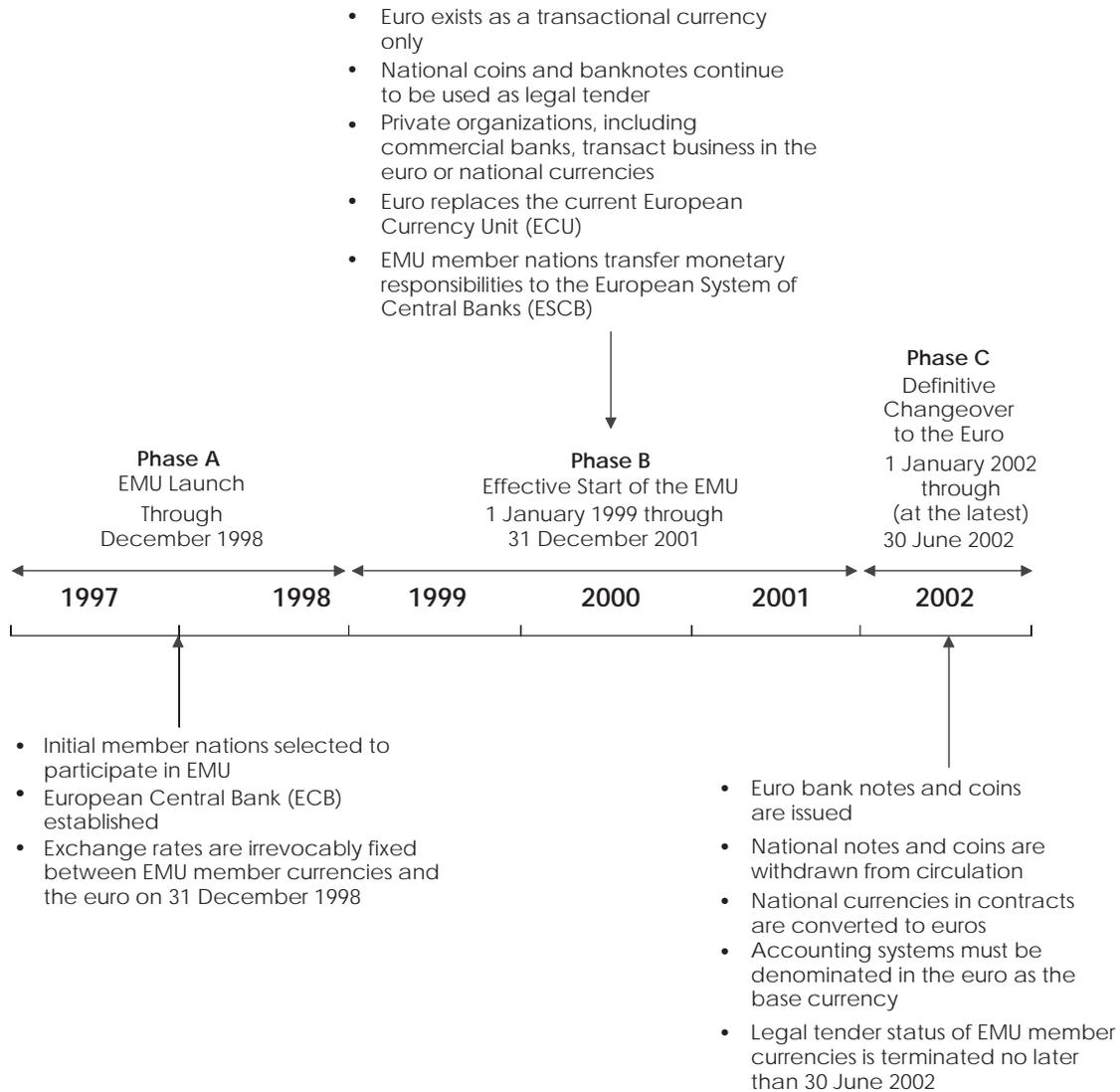
In 1995, the European Council met in Madrid, Spain, and agreed that the single European currency would be named the euro in all official EU languages. It also agreed that the EMU would be introduced in the following phases:

- Phase A: EMU Launch
- Phase B: Effective Start of the EMU
- Phase C: Definitive Changeover to the Euro



## EMU Timetable

The three phases are illustrated and described in the following timetable:



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## EU and EMU Member Nations

Of the 15 EU member nations, 11 are also members of the EMU. The following table lists each EU nation, year admitted, and whether the nation is part of the EMU.

<b>EU Member Nation (Year Admitted)</b>	<b>EMU Member Nation</b>
<b>Austria (1995)</b>	Yes
<b>Belgium (1951)</b>	Yes
<b>Denmark (1973)</b>	No
<b>Finland (1995)</b>	Yes
<b>France (1951)</b>	Yes
<b>Germany (1951)</b>	Yes
<b>Greece (1981)</b>	No
<b>Italy (1951)</b>	Yes
<b>Luxembourg (1951)</b>	Yes
<b>Netherlands (1951)</b>	Yes
<b>Portugal (1981)</b>	Yes
<b>Republic of Ireland (1973)</b>	Yes
<b>Spain (1981)</b>	Yes
<b>Sweden (1995)</b>	No
<b>United Kingdom (1973)</b>	No

### Accounting Requirements for the EMU

For several years, the European Commission has worked to formulate an accounting framework for the EMU environment. One of its goals has been to improve comparability of consolidated accounts in the single market. To this end, the European Commission has proposed an initiative to align, where possible, EU accounting rules with international accounting standards promoted by the International Accounting Standards Committee (IASC) and the International Organization of Securities Commissions (IOSCO). The European Commission has also worked to formulate guidelines for the conversion to and operation in the euro.

Additionally, industry groups such as the Fédération des Experts Comptables Européens (FEE), which represents the accountancy profession in Europe, have been working to formulate guidelines for software development standards regarding the euro.

### Preparation for the Monetary Union

To prepare for the monetary union, companies that operate in EMU member nations should do the following:

- Develop an accounting and reporting strategy for the transition period from January 1999 through December 2001
- Establish policies for transacting in specific currencies with major trading partners
- Establish policies for transacting and reporting in specific currencies with subsidiaries
- Decide when to convert the company's base currency to the euro

Companies may begin transacting business in the euro on 1 January 1999, although there is no obligation to do so. This is called the “no compulsion, no prohibition” principle. A creditor cannot require a debtor to deal in a specific currency unless agreed upon in a contract.

Some suppliers will invoice in euros immediately, while others will invoice in euros as late as possible. Customers will also have varying preferences for transacting business in euros. Essentially, “no compulsion, no prohibition” means that companies must be prepared to handle multiple currencies at the transaction level beginning 1 January 1999, regardless of when they plan to change over their accounting systems to the euro.

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## Issues Related to the Introduction of the Euro

The following topics describe some specific issues related to the introduction of the euro.

<b>Topic</b>	<b>Issue</b>
Dual Base Currencies	<p>With the introduction of the euro, there is a period of time when EMU member nations will have two legal currencies – their national currency and the euro.</p> <p>During the euro transition period, companies in EMU member nations may need to manage dual currencies for operational as well as reporting purposes. This means that daily business activities such as generating invoices and writing payments may be transacted and recorded in both a national currency and the euro. In addition, subsidiaries of global companies doing business in more than one EMU member nation may need to manage up to three currencies – corporate, national, and the euro.</p>
Exchange Rate Calculations	<p>With the introduction of the euro, international currencies are quoted as an exchange rate against the euro and not against the national EMU currencies. The euro rates are quoted as 1 euro = xxxxxx national currency units, for example, 1 EUR = 1.95583 DEM. The inverse is no longer allowed. That is, rates are no longer officially published as 1 DEM = 0.5113 EUR, for example.</p> <p>Amounts that are converted from one national currency to another must first be converted to the euro and then converted from the euro to the other national currency (triangulation). The European Commission has expressly stated that an alternative method of calculation cannot be used unless it produces the same result.</p> <p>For EMU member currencies, this means there are now two exchange rates involved when converting amounts from one currency to another. For example, when converting from the German mark to the French franc, one calculation is based on the exchange rate between the mark and the euro. The other is based on the exchange rate between the euro and the French franc.</p>

<b>Topic</b>	<b>Issue</b>
Rounding	<p>When using triangulation to convert a currency amount to the euro, the converted amount cannot be rounded to less than three decimals for EMU member currencies. Strict application of conversion rates will inevitably lead to fractional euro values that require price rounding. This could yield significant percentage price changes and impact profitability for low-margin, high-volume industries.</p>
Realization	<p>The exchange rates between EMU member currencies and the euro are irrevocably fixed. Because of the fixed rates, any potential gains and losses due to exchange rate fluctuations prior to 1 January 1999 need to be realized.</p> <p>Losses on open transactions must be realized at the end of December 1998. Gains are regulated by each EMU member country, but must be realized by no later than 31 December 1999 according to EU regulations.</p>
Alternate Currency Payments and Receipts	<p>According to the “no compulsion, no prohibition” principle, suppliers may invoice in their national currency or the euro from 1 January 1999 through 31 December 2001, and customers may pay in their national currency or the euro through, at the latest, 30 June 2002.</p> <p>The no compulsion, no prohibition principle means that companies must be prepared to process customer receipts in a currency different from the original transaction currency or their base currency as of 1 January 1999. However, those same companies can pay supplier invoices in their base currency through as late as 30 June 2002, if they choose to do so. For example, a French company that invoices a German company in euros could receive payment in German marks until as late as 30 June 2002.</p>
Dual Pricing	<p>During the transition period, companies are encouraged to provide dual pricing of goods and services at the consumer level to assist EMU consumers in getting accustomed to a single currency. Trading partners are also encouraged to do the same by providing dual price lists in their product catalogues.</p> <p>It is believed that by developing a sense for prices in the euro and learning to convert national currencies to the euro, consumers will quickly see the benefits of the monetary union.</p>

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<b>Topic</b>	<b>Issue</b>
Conversion of Historical Data	When a company converts its base currency to the euro, historical and current data in monetary amount fields are converted.

## J. D. Edwards Software Solution

J.D. Edwards is well positioned to support the requirements for the implementation of the euro. Much of the functionality required for implementation of the euro already exists in WorldSoftware. This functionality includes dual currency, multi-currency balance restatement, and multi-currency transaction processing. In addition to the existing functionality, J.D. Edwards has developed software enhancements for the euro-specific requirements.

This topic describes the following:

- Existing software functionality
- New software functionality

### Existing Software Functionality

The following briefly describes the existing WorldSoftware functionality for euro transaction processing:

<b>Existing Functionality</b>	<b>Description</b>
Multi-Currency General Ledger Balance Restatement	Companies can maintain an unlimited number of currencies at the account balance level. You can review currency amounts for account comparisons online and on reports.
Dual Currency General Ledger Detail Restatement	In addition to managing multiple currencies at an account balance level, companies can maintain two base currencies at the transaction level. A German company that chooses to operate in its national currency can continue using German marks in day-to-day business and restate all general ledger transactions to the euro for reporting and business analysis purposes.
Multi-Currency Customer and Supplier Transaction Processing	Companies are able to transact business in the currency of their choice for customer and suppliers. A company transacting business in German marks, for example, can continue to invoice a French customer in francs as long as it is within the euro transition period.

<b>Existing Functionality</b>	<b>Description</b>
Multi-Currency Draft Processing for A/R and A/P	<p>Companies can process A/R and A/P drafts in a multi-currency using manual receipts, manual payments, and automatic payment processing.</p> <p>Multi-currency processing for manual receipts is available as of release A7.3 CU11.</p>
Multi-Currency Automatic Debit Processing	Companies can process automatic debits in the transaction (foreign) currency of an invoice as of release A7.3 CU11, as well as the domestic currency.
Multi-Currency Payment Processing	Companies can centralize payment processing for multinational operations by associating payment groups with specific bank accounts. All vouchers in a particular currency can be paid from a bank account that deals in that currency.
Multi-Currency Pricing	Companies have the flexibility to establish base prices and advanced price adjustments by customer, customer groups, product, and product groups in unlimited currencies.
Asset Revaluations	Companies can simultaneously record fixed assets at the detail level in different ledgers for reporting in two currencies. Any fixed assets that are acquired during the euro transition period can be accounted for in both a company's base currency and the euro.
User-Defined Depreciation (UDD)	Using parallel ledger types, companies can depreciate assets in the euro and their base currency with user-defined, date-effective depreciation rules that can be different for each ledger. This is a significant advantage for rapid implementation of any new rules that may be established by EMU member nations.

### **New Software Functionality**

Releases A7.3 CU9, CU10, and CU11 include significant enhancements for the euro. Although many of the enhancements were designed for countries participating in the European common currency, companies outside of the EMU can also use the enhancements. Consult with your accounting department to determine whether the enhancements are applicable to your business.

The following briefly describes the new software functionality (enhancements) that J.D. Edwards has developed for euro-specific requirements:

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**New Functionality****Description**

No Inverse and  
Triangulation

As of 1 January 1999, the only official published exchange rates for EMU member nations are to the euro. There is no longer an official rate between two EMU member currencies, such as French francs and German marks.

In accordance with rules defined by the European Commission, the inverse of the officially published rates cannot be used. Companies must perform exchange rate calculations from one EMU member currency to another by first converting to the euro (triangulation).

The Set Daily Transaction Rates program has been enhanced to provide no inverse and triangulation functionality. Programs that calculate and use exchange rates have been enhanced to follow the no inverse/triangulation rules. A new user defined code table (00/EU) designates EMU members.

Euro Realization

According to EU regulations, companies in all EMU member nations must realize losses on exchange differences between EMU member currencies by 31 December 1998. This is regardless of which currency a company uses for accounting purposes. Each EMU member nation has its own guidelines for when gains on exchange differences must be realized, but EU regulations require that all gains (on transactions prior to 1999) be realized no later than 31 December 1999.

The Currency Gains and Losses program has been enhanced to realize gains and losses for open EMU currency transactions for A/R and A/P over an extended period of time.

Customer and Supplier  
Master Conversion

As EMU companies with which you conduct business convert to the euro, you will convert their currencies to the euro. You can do this on an individual basis, or you can convert multiple customers and suppliers at a time.

The Customer Master and Supplier Master Conversion programs have been created to automatically convert customer and supplier default currencies, address book currency code and amounts, or both to the euro.

To change customer or supplier currencies to the euro, you convert their default currencies. To store certain summary information such as year-to-date invoice and voucher amounts in the euro, you convert their address book currency code and amounts.

<b>New Functionality</b>	<b>Description</b>
Alternate Currency Processing	<p>Companies must be prepared to process customer receipts and supplier payments in a currency different from the original transaction currency or their company's base currency.</p> <p>The programs for receipts entry, manual payments, automatic payments, and A/P drafts have been enhanced to process transactions in the euro, or other alternate currency.</p> <p>Alternate currency processing for manual payments and A/P drafts is available as of release A7.3 CU11.</p>
Price Generation	<p>As your company and other EMU member companies convert to the euro, you will generate new prices in the euro. You can do this on an individual basis, or you can generate multiple prices at the same time.</p> <p>The Generate Purchase Price by Currency and Generate Price Adjustments by Currency programs automatically copy existing price records, calculate new costs, and create new prices in the euro.</p>
"As If" Currency Processing	<p>Before, during, and after converting to the euro, you can view amounts in the euro, regardless of whether a transaction was entered in a foreign or domestic currency. This will help companies prepare for the transition to the euro.</p> <p>Many inquiry and report programs have been enhanced to provide the ability to view amounts in an "as if" currency. "As if" currency processing allows you to view amounts as if they were entered in a currency other than the currency in which they were actually entered.</p>
Electronic Formats	<p>With the introduction of the irrevocably fixed euro exchange rate, several EMU member nations have created new electronic formats, while others have enhanced their existing formats. The A/R and A/P electronic format processing options have been enhanced to accommodate the EMU electronic format changes.</p> <p>Many of the EMU formats support the domestic currency <i>and</i> the euro.</p>

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**New Functionality****Description**

Intrastat Reporting

Each EMU member nation will continue to determine its own Intrastat requirements. Some nations will change their format to more easily accommodate the euro.

The Intrastat programs have been enhanced so that your company can continue to comply with the reporting requirements for your country.

Each of these software enhancements is described in detail in this guide. The base currency conversion, which converts a company's base currency to the euro, is described in the *WorldSoftware E9 Euro Installation, Conversion, and Integrity Workbook*.

## The Purpose of This Guide

This guide describes the software functionality developed for companies in EMU member nations who are required to transact business in the euro and for companies outside of the EMU who choose to transact business in an alternate, or third, currency.

Although this guide specifically describes the euro, its contents apply to any company that chooses to set up its system and transact business in an alternate currency.

This guide includes the following types of information:

- Conceptual information about the no inverse and triangulation method of exchange rate calculations
- Things to consider before setting up your system for the euro, or other alternate currency
- Examples that provide possible strategies for implementing the euro
- Examples of T-accounts and tables that show the entries that are created for euro realization
- Form captures that show records before and after converting to the euro
- Descriptions of the changes that were made to the existing software to allow for the euro, or other alternate currency

This guide assumes that you have worked with and have a solid understanding of J.D. Edwards software. As such, it does not include step-by-step instructions on how to complete a task. For example, assume you are setting up EMU member currencies. This guide does not describe every field and the buttons you must click when you set up EMU currencies. Instead, it explains that if two currencies exist in the table, the system does not allow spot rates on transactions between them. Or, for example, assume you want to enter a manual payment in the euro. Instead of describing the manual payment process in its entirety, this guide describes the steps that are different when entering a manual payment in the euro.



## Exchange Rates and the Euro

On 1 January 1999, the euro was introduced as a new monetary unit. The euro impacts many European countries, especially Economic and Monetary Union (EMU) member countries and any countries with which they do business. The euro currency will fluctuate against world currencies but not against EMU member currencies. The regulations for the euro and associated EMU national currencies affect how exchange rates are handled.

This overview describes the following:

- Irrevocably fixed exchange rates
- Exchange rates and calculations
- Checklist: Setting up euro currency relationships

### Irrevocably Fixed Exchange Rates

As of 1 January 1999, the euro exchange rate was irrevocably fixed to EMU member currencies. International currencies are quoted as an exchange rate against the euro, and not against the national EMU currencies. The official conversion rates are as follows:

1 euro equals:

- 40.3399 Belgian francs
- 1.95583 German marks
- 166.386 Spanish pesetas
- 6.55957 French francs
- 0.787563 Irish pounds
- 1936.27 Italian lire
- 40.3399 Luxembourg francs
- 2.20371 Dutch guilders
- 13.7603 Austrian schillings



200.482 Portuguese escudos

5.94572 Finnish markka

### Exchange Rates and Calculations

Prior to the introduction of the euro and the new exchange rate regulations, J.D. Edwards WorldSoftware calculated exchange rates by using the multiplier or divisor method to derive the unknown side of a transaction. This meant that the reciprocal (or inverse) of a rate was used for some exchange rate calculations. With the euro, the inverse rate can no longer be used. Only the rate that corresponds to one euro is valid.

One fixed exchange rate is now published for each EMU member currency. The only official published rates are from the euro; you will not see an official published rate to the euro, such as 1 DEM = 0.511291 EUR.

The rate is published with six significant figures as follows:

1 EUR = xxxxxx national currency unit

For example, 1 euro (EUR) = 1.95583 German mark (DEM) or 1 EUR = 1936.27 Italian lire (ITL). The DEM rate has one significant figure to the left of the decimal and five to the right of the decimal, whereas the ITL rate has four significant figures to the left of the decimal and two to the right.

There is no official exchange rate between two EMU currencies, such as German marks and French francs. Instead, the fixed exchange rate is used in both directions, converting from a national currency to the euro and converting from the euro to a national currency.

The European Commission has defined strict rules for EMU member nations and how they perform exchange rate calculations. Some of the rules include:

- The officially published euro exchange rates must be used for calculations between EMU member currencies and other currencies.
- EMU member nations must use triangulation to calculate currency amounts through the euro.
- Cross rates are allowed in exchange rate calculations only if they provide the same result as triangulation.
- Spot rates are not used on transactions between two EMU member currencies.

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To adhere to these rules, J.D. Edwards WorldSoftware has incorporated no inverse and triangulation functionality.

## Checklist: Setting Up Euro Currency Relationships

Complete the items in the following checklist to set up your exchange rates for the euro. These are one-time only tasks:

- Activate multi-currency
- Set up a currency code for the euro
- Set up the EMU member currency table
- Set up processing options for Set Daily Transaction Rates and Speed Transaction Rates Entry
- Set up no inverse records for EMU currencies
- Set up triangulation records for EMU currencies

## Topics and Tasks in This Section

This section consists of the following topics and tasks:

- No inverse and triangulation
- Before setting up euro currency relationships
- Setting up euro currency relationships



## No Inverse and Triangulation

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The European Commission has defined strict rules for Economic and Monetary Union (EMU) member nations and how they perform exchange rate calculations. To adhere to the rules, J.D. Edwards has incorporated no inverse and triangulation functionality into the software.

As of 1 January 1999, each EMU member currency is fixed to the euro at an irrevocably fixed exchange rate. This fixed rate is published and used to calculate currency conversions between EMU member currencies.

For example, the German mark is irrevocably fixed to the euro at an exchange rate of 1 EUR = 1.95583 DEM. Likewise, the French franc is irrevocably fixed at a rate of 1 EUR = 6.55957 FRF. Thus, the German mark is fixed to the euro and the French franc is fixed to the euro. In essence, the mark and the franc are fixed to each other, even though there is no exchange rate published between the mark and the franc. This is the case with the exchange rates between the euro and the currencies of all EMU member nations.

This topic describes the following:

- Exchange rate methods
- No inverse
- Triangulation
- Application outside of the EMU

## Exchange Rate Methods

There are three exchange rate methods for calculating amounts from one currency to another:

- Multiplier method
- Divisor method
- No inverse method

The first two methods, divisor and multiplier, do not apply when calculating amounts between two EMU member currencies. The third method, no inverse, is the exchange rate method that applies to EMU member currencies, as defined by the European Union (EU). While non-EMU member countries may choose to use the no inverse method of exchange rate calculation, the no inverse method is required for EMU member countries that transact business with one another.

The three exchange rate methods are illustrated and described in the following examples. Although the examples are based on DEM to EUR and EUR to DEM exchange rates, remember that German companies can no longer use the multiplier or divisor method for transactions with another EMU currency. Instead, they are required to use the no inverse method.

### Multiplier Method

The multiplier method (Y) multiplies the foreign amount by the exchange rate to calculate the domestic amount.

	Multiplier Method (Y) and Rate	Divisor Method (Z) and Rate	No Inverse (Override Conversion) Method (Y or Z)
EUR to DEM	1.95583	.511292	
DEM to EUR	.511292	1.95583	

The system uses the multiplier rate when calculating from EUR to DEM and from DEM to EUR. Notice that the DEM to EUR multiplier rate ( $1/1.95583 = .511292$ ) is the inverse of the EUR to DEM multiplier rate (1.95583).

### Divisor Method

The divisor method (Z) divides the foreign amount by the exchange rate to calculate the domestic amount.

	Multiplier Method (Y) and Rate	Divisor Method (Z) and Rate	No Inverse (Override Conversion) Method (Y or Z)
<b>EUR to DEM</b>	1.95583	.511292	
<b>DEM to EUR</b>	.511292	1.95583	

The system uses the divisor rate when calculating from EUR to DEM and from DEM to EUR. Notice that the EUR to DEM divisor rate ( $1/1.95583 = .511292$ ) is the inverse of the DEM to EUR divisor rate (1.95583).

### No Inverse Method

The no inverse method uses the divisor rate when calculating to the euro and the multiplier rate when calculating from the euro. It does not use the inverse rate when calculating in the opposite direction, as do the multiplier and divisor methods. The EU requires that the inverse of exchange rates *not* be used when calculating amounts between EMU currencies in the opposite direction. Therefore, the system uses the no inverse method when calculating amounts.

The no inverse method is sometimes referred to as the override conversion method because it overrides the multiplier or divisor method (on the Set Multi-Currency Option form) when it is set up.

	Multiplier Method (Y) and Rate	Divisor Method (Z) and Rate	No Inverse (Override Conversion) Method (Y or Z)
<b>DEM to EUR</b>	blank	1.95583	Z
<b>EUR to DEM</b>	1.95583	blank	Y

Notice that the override conversion method for DEM to EUR is Z (divisor) in this example. It cannot be Y because that would require using the inverse rate, which is not allowed on transactions between EMU member currencies. Notice that the override conversion method for EUR to DEM is Y (multiplier). Both methods Y and Z use the same exchange rate amount, 1.95583. Because the inverse rate is not valid, it appears as blank in the example.

### No Inverse

In accordance with rules established by the European Commission, EMU member nations can no longer use the inverse of the officially published exchange rates. The European Commission legislation states the following:

- Economic Council regulations specifically prohibit the use of inverse rates for converting amounts between a national currency and the euro. (The J.D. Edwards term for this legal requirement is “no inverse.”)
- The EU national banks will no longer make rates available for member national currencies to any currency other than the euro. For example, the German mark (DEM) to French franc (FRF), and DEM to U.S. dollar (USD) exchange rates will no longer exist.

The no inverse method of exchange rate calculation is called “no inverse” because it does not use the inverse (reciprocal) rate when calculating amounts between currencies, as do the divisor and multiplier methods. With the no inverse method, the divisor and multiplier rates are the same rate and not the reciprocal of one another. Using the no inverse method minimizes the rounding differences that sometimes occur when using the divisor or multiplier method of exchange rate calculation. Any rounding differences that might occur with the no inverse method are usually immaterial.

The no inverse method works as follows:

- For transactions between two EMU currencies, the no inverse method uses the divisor rate when calculating *to* the euro and the multiplier rate when calculating *from* the euro. This is a legal requirement, as established by the European Commission.
- For transactions between an EMU and a non-EMU currency or two non-EMU currencies, the no inverse method can use either the divisor rate when calculating to a currency and the multiplier rate when calculating from a currency, or vice versa. There is no legal requirement that specifies whether the divisor or multiplier rate is used.

### Example: Converting Irish Pounds to the Euro

In the following example:

- The first calculation uses the no inverse method, which is required by EMU currencies, to convert Irish pounds (IEP) to the euro.
- The second calculation uses the reciprocal rate, which is not used by EMU member currencies. Notice the rounding differences that occur when the reciprocal rate is used.

Convert:

IEP    500.00    5,000.00    50,000.00    500,000.00    5,000,000.00

Using the no inverse method:

1 EUR = 0.787564 IEP

EUR	634.87	6,348.69	63,486.90	634,869.04	6,348,690.39
	= 500 / 0.787564				
	→ 653.23				

Using the reciprocal rate:

Reciprocal = 1.269738078

6 decimal places – 1.269738	634.87	6,348.69	63,486.90	<b>634,869.00</b>	<b>6,348,690.00</b>
7 decimal places – 1.2697380	634.87	6,348.69	63,486.90	634,869.00	6,348,690.00
8 decimal places – 1.26973807	634.87	6,348.69	63,486.90	<b>634,869.04</b>	<b>6,348,690.35</b>
9 decimal places – 1.269738078	634.87	6,348.69	63,486.90	<b>634,869.04</b>	<b>6,348,690.39</b>
	= 500.00 x (1 / 0.787564)				
	= 500.00 x 1.2697				
	→ 634.87				

### Triangulation

If two companies that transact business with one another are both EMU member countries, they must calculate amounts through the euro. For example, a German and a French company transact business. To calculate an amount from DEM to FRF, the French company must first calculate DEM to EUR and then EUR to FRF. In this way, the DEM to FRF rate is calculated through the euro.

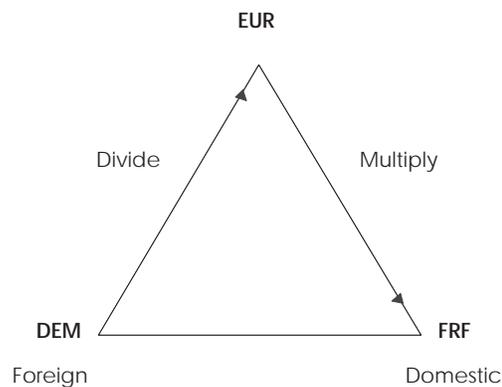
The currency calculation method between DEM and FRF is called triangulation. Triangulation must exist whenever EMU member companies transact business *with one another*; unless a company uses a cross rate that produces the same result as triangulation. To follow the rules of triangulation, the euro is used as a middle step when restating one EMU currency to another EMU currency other than the euro.

Triangulation works as follows:

- For transactions between two EMU currencies, triangulation uses the divisor rate (Z) to convert to the euro and the multiplier rate (Y) to convert from the euro. This is necessary so that the currency calculation does not violate the no inverse rule, according to EMU regulations.
- For transactions between one EMU and non-EMU currency or two non-EMU currencies, triangulation is optional. Amounts can be calculated in either of the following ways:
  - Using cross rates, as usual.
  - Using triangulation. Triangulation can use the divisor rate to convert to a triangulation currency and the multiplier rate to convert from a triangulation currency, or vice versa. There is no legal requirement that specifies whether the divisor or multiplier rate is used when going to or from the triangulation currency.

Spot rates are not used on transactions between two EMU member currencies that triangulate through the euro because the exchange rates for the EMU currencies are irrevocably fixed to the euro. However, spot rates can be used on transactions between an EMU and a non-EMU member currency. Companies must decide whether to set up triangulation between EMU and non-EMU member currencies or continue to use cross rates. For example, a German company must decide whether to set up triangulation between the DEM (EMU) and USD (non-EMU) currency or continue to use cross rates for that currency relationship.

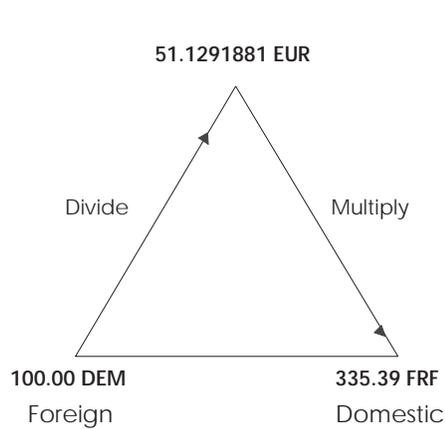
The following graphic provides a visual representation of triangulation:



Activating triangulation is irreversible. Once you activate it, you cannot turn it off. Make sure you understand the triangulation functionality and determine whether it relates to your business before activating it.

## Example: Converting German Marks to French Francs

The following graphic shows how DEM to FRF amounts are calculated through the euro. To perform a currency calculation between DEM and FRF, you first calculate DEM to EUR (step 1) and then calculate EUR to FRF (step 2).



1 EUR = 1.95583 DEM  
1 EUR = 6.55957 FRF

### Step 1:

Divide FC by ER to calculate to EUR  
 $100.00 \text{ DEM} / 1.95583 = 51.1291881 \text{ EUR}$

### Step 2:

Multiply EUR by ER to calculate to DC  
 $51.1291881 \times 6.55957 = 335.39 \text{ FRF}$

FC = Foreign Currency  
ER = Exchange Rate  
DC = Domestic Currency

Notice that the euro amount in the example shows as seven decimal places. That is because the AS/400 performs calculations up to that number. Do not confuse those calculations with exchange rates, which are published as six significant figures.

## Triangulation in a Multicompany Environment

When you activate triangulation, you do not have to use it to calculate all exchange rates. That is, if you use triangulation for some currency relationships within a company, you do not have to use it for all currency relationships within that company. You control whether a currency relationship uses triangulation.

If you have several companies operating in one environment, all companies have the euro functionality available to them. The currency relationships that you set up apply to all companies in the environment. If you activate triangulation for EMU member currencies only, companies with non-EMU base currencies are not impacted.

### Application Outside of the EMU

The no inverse method of exchange rate calculation is required for EMU member countries that transact business with one another, whereas it is optional for non-EMU member countries. The no inverse method reduces the rounding errors that can occur when working with large amounts using the multiplier or divisor method. Non-EMU member countries may choose to use no inverse when transacting business with EMU and non-EMU member countries, or they can continue to use the multiplier or divisor method of exchange rate calculation.

Triangulation is required for EMU member countries that transact business with one another, whereas it is optional for non-EMU member countries. Companies outside of the EMU can do either of the following when transacting business with an EMU member nation:

- Set up a currency relationship between the EMU and non-EMU currency using triangulation. First, set up the EMU and EUR currency relationships, using the no inverse method. Then set up triangulation for the EMU and non-EMU currency relationship.

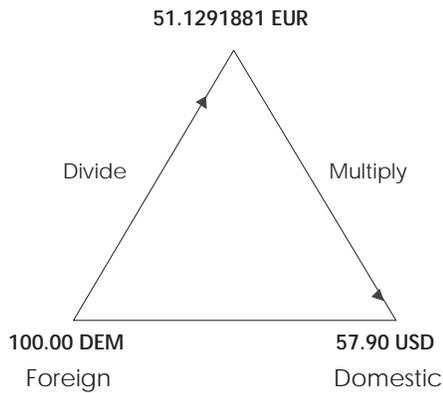
Triangulation allows spot rates on transactions between an EMU and non-EMU currency; however, spot rates are not allowed on transactions between two EMU member currencies.

- Set up exchange rates for the EMU and non-EMU currency relationships, as usual, and continue to use cross rates.

For example, a United States company can use triangulation when calculating amounts between DEM (EMU) and USD (non-EMU) currencies or it can continue to use cross rates between those currencies. To calculate amounts from DEM to USD using triangulation, you calculate the DEM to EUR amount and then the EUR to USD amount. In this way, the DEM to USD amounts are calculated through the euro, using triangulation.

### Example: Converting German Marks to U.S. Dollars

The following graphic shows how DEM to USD amounts are calculated through the euro. To perform a currency calculation between DEM and USD, you first calculate DEM to EUR (step 1) and then calculate EUR to USD (step 2).



1 EUR = 1.95583 DEM  
 1 EUR = 1.13252 USD

**Step 1:**  
*Divide* FC by ER to calculate to EUR  
 $100.00 \text{ DEM} / 1.95583 = 51.1291881 \text{ EUR}$

**Step 2:**  
*Multiply* EUR by ER to calculate to DC  
 $51.1291881 \times 1.13252 = 57.90 \text{ USD}$

FC = Foreign Currency  
 ER = Exchange Rate  
 DC = Domestic Currency



## Before Setting Up Euro Currency Relationships

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Make sure you understand no inverse and triangulation before you set up euro currency relationships. Once you activate the no inverse and triangulation functionality, you cannot turn it off. See *No Inverse and Triangulation* for more information.

Before you set up euro currency relationships, you must complete the following tasks:

- Activating multi-currency
- Setting up a currency code for the euro
- Setting up EMU member currencies
- Setting up processing options
- Verifying no inverse and triangulation functionality

## Activating Multi-Currency

From the Multi-Currency Setup menu (G1141), choose Set Multi-Currency Option. On Set Multi-Currency Option, set the Multi-Currency Conversion field to Y (multiplier) or Z (divisor).

```

000909          Set Multi-Currency Option
Action Code. . . . . _
Batch Control Required (Y/N) . . . . . N
Management Approval of Input (Y/N) . . . . . N
Allow PBCO Postings (Y/N). . . . . Y
Allow Invalid Accounts (Y/N) . . . . . Y

Symbol to Identify Short Number. . . . . *
Symbol to Identify BU.Object.Sub . . . . . _
Symbol to Identify 3rd G/L Account # . . . . . Z
Account Separator Character. . . . . _

Intercompany Settlements (Y/D/1/2/*N) . . . . . *

Multi-Currency Conversion (Y/N/Z). . . . . Y
Allow Multi-Currency Intercompany JE . . . . . N

F24=More Keys
    
```

## Setting Up a Currency Code for the Euro

From the Multi-Currency Setup menu (G1141), choose Designate Currency Codes. On Designate Currency Codes, set up the euro currency code. Make sure you set the Display Decimals field to 2 for the euro.

```

0013          Designate Currency Codes
Action Code. . . . . A
Currency Code. . . . . EUR
Description. . . . . Euro
A/P Payment Amt Text . . . . .
Display Decimals . . . . . 2

F24=More Keys
    
```



03 Character		Description		Description-2	
Code					
ATS		Austrian Shilling			
Special Handling Code.	01/01/1999			Hard Coded Y/N	N
BEF		Belgian Franc			
Special Handling Code.	01/01/1999			Hard Coded Y/N	N
DEM		German Mark			
Special Handling Code.	01/01/1999			Hard Coded Y/N	N
ESP		Spanish Pesetas			
Special Handling Code.	01/01/1999			Hard Coded Y/N	N
EUR		Euro		E - Electronic Format Euro	
Special Handling Code.	01/01/1999			Hard Coded Y/N	N
FIN		Finland Markka			
Special Handling Code.	01/01/1999			Hard Coded Y/N	N
FRF		French Franc		F - Electronic Format French	
Special Handling Code.	01/01/1999			Hard Coded Y/N	N

F5=Code Types F14=Memo F15=Where Used F18=Translate F21=Print F24=More

Each currency has an effective date, which allows you to enter existing EMU currencies now and at a later time add other currencies that join the EMU. The effective date for a currency is entered in the Special Handling Code field.

4. Enter the effective date in the following format, regardless of your date preferences:

DD/MM/YYYY

The effective date must be entered in this format because the Special Handling Code field is a text field, not a date field.

5. Make sure that the effective date for the currency is the same as the effective date on the Set Daily Transaction Rates form.

The Description-2 field on the EMU Member Setup form has a specific purpose for A/R domestic formats in the French franc and Italian lire. See *Special Setup Requirement for A/R French and Italian Formats*.

## Setting Up Processing Options

Before you set up euro currency relationships, you must set up processing options for the following programs:

- Set Daily Transaction Rates. From the Multi-Currency Setup menu (G1141), choose the processing options for Set Daily Transaction Rates.
- Speed Transaction Rates Entry. From the Multi-Currency Processing menu (G11), choose the processing options for Speed Transaction Rates Entry.

The processing options for euro functionality are:

- Processing Option 2 (Speed Transaction Rates Entry only)

To use the same processing option values as Set Daily Transaction Rates (P00151), enter version ZJDE0002 (euro functionality). Version ZJDE0001 is the default (no euro functionality).

From Speed Transaction Rates Entry, you can access the Set Daily Transaction Rates form by pressing F5.

- Processing Option 2 (Set Daily Transaction Rates)  
Processing Option 3 (Speed Transaction Rates Entry)

To display the fields that allow you to set up currency relationships for no inverse and triangulation, enter 1. Entering 1 does not activate triangulation. Triangulation is activated when you enter a currency in the Triangulation Currency field on the Set Daily Transaction Rates form.



For security purposes, J.D. Edwards recommends that you remove the value for this processing option after you set up currency relationships for no inverse and triangulation. This way, the no inverse and triangulation fields will no longer display, avoiding any erroneous entries by users.

- Processing Option 3 (Set Daily Transaction Rates)  
Processing Option 4 (Speed Transaction Rates Entry)

To prohibit additional exchange rates from being entered between EMU currencies after the override effective date, enter 1.

## Verifying No Inverse and Triangulation Functionality

After you set the processing options for euro functionality, verify that the no inverse and triangulation functionality are available for your use.

### ▶ **To verify no inverse and triangulation functionality**

---

1. From the Multi-Currency Setup menu (G1141), choose Set Daily Transaction Rates.
2. Make sure the following fields display on Set Daily Transaction Rates:
  - Triangulation Currency
  - Override Conversion Method
  - Prohibit Spot Rates
  - Override Effective Date

The no inverse/triangulation fields appear under the Contract (Addr) field.

```
00151          Set Daily Transaction Rates
Action Code. . -
To Currency. . ___
From Currency. ___
Contract (Addr) _____
Triangulation Currency . . . . . ___
Override Conversion Method (Y/Z) . _ Prohibit Spot Rates. . _
Override Effective Date. . . . . _____

Skip to Date-Effective _____

          Effective      . . Exchange Rate . .
          Date          Multiplier      Divisor
          _____      _____      _____
          _____      _____      _____
          _____      _____      _____
          _____      _____      _____
          _____      _____      _____
          _____      _____      _____
          _____      _____      _____
          _____      _____      _____

F5=Update w/Redisplay      F21=Print Exchange Rates      F24=More Keys
```

## Setting Up Euro Currency Relationships

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This topic describes setting up euro currency relationships for EMU currencies and consists of the following:

- Setting up no inverse records
- Setting up triangulation records
- Example: Currency setup for two EMU currencies
- Example: Currency setup for an EMU and non-EMU currency
- Viewing and updating exchange rates



Activating triangulation is irreversible. Once you activate it, you cannot turn it off. Make sure you understand the triangulation functionality and determine whether it relates to your business before activating it.

### Setting Up No Inverse Records

You must have two no inverse records for each EMU currency. A no inverse record identifies a currency relationship between an EMU currency and the euro, includes the exchange rate, and designates whether the divisor or multiplier method is used for the exchange rate calculation. For exchange rate calculations from an EMU currency to the euro, the no inverse record uses the divisor method. For calculations from the euro to an EMU currency, the no inverse record uses the multiplier method.

When you set up a no inverse record, the system automatically creates a corresponding record in the opposite direction. For example, if you set up a no inverse record from FRF to EUR with the divisor method, the system automatically creates a no inverse record from EUR to FRF with the multiplier method. The two no inverse records contain the same exchange rate, and not the inverse of each other. The opposite rate on each exchange rate record is blank because that rate has no purpose.



attempt to do this, the program issues an error message and you must remove the amount.

The fields in the following table apply specifically to no inverse.

Field	Explanation
Override Conversion Method (Y/Z)	<p>A value that specifies which method of multi-currency accounting to use:</p> <p>Codes are:</p> <ul style="list-style-type: none"> <li>Y Use multipliers to convert currency. The system multiplies the foreign amount by the exchange rate to calculate the domestic amount.</li> <li>Z Use divisors to convert currency. The system divides the foreign amount by the exchange rate to calculate the domestic amount.</li> </ul> <p>..... <i>Form-specific information</i> .....</p> <p>For EMU member currencies, enter a value in this field to override the conversion method in General Accounting Constants. A value in this field activates the no inverse method. Enter Z (divisor) when calculating the foreign currency to the triangulation currency and Y (multiplier) when calculating the triangulation currency to the domestic currency.</p>
Override Effective Date	<p>The date on which a transaction, text message, contract, obligation, or preference becomes effective.</p> <p>..... <i>Form-specific information</i> .....</p> <p>The override effective date is the date to begin using the no inverse or triangulation method to calculate exchange rates. If you enter a value in this field and the Override Conversion Method field, the system uses this date to begin using the no inverse method to calculate exchange rates. If you enter a value in this field and the Triangulation Currency field, the system uses this date to begin using triangulation to calculate exchange rates.</p> <p>For EMU member currencies, the date in this field should be the same date as the effective date in the Special Handling field on the EMU Member Setup form (00/EU).</p>

Field	Explanation
Effective Date	<p>The date on which the exchange rate takes effect. The effective date is used generically. It can be a lease effective date, a price or cost effective date, a currency effective date, a tax rate effective date, or whatever is appropriate.</p> <p>..... <i>Form-specific information</i> .....</p> <p>If you are adding a new effective date to an existing pair of currencies, enter the date on the first blank line.</p> <p>Programs use the multiplier or divisor rate associated with the date in this field to calculate amounts. When you enter a transaction, such as an invoice or payment, the program searches for the most recent effective date and uses the corresponding exchange rate.</p> <p>For EMU member currencies, programs use this date and the corresponding rate to calculate amounts to the euro, from the euro, or through the euro (triangulation).</p>
Multiplier	<p>The conversion rate that the system uses to convert foreign currencies to the domestic currency. If the Multi-Currency Conversion field on the Set Multi-Currency Option form is set to Y, the multiplier rate is used for all calculations.</p> <p>..... <i>Form-specific information</i> .....</p> <p>The number you enter in the Multiplier Exchange Rate field can have a maximum of seven decimal positions. If more are entered, the system adjusts the number to the nearest seven decimal positions. If the Multi-Currency Conversion field on the Set Multi-Currency Option form is set to Y, the multiplier is used for all conversions. If you are adding a new rate for the multiplier, remove the existing divisor rate so the system can calculate the new rate.</p> <p>For EMU member currencies, the value in the Override Conversion Method field overrides the value in the Multi-Currency Conversion field on the Set Multi-Currency Option form. Enter an exchange rate in this field if the override conversion method is Y (multiplier). This exchange rate is used when calculating from the euro. If you enter a value in this field, you must leave the Divisor Exchange Rate field blank.</p>

Field	Explanation
Divisor	<p>The conversion rate that the system uses to convert foreign currencies to the domestic currency. If the Multi-Currency Conversion field on the Set Multi-Currency Option form is set to Z, the divisor rate is used for all calculations.</p> <p>..... <i>Form-specific information</i> .....</p> <p>The number you enter in the Divisor Exchange Rate field can have a maximum of seven decimal positions. If more are entered, the system adjusts to the nearest seven decimal positions. If the Multi-Currency Conversion field on the Set Multi-Currency Option form is set to Z, the divisor is used for all conversions. If you are adding a new rate for the divisor, remove the existing multiplier so the system can calculate the new one.</p> <p>For EMU member currencies, the value in the Override Conversion Method field overrides the value in the Multi-Currency Conversion field on the Set Multi-Currency Option form. Enter an exchange rate in this field if the override conversion method is Z (divisor). This exchange rate is used when calculating to the euro. If you enter a value in this field, you must leave the Multiplier Exchange Rate field blank.</p>

## Setting Up Triangulation Records

After you set up no inverse records, you set up triangulation records. The triangulation record identifies a currency relationship between two EMU currencies and designates the euro as the triangulation currency. In this way, triangulation is used to calculate amounts between two EMU currencies through the euro.

When you set up a triangulation record between two EMU currencies, the system automatically creates a corresponding record in the opposite direction. For example, when you set up a triangulation record from FRF to DEM with EUR as the triangulation currency, the system creates a record from DEM to FRF with EUR as the triangulation currency. Once you set up a triangulation record between two EMU currencies, the system derives the exchange rate from the corresponding no inverse record.

Because triangulation is a composite of two rates that have been divided and multiplied to produce a domestic amount, two rates are retrieved and used in the calculation. It is not possible to store both rates on the transaction record; therefore, an exchange rate of zero is stored but not used.

► **To set up triangulation records**

1. From the Multi-Currency Setup menu (G1141), choose Set Daily Transaction Rates.

```

00151                               Set Daily Transaction Rates
Action Code. . . . . 0
To Currency. . . . . DEM German Mark
From Currency. . . . . FRF French Franc
Contract (Addr) _____
Triangulation Currency . . . . . EUR Euro
Override Conversion Method (Y/Z) . . . . . Prohibit Spot Rates. . . 1
Override Effective Date. . . . . 01/01/99

Skip to Date-Effective _____

Effective      . . Exchange Rate . .
Date          Multiplier  Divisor
____
____
____
____
____
____
____
____
____
____
____

F5=Update w/Redisplay   F21=Print Exchange Rates   F24=More Keys
    
```

2. On Set Daily Transaction Rates, complete the following fields:
  - To Currency
  - From Currency
  - Triangulation Currency
  - Override Effective Date
3. Enter 1 in the following field:
  - Prohibit Spot Rates

The fields in the following table apply specifically to triangulation.

Field	Explanation
Triangulation Currency	<p>A code that indicates the settling currency for triangulation calculations.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Enter a currency code only if you are setting up a currency relationship record for triangulation. You must enter a currency code, such as EUR, for triangulation to occur between two EMU member currencies. If you use triangulation instead of a cross rate when calculating exchange rates between an EMU member currency and a non-EMU member currency, you must enter a currency code in this field.</p> <p>Leave this field blank if you are setting up an exchange rate record for no inverse or any other currency conversion method.</p>
Override Effective Date	<p>The date on which a transaction, text message, contract, obligation, or preference becomes effective.</p> <p>..... <i>Form-specific information</i> .....</p> <p>The override effective date is the date to begin calculating exchange rates using the no inverse method or triangulation. If you enter a value in this field and the Override Conversion Method field, the system uses this date to begin calculating exchange rates using the no inverse method. If you enter a value in this field and the Triangulation Currency field, the system uses this date to begin calculating exchange rates using triangulation.</p> <p>For EMU member currencies, the date in this field should be the same date as the effective date on the EMU Member Setup form (00/EU).</p>
Prohibit Spot Rates	<p>Indicates whether or not a spot rate is applicable for a particular currency relationship. Spot rates are rates entered at the time of transaction entry.</p> <p>..... <i>Form-specific information</i> .....</p> <p>Valid values are:</p> <ul style="list-style-type: none"> <li>0 (or blank) Spot rates are valid for this currency relationship.</li> <li>1 Spot rates are not valid for this currency relationship.</li> </ul> <p>Spot rates are not allowed on transactions between EMU member currencies. If you are setting up a triangulation relationship between two EMU member currencies, enter 1 in this field.</p>

### Triangulation and Spot Rates

When you set up a triangulation relationship for two currencies, you must designate whether spot rates can be used on transactions between those currencies. If the triangulation relationship is between two EMU member currencies, spot rates are not used.

To designate whether spot rates are valid, you enter a value in the Prohibit Spot Rates field. The system edits the value to determine whether the currency codes exist in the EMU Member Setup table (00/EU). It then ensures one of the following:

- If both currency codes exist in the table, the Prohibit Spot Rates field must contain a value of 1. Spot rates cannot be used for the currency relationship.
- If one or no currency codes exist in the table, the Prohibit Spot Rates field can contain a value of 0 or 1. The user determines whether spot rates are used for the currency relationship.

If spot rates are valid for a currency relationship, when you enter a spot rate on an invoice or voucher, the system compares the converted currency amount to the amount that would be derived using the actual exchange rates. The system calculates the difference between the two amounts and edits your entry, based on the tolerance limit you specified in the processing options for Set Daily Transaction Rates and Speed Transaction Rates Entry. If the calculated amount is greater or less than the tolerance amount, you will receive a warning message.

For example, .05 specifies a tolerance limit of 5 percent. If you enter a spot rate that calculates an amount that is 6 percent greater or less than the amount that is derived using the actual exchange rates, you will receive a warning. In this way, the system helps to ensure that the spot rate you enter is reasonable, thus alerting you to possible data entry errors.

### Example: Currency Setup for Two EMU Currencies

In the following example, a company with a base currency of French francs (FRF) transacts business with a company whose base currency is German Marks (DEM). To calculate amounts on transactions between these two currencies, you set up the following records:

- No inverse
- Triangulation

No Inverse

On Set Daily Transaction Rates, set up two no inverse records.

1. Set up a no inverse record from FRF to EUR, using the divisor method (Z).

The FRF to EUR exchange rate is fixed. The transaction amount is divided by 6.55957 when converting from FRF to EUR.

```

00151                               Set Daily Transaction Rates
Action Code. . . A
To Currency. . . EUR  European Currency Unit
From Currency. . FRF  French Franc
Contract (Addr) _____
Triangulation Currency . . . . . _____
Override Conversion Method (Y/Z) . Z  Prohibit Spot Rates. . _
Override Effective Date. . . . . 01/01/99

Skip to Date-Effective _____

Effective      . . . Exchange Rate . .
Date          Multiplier      Divisor
01/01/99      _____      6.5595700
_____
_____
_____
_____
_____
_____
_____

F5=Update w/Redisplay  F21=Print Exchange Rates  F24=More Keys

```

When you set up a no inverse record from FRF to EUR, the system automatically creates a record from EUR to FRF with the same exchange rate using the multiplier method (Y).

2. Set up a no inverse record from EUR to DEM, using the multiplier method (Y).

The EUR to DEM exchange rate is fixed. The transaction amount is multiplied by 1.95583 when converting from EUR to DEM.

```

00151                               Set Daily Transaction Rates
Action Code. . . A
To Currency. . . DEM  German Mark
From Currency. . EUR  European Currency Unit
Contract (Addr) _____
Triangulation Currency . . . . . _____
Override Conversion Method (Y/Z) . Y  Prohibit Spot Rates. . _
Override Effective Date. . . . . 01/01/99

Skip to Date-Effective _____

Effective      . . . Exchange Rate . .
Date          Multiplier      Divisor
01/01/99      1.9558300      _____
_____
_____
_____
_____
_____
_____

F5=Update w/Redisplay  F21=Print Exchange Rates  F24=More Keys

```

When you set up a no inverse record from EUR to DEM, the system automatically creates a record from DEM to EUR with the same exchange rate using the divisor method (Z).

### Triangulation

On Set Daily Transaction Rates, set up a triangulation record from FRF to DEM with EUR as the triangulation currency. Spot rates are prohibited between these two currencies.

```

00151          Set Daily Transaction Rates
Action Code. . . A
To Currency. . . DEM German Mark
From Currency. . . FRF French Franc
Contract (Addr) _____
Triangulation Currency . . . . . EUR Euro
Override Conversion Method (Y/Z) . . . . . Prohibit Spot Rates. . 1
Override Effective Date. . . . . 01/01/99

Skip to Date-Effective _____

          Effective      . . Exchange Rate . .
          Date          Multiplier      Divisor
          _____      _____      _____
          _____      _____      _____
          _____      _____      _____
          _____      _____      _____
          _____      _____      _____
          _____      _____      _____
          _____      _____      _____
          _____      _____      _____

          F5=Update w/Redisplay      F21=Print Exchange Rates      F24=More Keys
    
```

When you set up the triangulation record from FRF to DEM, the system automatically creates a record from DEM to FRF with EUR as the triangulation currency.

### Calculation

Using the currency setup in this example, a DEM company transacts business with a FRF company for 50 FRF. The exchange rates are:

- 1 EUR = 6.55957 FRF
- 1 EUR = 1.95583 DEM

To convert 50 FRF to DEM, you use triangulation:

1. Use the divisor method to convert to EUR:

$$50 \text{ FRF} / 6.55957 = 7.6224509 \text{ EUR}$$

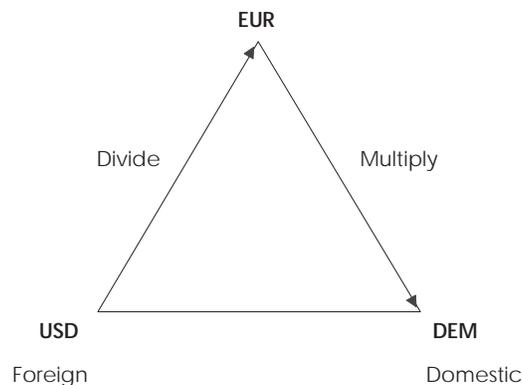
2. Use the multiplier method to convert to DEM:

$$7.6224509 \text{ EUR} \times 1.95583 = 14.9082181, \text{ or rounded} = 14.91 \text{ DEM}$$

## Example: Currency Setup for an EMU and Non-EMU Currency

Companies in EMU and non-EMU countries that transact business with one another can calculate exchange rates between their currencies using no inverse and triangulation. The no inverse/triangulation functionality allows you to calculate transaction amounts between an EMU and a non-EMU currency, as well as between two EMU currencies. For example, a company in Germany can use no inverse and triangulation when calculating amounts from USD to DEM.

The following provides a visual representation of a USD to DEM currency relationship, using triangulation.



The following describes how to set up a currency relationship for a German company that uses no inverse and triangulation when calculating amounts from USD (non-EMU) to DEM (EMU) currencies. To calculate amounts on transactions between these two currencies, you set up the following records:

- No inverse
- Triangulation

### No Inverse

On Set Daily Transaction Rates, set up two no inverse records.

1. Set up a no inverse record from USD to EUR, using the divisor method (Z).

The USD to EUR exchange rate is not fixed, therefore, the USD exchange rate will continue to fluctuate against the euro. The transaction amount is divided by the current rate (.8566, in this example) when converting from USD to EUR.

```

00151          Set Daily Transaction Rates
Action Code. . . A
To Currency. . . EUR Euro
From Currency. . USD U.S. Dollar
Contract (Addr) _____
Triangulation Currency . . . . .
Override Conversion Method (Y/Z) . Z Prohibit Spot Rates. . _
Override Effective Date. . . . . 01/01/99

Skip to Date-Effective _____

          Effective      . . Exchange Rate . .
          Date           Multiplier      Divisor
01/01/99           _____      _____      .8566000
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

F5=Update w/Redisplay      F21=Print Exchange Rates      F24=More Keys
    
```

When you set up the no inverse record from USD to EUR, the system automatically creates a record from EUR to USD with the same exchange rate using the multiplier method (Y).



Because this currency relationship is between a non-EMU and an EMU currency, the no inverse method is not required. (Alternatively, you could set up this currency relationship using the reciprocal rate and the multiplier or divisor method.)

2. Set up a no inverse record from EUR to DEM, using the multiplier method (Y).

The EUR to DEM exchange rate is fixed. The transaction amount is multiplied by 1.95583 when converting from EUR to DEM.

```

00151          Set Daily Transaction Rates
Action Code. . . A
To Currency. . . DEM German Mark
From Currency. . . EUR Euro
Contract (Addr) _____
Triangulation Currency . . . . .
Override Conversion Method (Y/Z) . Y Prohibit Spot Rates. . _
Override Effective Date. . . . . 01/01/99

Skip to Date-Effective _____

          Effective      . . Exchange Rate . .
          Date           Multiplier      Divisor
01/01/99           _____      _____      _____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____

F5=Update w/Redisplay      F21=Print Exchange Rates      F24=More Keys
    
```

When you set up the no inverse record from EUR to DEM, the system automatically creates a record from DEM to EUR with the same exchange rate using the divisor method (Z).



► **To view and update exchange rates**

From the Multi-Currency Processing menu (G11), choose Speed Transaction Rates Entry.

```

11154                               Speed Transaction Rates Entry
Action Code. . . I
To Currency. . . EUR Euro
Contract (Addr). _____
Effective Date . 01/01/99

Frm      ...Exchange Rate...   Effective   Effective   Effective
Cur     Multiplier           Divisor     Date        Multiplier   Divisor
BEF     _____           _____   01/01/99   _____   _____
CAD     _____           _____   01/01/99   _____   _____
DEM     _____           _____   01/01/99   _____   _____
FRF     _____           _____   01/01/99   _____   _____
ITL     _____           _____   01/01/99   _____   _____
USD     _____           _____   01/01/99   5.6000009   1936.2700000
                                                .1785714

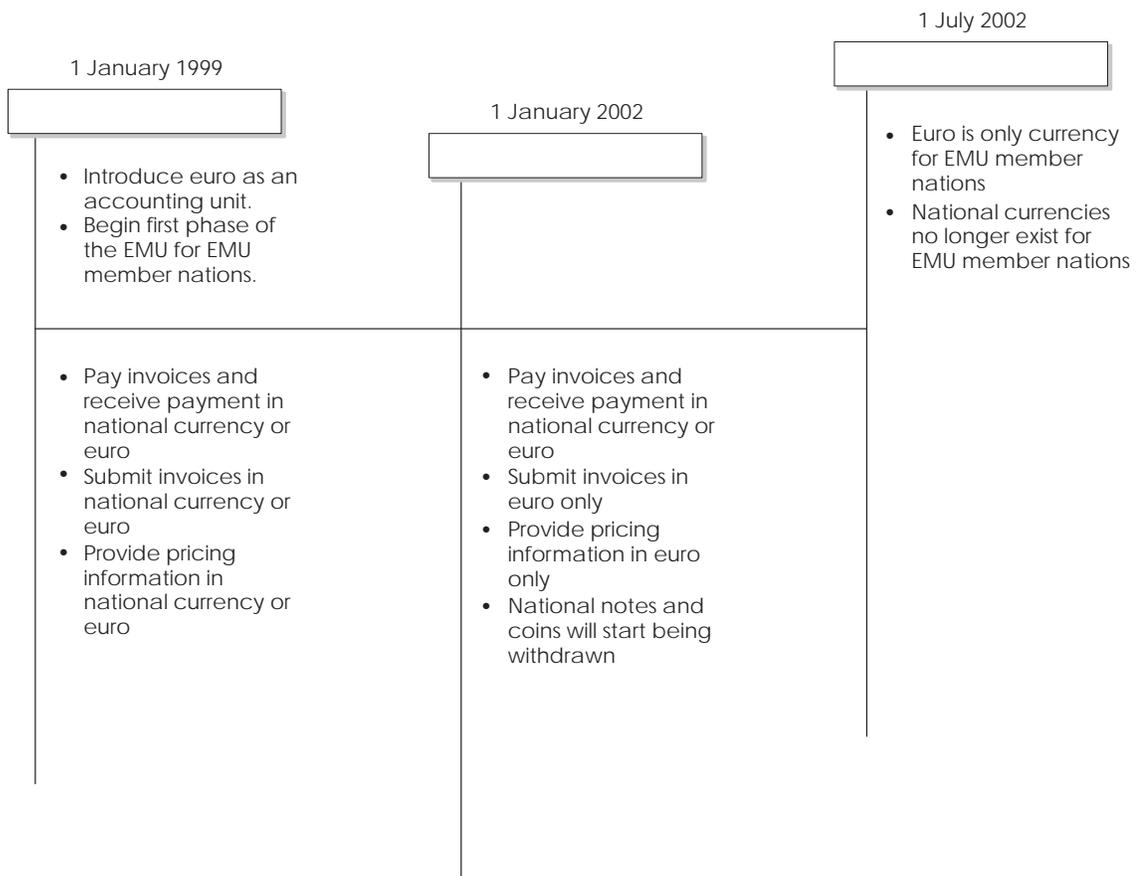
F5=Set Transaction Rates   F9=Redisplay   F24=More Keys
    
```

When you update exchange rates on the Speed Transaction Rates Entry form, the system updates the Currency Exchange Rates table (F0015).

## Accounts Receivable Transactions and the Euro

The following timeline is based on the principles of “no compulsion, no prohibition.” These principles basically state that companies are under no obligation to transact business in the euro beginning on 1 January 1999. The principles also state that companies cannot prohibit their customers or suppliers from transacting business in the euro.

The timeline illustrates how Economic and Monetary Union (EMU) member nations are expected to handle receipts and payments during the euro transition period, from 1 January 1999 to 1 July 2002.



During the euro transition period, your company must be prepared to process transactions in the euro, regardless of whether the original transaction was in another currency or whether your company has converted its base currency to the euro. For example, a French company can continue to submit invoices to a German customer in German marks during the transition period. However, the same company must be able to process receipts in the euro if the German customer pays in the euro.

Converting prices to the euro presents new challenges to companies since it becomes easier for customers to compare prices between countries. Inevitably, prices for products in the euro will vary across countries because the cost of doing business varies across countries.



During the euro transition period, you will run the customer conversion and price generation programs to convert currency codes and create new prices in the euro. These conversion and generation programs are available in WorldSoftware release A7.3 CU9 (and above). Do not confuse them with the euro conversion programs. The euro conversion programs, which are in E9, convert a company's base currency to the euro.

### Checklist: Processing A/R Transactions in the Euro

To process accounts receivable transactions in the euro, complete the items in the following checklist:

- Set up accounts, automatic accounting instructions (AAIs), and processing options for alternate receipt processing
- Calculate A/R gains for euro realization
- Convert customer default currency code to the euro
- Convert customer address book currency code and amounts to the euro
- Generate new base and advanced prices in the euro
- Process alternate currency receipts in the euro
- View customer amounts in the euro

### Topics and Tasks in This Section

This section consists of the following topics and tasks:

- Euro realization for accounts receivable
- Converting customer currencies and amounts to the euro

- 
- Generating new prices in the euro
  - Managing credit notes during the euro transition
  - Alternate currency receipt setup
  - Processing alternate currency receipts
  - Viewing customer amounts in the euro

For information about new and enhanced electronic formats for accounts receivable, see *Electronic Formats and the Euro* in the Accounts Payable section of this guide.



## Euro Realization for Accounts Receivable

---



With the introduction of the euro, exchange rates between Economic and Monetary Union (EMU) member currencies no longer fluctuate. This means that EMU companies no longer record gains and losses on transactions between EMU currencies. Transactions that were entered before the introduction of the euro must be handled in accordance with EU and EMU regulations.

European Union (EU) regulations required companies in all EMU member nations to realize losses on EMU currency invoices that were open as of 31 December 1998 using the euro fixed exchange rates. Since those losses were realized at the end of 1998, this documentation does not describe them. Instead, it describes the gains for euro realization.

According to EU regulations, all EMU member nations must realize gains on EMU currency invoices that were open as of 31 December 1998 *no later than* 31 December 1999. Within that framework, each EMU member nation regulates whether companies must realize gains at the end of 1998 or the end of 1999. EMU companies that are allowed to realize gains as late as the end of 1999 will continue to realize gains on EMU currency invoices as they are paid throughout 1999. As usual, the system will create the gains when you post receipts during standard receipt processing.

At the end of 1999 and to comply with EU regulations, you must ensure that all gains on any remaining open EMU currency invoices are realized by running the A/R Currency Gains and Losses program one final time. The likelihood that you have invoices over one year old is minimal, however, you must run this program to ensure that you meet EU requirements.



Companies can calculate gains for euro realization before or after they convert their base currency to the euro. The euro conversion programs, which are available in E9, convert every entry and offsetting entry in your system from your base currency to the euro. For example, if your base currency is Belgian francs, your transactions as well as your gains and losses are in Belgian francs. When you run the E9 conversion programs, each Belgian franc transaction is converted to the equivalent euro amount. As a result, it does not matter whether you calculate gains for euro realization before or after you convert your base currency to the euro.

This topic describes the following:

- A/R setup requirements for euro gain realization
- Calculating euro gain realization for A/R
- Example: Euro gain realization for A/R

### A/R Setup Requirements for Euro Gain Realization

For euro gain realization, ensure that the following are set up:

- Realized gain accounts
- Automatic accounting instructions (AAIs)
- Processing options

At the end of 1999 and according to EU regulations, you must run the A/R Currency Gains and Losses program one final time to ensure that gains for any remaining open EMU currency invoices are realized.

#### Realized Gain Accounts

Verify that the following accounts are set up:

- Realized gain accounts. If you process automatic receipts, these realized gain accounts already exist. Some companies will set up special A/R receivable accounts to track realized gains for EMU currency transactions separately from other currency transactions.
- Unrealized gain accounts. If you use the A/R Currency Gains and Losses program to calculate unrealized gains and losses, these unrealized gain accounts already exist. You will continue to use these accounts for non-EMU currency transactions.

#### Automatic Accounting Instructions

When you calculate gains, the system uses AAIs to distribute the realized or unrealized gain amount to the correct G/L account. Typically, the AAI items for A/R are:

- RGxxx for realized gains
- RVxxx for unrealized gains
- RRYyyy for unrealized gain/loss offsets

(xxx represents the currency code and yyyy represents the G/L offset code.)

To calculate realized gains on transactions between EMU currencies, you must do the following:

- Set up AAI items RVxxx and RRYyyy to point from unrealized accounts to *realized* accounts. The reason these AAI items point to realized (not unrealized) accounts is that there are no exchange rate differences between EMU currency transactions because of the euro. Therefore, there are no unrealized gains and losses on open items. This explains why an unrealized AAI item can point to a realized account. Realized gain entries flow in and out of the realized accounts until all invoices that were open before 1 January 1999 are processed.

AAI item RRYyyy usually points offset amounts to an A/R trade account. You might choose, instead, to point offset amounts to an account that rolls up into the A/R trade account.

- Set up AAI item RVxxx by currency code. The currency code for item RV separates realized and unrealized transactions within the same company. This allows you to recognize realized gains for EMU currencies while continuing to recognize unrealized gains and losses for non-EMU currencies.



If most of the gains you realize are based on EMU currencies and your gain AAIs are not currently set up by currency, you can save time by doing the following:

- Set up new gain AAIs by currency for each non-EMU currency.
- Change the “old” gain AAIs (these are default AAIs, which do not have a currency code) to point to realized accounts, as described in this documentation. This causes all EMU currency gains to be directed to a realized account.

### Example: AAI Setup for Two Companies

In the following example, company 1 has foreign invoices in French francs (FRF) and U.S. dollars (USD). The company directs the gain related to the FRF invoice to a realized account and the gain or loss related to the USD invoice to an unrealized account.

Company 1 and company 2 both have foreign invoices in FRF so the AAI item is RVFRF. Company 1 directs the AAI item to a realized account, while company 2 directs the same AAI item to an unrealized account.

Company	Domestic	Foreign	AAI Item	Type of Account	Reason
Company 1	DEM	FRF	RVFRF	Realized Gain	Both EMU currencies
Company 1	DEM	USD	RVUSD	Unrealized Gain	One non-EMU currency

Company	Domestic	Foreign	AAI Item	Type of Account	Reason
Company 2	USD	FRF	RVFRF	Unrealized Gain	One non-EMU currency
Company 2	USD	DEM	RVDEM	Unrealized Gain	One non-EMU currency

### Processing Options

EU regulations required all EMU companies to realize losses on EMU currency invoices by the end of 1998. Depending on the EMU country in which your company conducts business, you were required to realize gains at the end of 1998 or by the end of 1999. To handle the requirement, the A/R Currency Gains and Losses program has a processing option for gains only.

### Calculating Euro Gain Realization for A/R

From the Multi-Currency Monthly Valuation menu (G1121), choose A/R Currency Gains and Losses.

To calculate euro gains on exchange differences for EMU currency invoices dated through 31 December 1998 that remain open as of the end of 1999, you must run the A/R Currency Gains and Losses program. The gains that are created by this program and the gains that are created during receipt processing comprise the solution for euro gain realization. The receipt processing program calculates realized gains for EMU currencies and realized gains and losses for non-EMU currencies, as usual.

When you calculate euro gains, the system creates an entry in the gain account and an offsetting entry in the trade account. On the first day of the next fiscal period, the system creates reversing entries. These entries return the gain account and trade account to the balances that existed before calculating the euro gains.

Euro realization does not impact the original transactions in the Accounts Receivable Ledger table (F0311).

### Example: Euro Gain Realization for A/R

In this example, a German company uses DEM as its base currency. The example shows losses on invoices that were open at the end of 1998. It also shows gains on invoices that were open at the end of 1998, during 1999, and at the end of 1999.

## 15 December 1998

The company has four open invoices as of 15 December 1998.

Invoice	Domestic Amounts	Foreign Amounts	Exchange Rate 15 December 1998
RI 1	595.12 DEM	2000 FRF	0.29756
RI 2	484.98 DEM	10000 BEF	0.048498
RI 3	2380.46 DEM	8000 FRF	0.2975575
RI 4	999.60 DEM	500 USD	1.9992

## 31 December 1998

On 31 December 1998, the exchange rates were irrevocably fixed for EMU member currencies. As a result, the exchange rates are calculated using no inverse and triangulation, based on the following rates:

- 1 EUR = 6.55957 FRF
- 1 EUR = 40.3399 BEF
- 1 EUR = 1.0235 USD
- 1 EUR = 1.95583 DEM

Invoice	Calculation	Calculated Exchange Rate 31 December 1998
RI 1	$((2000 / 6.55957) \times 1.95583) = 596.33 / 2000$	0.298165
RI 2	$((10000 / 40.3399) \times 1.95583) = 484.84 / 10000$	0.048484
RI 3	$((8000 / 6.55957) \times 1.95583) = 2385.31 / 8000$	0.298164
RI 4	$((500 / 1.0235) \times 1.95583) = 955.46 / 500$	1.91092

The following table shows the gains and losses calculated from the change in exchange rates:

Invoice	Domestic Amounts	Foreign Amounts	Exchange Rate 31 December 1998	Gain (+) or Loss (-)
RI 1	596.33 DEM	2000 FRF	0.298165	+ 1.21 DEM
RI 2	484.84 DEM	10000 BEF	0.048484	- 0.14 DEM
RI 3	2385.31 DEM	8000 FRF	0.298164	+ 4.85 DEM
RI 4	955.46 DEM	500 USD	1.91092	- 44.14 DEM

Because the German company is an EMU company, it was required to realize losses on EMU currency invoices that were open at the end of 1998. The processing option for the A/R Currency Gains and Losses program was set to create journal entries for *losses* only. (Germany allows companies to realize gains up until the end of 1999, which is why the processing option was set to create journal entries for losses only.) The following journal entries were created on 31 December 1998.

Journal Entry Type	AAI Item	Type of Account	Amount
JX 2	RWBEF	Realized Loss	+ 0.14 DEM
JX 2	RRBEF	Accounts Receivable Trade	- 0.14 DEM
JX 4	RWUSD	Unrealized Loss	+ 44.14 DEM
JX 4	RRUSD	Accounts Receivable Other	- 44.14 DEM

The journal entry for RI 2 (BEF) was recorded in a realized loss account because it involves EMU currencies, and the journal entry for RI 4 (USD) was recorded in an unrealized loss account because it does not involve an EMU currency.

The following T-account shows the journal entry for RI 2 in December:

Realized Loss Account December	
0.14	

As of 31 December 1998, the German company realized losses for all open EMU currency invoices as required by the EU.

### 1 January 1999

On 1 January, reversing journal entries are created for realized and unrealized losses.

Journal Entry Type	AAI Item	Type of Account	Amount
JX 2	RWBEF	Realized Loss	- 0.14 DEM
JX 2	RRBEF	Accounts Receivable Trade	+ 0.14 DEM
JX 4	RWUSD	Unrealized Loss	- 44.14 DEM
JX 4	RRUSD	Accounts Receivable Other	+ 44.14 DEM

During January, invoices RI 2 and RI 4 were paid. The losses were realized during receipt processing and journal entries were created when the receipt was posted. There were no new invoices entered in January, so the A/R Currency Gains and Losses program did not create journal entries.

Journal Entry Type	Type of Account	Domestic Amounts	Foreign Amounts
RC 2	Cash in Bank	+ 484.84 DEM	+ 10000 BEF
RG 2	Realized Loss	+ 0.14 DEM	
AE 2	Accounts Receivable Trade	- 484.98 DEM	- 10000 BEF
RC 4	Cash in Bank	+ 955.46 DEM	+ 500 USD
RG 4	Realized Loss	+ 44.14 DEM	
AE 4	Accounts Receivable Trade	- 999.60 DEM	- 500 USD

On 1 January 1999, a reversing journal entry was created to offset the original journal entry and in January, RI 2 was paid. As a result, the overall impact was zero in January. The loss was realized in December. The following T-account shows the journal entries for RI 2 in January:

Realized Loss Account January	
<div style="text-align: right;">* 0.14</div>	<div style="text-align: left;">0.14</div>

\* This entry was created when the invoice was paid; it was not created by the A/R Currency Gains and Losses program.

### 1 March 1999

During March, invoice RI 1 was paid and the gain was realized during receipt processing.

Journal Entry Type	Type of Account	Domestic Accounts	Foreign Amounts
RC 1	Cash in Bank	+ 596.33 DEM	+ 2000 BEF
RG 1	Realized Gain	- 1.21 DEM	
AE 1	Accounts Receivable Trade	- 595.12 DEM	- 2000 BEF

The following T-account shows the journal entry for the realized account in March:

Realized Gain Account March	
	* 1.21

\* This entry was created when the invoice was paid; it was not created by the A/R Currency Gains and Losses program.

### 31 December 1999

On 31 December 1999, invoice RI 3 (FRF) is still open. The processing option for the A/R Currency Gains and Losses program is set to realize gains.



Regardless of the EMU country, all gains must be realized no later than 1999 according to EU regulations. Some EMU countries required gains to be realized by the end of 1998, others by the end of 1999.

Journal Entry Type	AAI Item	Type of Account	Amount
JX 3	RVFRF	Realized Gain	- 4.85 DEM
JX 3	RRFRF	Accounts Receivable Trade	+ 4.85 DEM

The following T-account shows the journal entry for RI 3 in December:

Realized Gain Account December	
	4.85

### 31 January 2000

During January, invoice RI 3 (FRF) is finally paid. The gain is realized during receipt processing and journal entries are created when the receipt was posted. Journal entries are not created by the A/R Currency Gains and Losses program.

Journal Entry Type	Type of Account	Domestic Amounts	Foreign Amounts
RC 3	Cash in Bank	+ 2385.31 DEM	+ 8000 FRF
RG 3	Realized Gain	- 4.85 DEM	
AE 3	Accounts Receivable Trade	- 2380.46 DEM	- 8000 FRF

On 1 January 1999, a reversing journal entry was created to offset the original journal entry and in January RI 3 was paid. As a result, the overall impact was zero in January. The gain was realized in December. The following T-account shows the journal entries for RI 3 in January:

Realized Gain Account January	
4.85	* 4.85

\* This entry was created when the invoice was paid; it was not created by the A/R Currency Gains and Losses program.



# Converting Customer Currencies and Amounts to the Euro



Throughout your company's transition to the euro, you will convert customer currency codes and address book amounts to the euro for the following reasons:

- Your customer wants to receive invoices in the euro
- You want to submit invoices to your customers in the euro
- You want to view a customer's statistical amounts in the euro

Regardless of when your company converts its base currency to the euro, you can submit invoices in either the euro or the national currency of your EMU customers, as long as it is within the euro transition period. For example, if a French customer has not yet converted to the euro, you can submit invoices to them in the French franc even if your company has converted to the euro.

This topic describes the following:

- How the customer conversion program works
- Converting customer currency codes and amounts
- Example: Before and after converting customer amounts
- How converted limit amounts are rounded
- Parent/child structures with different currencies
- Application outside of the EMU

## How the Customer Conversion Program Works

The customer conversion program converts currency codes and amounts for multiple customers at one time. You can run the conversion program and convert a customer's currency code and address book currency and amounts at the same time, or independently of one another.

You might consider setting up different DREAMWriter versions of the conversion

program. For example, set up one version to convert default currency codes only, another version to convert address book currency codes and amounts, and still another to convert both.

### Processing Options for Customer Master Conversion

To convert customer currency codes and amounts in proof or final mode, you specify the following in the processing options:

- Exchange rate date to use to convert address book amounts.
- Currency code to use to convert customer address book currency code and address book (statistical) amounts. The conversion updates the Amount Currency (CRCA) field in the F0301 table.
- Currency code to use to convert customer default currency codes. The conversion updates the Currency Code (CRCD) field in the F0301 table.
- Rounding factor to use to round converted limit amounts. See *How Converted Limit Amounts Are Rounded* in this chapter.

### Data Selection for Customer Master Conversion

Use the data selection for the Customer Master Conversion program to select only those customers you want to convert to the euro. To convert currency codes and address book amounts, specify the customer address book numbers. If you do not do this, the conversion program converts all customers. To convert amounts for all customers assigned a certain category code, specify the category code.

## Converting Customer Currency Codes and Amounts

From the Multi-Currency Conversion Operations menu (G1132), choose Customer Master Conversion.

Depending on how you set your processing options, the Customer Master Conversion program converts either or both of the following:

- Customer default currency (Currency Code field)
- Customer address book currency code and amounts (A/B Amount Codes field)

```

01053 Customer Master Information
Action Code. . . I
Customer Number. 7481 French Customer
Long Address Number.
. . . . . Credit/Collections Information . . . . .
Credit Message. . . . .
Temp Credit Msg. . . . .
Factor/Special P 7481 French Customer
Parent Number. . . . .
Payment Terms. . . Net 30 Days Hold Invoices. . N Ledger Inq Seq. 6
Credit Manager. . . . . Print Stmt(Y/N). Y Auto Receipt (Y/ Y
Collection Mgr. . . . . Send Stmt To . . C Auto Cash Alg. . U
Last Cred Rvw. . . . . Statement Cycle. F Payment Instr. .
ABC (Sl/Marg/P) C C C Send Invoice to. C Bal Fwd/Open Itm .
Credit Limit . . . . . Delinquency Noti Y No. of Reminders .
Monthly Fin Chg% . . . . . Apply Fin Chgs . N Collection Rpt. Y
. . . . . Currency & Tax Information . . . . .
Tax Expl Code Tax Rate/Area Person/Corp. Currency Code. FRF
Tax ID Add'l Tax. Amt. Currency. EUR
. . . . . Accounting Distribution Information . . . . .
G/L Class. . . . . Model JE Type/Doc/Co . . . . .
Default Rev Acct
F5=Who F6=Memo F8=Bank cd F9=Srch F11=Addr F13=Billing F14=Cat cd F24=More
    
```

### Customer Default Currency Code

To comply with a customer’s request to receive invoices in the euro, run the Customer Master Conversion program to convert the default currency code on that customer’s master record.

Alternatively, you can change a customer’s currency code manually on the Customer Master Information form. You might do this if you have just one or two customer currency codes to change on a particular day.

### Customer Address Book Currency Code and Amounts

Before you convert customer address book currency codes and amounts, ensure that you have set up Economic and Monetary Union (EMU) currency relationships and exchange rates. See *Setting Up Euro Currency Relationships*.

To convert address book currency codes and amounts for customers to the euro, run the Customer Master Conversion program. When you convert customer amounts, you convert amounts in the Customer Master table (F0301) only. For consistency and integrity reasons, you do not convert customer transaction amounts (F0311) until you convert your company’s base currency to the euro.

The Customer Master Conversion program converts the following address book amounts:

**Summary balance amounts**

- Year-to-date invoice amounts and finance charges
- Prior year invoice amounts and finance charges
- Amount due
- Amount last paid
- Highest balance
- Open order amounts

### Limit amounts

- Credit limit
- Minimum and maximum order values

Many of these statistical and limit amounts appear on the Account Status Summary form. To access this form, press F16 on Customer Ledger Inquiry.

03203 Account Status Summary		Mode - "As Of"
		As of 12/31/99 Co _____
Parent Number. _____		
Customer Nbr. _____ 7481	Credit Message . . .	
FRENCH CUSTOMER	Temp Credit Message.	
1 FRANCAIS WAY		
PARIS	Future	
	Current	
	31 - 60	
	61 - 90	
	91 - 120	
	121 - 150	
	151 - 180	
	181 - 210	
Contact:	Over 210	
	Total Open Amount. .	
Average Days Late. .	Credit Limit . . . .	
First Invoice. . . .	Over Credit Limit. .	
Last Invoice. . . .	Invoiced This Year .	
Last Paid. . . . .	Invoiced Prior Year.	
Last Statement Date.	Last Paid Amount . .	
Last Message . . . .		
	Amount Currency Code EUR Euro	
F5=Who's Who F6=E-Mail F8=Cust Mast F16=Ledg Inq F18/F19=Mode F24=More		

### Exceptions Report

When you run the Customer Master Conversion program, an exceptions report prints with any of the following messages:

- *No processing errors.* If you entered 1 for processing option 1, the conversion program updates the address book amounts in the Customer Master table.
- *Currency exchange rate not found.* The currency code that you are converting to is not set up in the exchange rate table, or the exchange rate or effective date is not set up for the currency code.
- *Invalid currency entered.* The currency code you entered for processing option 3 or 4 or both is not valid.
- *Update error - record locked or not found.* The customer master record is in use.

## Example: Before and After Converting Customer Amounts

The following example shows customer address book amounts before and after converting from the French franc (FRF) to the euro (EUR). For this example, program values are set as follows:

<b>Program</b>	<b>Field or Processing Option Value</b>
Customer Master Information	Currency Code field = FRF A/B Amount Code field = FRF
Set Daily Transaction Rates	(FRF to EUR currency relationship) Exchange Rate field = 6.55957 (divisor)
Customer Master Conversion	Amount Currency processing option = EUR Currency Code processing option = blank Rounding Factor processing option = 50

After converting to the euro, the customer's address book amounts will be in the euro, however, their invoices will remain in French francs.

<b>F0301 Field</b>	<b>Description</b>	<b>Before Conversion</b>	<b>After Conversion</b>	<b>Rounded From</b>
A5CRCD	Currency Code - A/R	FRF	FRF	Not applicable
A5CRCA	Currency Code - A/B	FRF	EUR	Not applicable
A5AD	Amount Due	100.00	15.24	Not applicable
A5AFCP	Prior Year Finance Charges	200.00	30.49	Not applicable
A5AFCY	YTD Finance Charges	300.00	45.73	Not applicable
A5ASTY	Invoiced This Year	400.00	60.98	Not applicable
A5SPYE	Invoiced Prior Year	500.00	76.22	Not applicable
A5AHB	High Balance	600.00	91.47	Not applicable
A5ALP	Last Paid Amount	700.00	106.71	Not applicable
A5ABAM	Address Book Amount	Not used	Not used	Not applicable
A5ABA1	Address Book Amount	Not used	Not used	Not applicable
A5APRC	Open Order Amount	1,000.00	152.45	Not applicable
A5MINO	Minimum Order Amount	1,000	150	152.45

<b>F0301 Field</b>	<b>Description</b>	<b>Before Conversion</b>	<b>After Conversion</b>	<b>Rounded From</b>
A5MAXO	Maximum Order Amount	50,000	7,600	7,622.45
A5ACL	Credit Limit	10,000	1,500	1,524.49



In the Customer Master table, the field A5ABAM stores a user-defined fixed amount and the field A5ABA1 is for future use. If you use either of these fields, be aware that the Customer Master Conversion program converts the amounts, regardless of whether they are monetary amounts.

## How Converted Limit Amounts Are Rounded

Limit amounts are credit limits and minimum and maximum order amounts that you assign to a customer master record. Limit amounts are usually rounded numbers and are stored without decimals. When you convert address book amounts, you designate the rounding factor for limit amounts in a processing option for the Customer Master Conversion program.

The following example shows how the Customer Master Conversion program rounds converted limit amounts when converting from German marks (DEM) to euros (EUR). The example is based on an exchange rate of 1 EUR = 1.95583 DEM and a rounding factor of 50. The conversion program rounds amounts up or down as follows:

### Round Up

The conversion program converts 3,000 DEM to 1,534 EUR. It rounds up 1,534 EUR to 1,550 EUR, based on the following calculation:

Converted amount / Rounding Factor = Q with a remainder of R. If R is greater than or equal to one half of the rounding factor, then subtract R from the rounding factor and add that amount to the converted amount.

In the example, 1,534 EUR / 50 = 30 with a remainder of 34. The value of 34 is greater than one half of 50 (25). Subtract 34 from 50 (50 - 34 = 16) and add 16 to 1,534 to get a rounded value of 1,550 EUR.

### Round Down

The conversion program converts 5,000 DEM to 2,556 EUR. It rounds down 2,556 EUR to 2,550 EUR, based on the following calculation:

Converted Amount / Rounding Factor = Q with a remainder of R. If R is less than one half of the rounding factor, then subtract R from the converted amount.

In the example,  $2,556 \text{ EUR} / 50 = 51$  with a remainder of 6. The value of 6 is less than one half of 50 (25). Subtract 6 from 2,556 to get a rounded value of 2,550 EUR.

### Parent/Child Structures with Different Currencies

If you have a parent/child structure with different default and address book currencies, you can convert the parent independently from its children and vice versa. This flexibility allows you to continue to track address book amounts in the parent company's currency while invoicing some of the subsidiaries in the euro. It also allows you to convert address book amounts to the euro at the subsidiary level or convert the currencies of a parent and its children at the same time, and so on.

The following table shows a parent/child relationship with different currencies before the conversion.

Relationship	Address Book Currency	Default Currency
Parent	ITL	ITL
Child 1	ITL	DEM
Child 2	ITL	FRF
Child 3	ITL	DEM

Child 1 and Child 3 have requested that you submit their invoices in the euro. You run the Customer Master Conversion program to convert their default currencies from the German mark (DEM) to the euro (EUR).

The following table shows the results after the conversion.

Relationship	Address Book Currency	Default Currency
Parent	ITL	ITL
Child 1	ITL	EUR
Child 2	ITL	FRF
Child 3	ITL	EUR

### Application Outside of the EMU

Companies outside of the EMU can use the Customer Master Conversion program to convert default currency codes and address book currency codes and amounts for multiple customers. Based on the currency code and exchange rate date you set in the processing options, you can convert default currency codes, address book (statistical and limit) amounts, or both from one currency to another. For example, you can convert from U.S. dollars to Canadian dollars.

## Generating New Prices in the Euro

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You can provide prices in the euro for existing customers who convert to the euro, and at the same time continue to provide prices in a national currency for other customers. You control the currency in which to create prices for a customer on the customer master record.

Some companies will create new euro price records as early as 1 January 1999, others will wait until 2002 when it is mandatory, and still others will use a transitional approach and create new prices for customers over an extended period of time.

This topic describes the following:

- Planning a strategy for new prices
- How the generation programs work
- Generating new base prices in the euro
- Example: Before and after generating new base prices
- Generating new advanced prices in the euro
- Application outside of the EMU

### Planning a Strategy for New Prices

Before you create new prices, you should review your current pricing structure and plan a strategy.

Assume your current pricing structure has several currencies associated with each item number. Before you generate new prices, think about which currency you want to base your new prices on. You might choose the most common currency used in your pricing structure or you might choose a currency based on a fixed rate that is more favorable for your pricing.

To plan a strategy for your new prices, it is important that you understand how the price generation program works. When you run the program, it creates only one euro price for each item. It does not create one euro price for each currency. If a euro price exists for a customer, item, or branch/plant, the generation program does not create another euro price.

If you have a complex pricing structure, you might create new euro prices manually. Or, you might create some new euro prices manually and others automatically, using the generation program.

### How the Generation Programs Work

The generation programs create new euro prices based on existing prices and are useful if you want to create base prices or advanced price adjustments for multiple records at one time. To update an individual record, you can manually enter the new currency and amount on the Base Price Revisions or Price Adjustment Detail form. You do not have to run the price generation program.

To create new prices in the euro, you run two separate generation programs for the following:

- New base prices
- New advanced price adjustments

You run the generation programs one currency at a time. These programs were designed to create new prices one currency at a time to avoid confusion about from which currency a new price was based on.

The price generation program creates only one new price for each unit of measure. It does not create one price for each currency. If a euro price already exists, the generation program does not create another euro price because both records would have the same key. There are two exceptions to this rule:

- When currency codes associated with an item have different effective through dates. Depending on the dates, the price generation program might create more than one euro price.
- If prices are set up for different customers or customer groups.

When the price generation program creates a new euro price, it sequences that record alphabetically along with the existing records.

### Processing Options for Base and Advanced Price Generation

To generate new prices in proof or final mode, you specify the following in the processing options for Generate Base Price Currency and Generate Price Adjustment/Currency:

- Date as of when you want to create new prices. If the expiration date of a price is greater than or equal to this date, a new price will be generated.
- Currency in which you want to create new prices.
- Currency of the existing prices. The currency code of the price that you want to base new prices on.
- Exchange rate to use to calculate the new price.
- Conversion method (multiplier or divisor) to use to perform the exchange rate calculation. When converting amounts from an Economic and Monetary Union (EMU) currency to the euro, you must designate the divisor method. This way the new prices are based on the no inverse method, which is required by the European Union (EU).

### Data Selection for Base and Advanced Price Generation

Typically, companies will generate new base prices for all customers within a specific branch/plant. If your company has multiple branch/plants with different currencies, you can run the generation program multiple times. For base prices that do not have a branch plant, designate \*blanks for branch/plant in the data selection. You can also run the generation program for base prices by item number or any other value in the data selection.

Most companies will generate new advanced prices by adjustment name; however, you can generate them by other value in the data selection.

## Generating New Base Prices in the Euro

From the Price Management menu (G4222), choose Generate Base Price/Currency.

The Generate Base Price/Currency program does the following:

- Copies the original base price record
- Calculates a new price in the euro, based on the currency code and exchange rate you specify
- Creates a new base price in the euro

The generation program for base prices automatically rounds converted euro amounts according to the decimal places that are set up in the data dictionary for Unit Price (UPRC).







To access the Price Adjustment Detail form, choose Price and Adjustment Schedule on menu G42311. On Price Adjustment and Schedule, choose option 1 (Adjustment Detail).

### Application Outside of the EMU

The price generation programs are designed to create new prices in any currency, based on existing base and advanced price adjustments.



# Managing Credit Notes During the Euro Transition

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This topic describes how to handle credit notes that were entered in 1998, before the euro exchange rate became irrevocably fixed.

If you created a credit memo or unapplied receipt and did not transfer it to the Accounts Payable system before the EMU exchange rates became irrevocably fixed to the euro, you will need to complete the following steps. These steps are necessary so that when you create new transactions, you use the new fixed euro exchange rates.

## ► **To manage credit notes during the euro transition period**

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1. From the Periodic Processes menu (G0321), choose Generate Reimbursements.
2. Run Generate Reimbursements in proof mode.
3. Review the list of customers on the proof report and determine the credit amounts that are in EMU member currencies.
4. Do either of the following:
  - Cancel the existing unapplied receipt or credit memo and enter a new one with the correct currency and exchange rate. Pay it later using the credit note reimbursement program.
  - Close out the existing unapplied receipt or credit memo (document type RM). Then create a voucher (document type PV).

For more information about credit note reimbursements, see *Working with Credit Reimbursements* in the *Accounts Receivable Guide*.



## Alternate Currency Receipt Setup

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With the introduction of the euro, the manual receipt programs now process receipts in an alternate, or third, currency. This means that you can apply receipts in a currency other than the domestic or foreign currency of an invoice.

To apply alternate currency receipts, you must set up the following:

- Alternate currency clearing account and AAI
- Alternate currency receipt gain accounts and AAI
- Alternate currency receipt loss accounts and AAI
- Processing options for alternate currency receipts

### Alternate Currency Clearing Account and AAI (R7)

To process a receipt in an alternate currency, you must set up an alternate currency clearing account and AAI to track the conversion from the receipt amount to the original invoice amount.

The original invoice amount is in a domestic or foreign currency and is recorded against the receivables trade account. This means that the offset amount must also be in the same currency. To calculate the offset amount, the receipt currency is converted to the domestic or foreign currency and then stored in an alternate currency clearing account. The alternate currency clearing account provides an audit trail from the cash account entry in the receipt (alternate) currency to the offset trade account entry in the invoice (domestic or foreign) currency.

The entries in the alternate currency clearing account are as follows:

Alternate Currency Receipt Amount	Foreign Receipt Amount
Alternate Currency Clearing Account	Gains/Losses Receivable Account
Cash Account	Alternate Currency Clearing Account

The alternate currency clearing account will balance on the domestic side, but not on the foreign side. This is because the foreign side contains different currencies, which will never balance.

The alternate currency clearing account is assigned to AAI item R7 and must follow these rules:

- It must be in the same company as the bank account from which the receipt is made.
- It cannot be a monetary account.
- It must be company specific. You cannot use company 00000 as a default.
- It must include a business unit.

For more information about how transactions move in and out of the alternate currency clearing account, see *Processing Alternate Currency Receipts*.

### Alternate Currency Receipt Gain Accounts and AAIs (RY)

To record a gain incurred on an alternate currency receipt, you must set up a new gain account and AAI. The gains for alternate currency receipts are recorded separately from standard gains and are handled by using different accounts and AAIs.

The gain account for alternate currency receipts stores the amount that is realized when the domestic amount of a receipt is greater than the amount derived by calculating from the alternate currency to the invoice currency to the domestic currency. The amount in the alternate currency gain account, which occurs because of rounding issues, should be minimal.

The gain account for alternate currency receipts is assigned to AAI item RY. The AAI search sequence used during alternate currency receipt processing is the same one used for standard gains and losses during regular receipt processing:

1. The program searches for alternate currency code and company.
2. If not found, the program searches for G/L offset and company.
3. If not found, the program searches for company.
4. If not found, the program searches for alternate currency code and company 00000.
5. If not found, the program searches for G/L offset and company 00000.
6. If not found, the program searches for company 00000.

### Alternate Currency Receipt Loss Accounts and AAIs (RZ)

To record a loss incurred on an alternate currency receipt, you must set up a new loss account and AAI. The losses for alternate currency receipts are recorded separately from standard losses and are handled by using different accounts and AAIs.

The loss account for alternate currency receipts stores the amount that is realized when the domestic amount of a receipt is less than the amount derived by calculating from the alternate currency to the foreign currency to the domestic currency. The amount in the alternate currency loss account, which occurs because of rounding issues, should be minimal.

The loss account for alternate currency receipts is assigned to AAI item RZ. The AAI search sequence used during alternate currency receipt processing is the same one used for standard gains and losses during regular receipt processing, which is described in *Alternate Currency Receipt Gain Accounts and AAIs* in this chapter.

### Processing Options for Alternate Currency Receipts

To process receipts in the euro or other alternate currency, you must activate the processing option for Alternate Currency Processing and deactivate the processing option for Draft Processing in the Receipts Entry program (P03103).



## Processing Alternate Currency Receipts

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According to the “no compulsion, no prohibition” principle, invoices and receipts can be handled as follows:

- Suppliers can submit invoices to their customers in their national currency or the euro through 31 December 2001.
- Customers can submit payments to their suppliers in their national currency or the euro through 30 June 2002.

Based on this principle, companies can submit and pay invoices in the euro or their national currency, as long as it is within the euro transition period. During the euro transition period, for example, a French company that submits an invoice in German marks to a German company could receive payment in marks or the euro.

This topic describes the following:

- Processing multi-currency drafts and automatic debits
- Entering alternate currency receipts
- T-accounts for alternate currency receipts
- Calculating gains/losses on alternate currency receipts
- Application outside of the EMU



You cannot process batch cash receipts, electronic data interchange (EDI) transactions, A/R drafts, or automatic debits in an alternate currency.

### Before You Begin

- Make sure you complete the setup requirements described in *Alternate Currency Receipt Setup*.

Most processing for alternate currency receipts is based on the setup you do beforehand. Minimal user intervention is needed during the actual processing of receipts.

## Processing Multi-Currency Drafts and Automatic Debits

As of release A7.3 CU11, you can process A/R drafts and automatic debits in a multi-currency. The multi-currency functionality allows you to process euro transactions as foreign transactions, alongside your domestic transactions.

### Multi-Currency Draft Processing

To process drafts in the euro or other foreign currency, you must do one of the following:

- Set the Mode field to F (foreign) when you enter a manual draft
- Set the Currency processing option to foreign before you create an automatic (pre-authorized) draft

The currency mode you set at the time of draft entry is the currency mode that you use throughout the entire draft process. If you enter a draft in a domestic currency, for example, you cannot print, remit, or collect it in a foreign currency.

### Multi-Currency Automatic Debit Processing

Many EMU clients process automatic debits instead of A/R drafts. With multi-currency processing, you can now process automatic debits in a foreign currency as well as continue to process them in your domestic currency. The multi-currency functionality allows you to select invoices in the euro, print the euro amount on the statement, and automatically debit your customer's bank account in the euro.

It is important that you process automatic debits for the euro or other foreign currency by company and currency code. To process them, you must do the following:

- Set the Multi-Currency processing option to use the transaction (foreign) currency of the invoice
- Make sure the currency for the bank account set in the Bank Information processing option is the same as the transaction currency
- Select only one currency in the data selection

## Entering Alternate Currency Receipts

When you receive a payment from a customer, you match the receipt to an invoice or group of invoices. Matching receipts to open invoices, the most common method of applying receipts, is used to enter alternate currency receipts. The ability to enter an alternate currency receipt is controlled by a processing option in the Receipts Entry program.

At the time you enter an alternate currency receipt, the system converts the invoice amount to the alternate currency so that you can apply the receipt. The system uses the exchange rate between the alternate currency and the invoice currency. The exchange rate is retrieved from the Currency Exchange Rates table (F0015), based on the G/L date.

### **To enter alternate currency receipts**

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Entering alternate currency receipts is similar to entering basic receipts. The differences are described in the following steps.

1. From the Manual Receipts Processing menu (G0312), choose Receipts Entry.
2. On Receipts Entry, display the open invoices for the customer as usual.
3. Complete the following fields:
  - Enter T (third) in the Mode field to indicate that you are processing an alternate currency receipt.
  - Enter the currency code (EUR) of the alternate receipt in the Currency Code field.

The Mode field combined with the Currency Code field designate the alternate currency in which the system will convert open invoice amounts.

- Enter the Deposit Date (G/L) to retrieve the correct exchange rate from the F0015 file.
4. Press F15 to redisplay the open invoices in the alternate currency amount.



### **Spot Rates**

You cannot enter spot rates on transactions between two EMU member currencies. Spot rates are not allowed between two EMU member currencies because of the irrevocably fixed euro rate.

You can enter a spot rate on a transaction between an EMU and a non-EMU member currency when you match receipts to invoices. Specify the spot rate in the Exchange Rate field.

### **Unapplied Cash Receipts**

Unapplied cash receipts with different G/L dates might have different exchange rates. Because the system uses the G/L date to determine the exchange rate gain or loss on a transaction, you can spread only one unapplied cash receipt at a time.

## T-Accounts for Alternate Currency Receipts

The following T-accounts show how transactions move in and out of accounts during alternate currency receipt processing. The transactions are listed by document type.

<b>Alternate Currency Receipt</b>									
	Revenue		Trade		Cash		Write-off		Clearing
RI	1,626.07 FRF	1,626.07 FRF	10,000.00 BEF	10,000.00 BEF					
RC			1,626.08 FRF	10,000.03 BEF			1,626.08 FRF	10,000.03 BEF	
R7					1,626.08 FRF				1,626.08 FRF
RA					247.89 EUR				247.89 EUR
			0.01 FRF 0.03 BEF				0.01 FRF 0.03 BEF		

(Alternate currency entries are *italicized*)

## Calculating Gains/Losses on Alternate Currency Receipts

The exchange rates for EMU member currencies no longer fluctuate because they are irrevocably fixed to the euro. This means that invoices and receipts between EMU member currencies no longer incur exchange rate gains or losses.

For example, if a German company submits an invoice to a French company in French francs and the French company pays in euros, there is no exchange rate gain or loss. A slight gain or loss might occur when converting amounts back and forth between currencies if an alternate currency is involved, but the gain or loss would be due to rounding differences, not exchange rate fluctuations. These slight rounding differences can occur because of EU requirements for converting from an alternate currency to a foreign currency to a domestic currency.

When you post receipts, the system creates journal entries for realized gains and losses. To calculate the gain or loss on a foreign currency receipt, the post program multiplies the invoice amount by the difference in the exchange rate from the time the invoice was entered and the receipt was entered, and creates a gain and loss entry.

### Example: German Company Receives EUR for FRF Invoice

In the following example, a German company issues an invoice in French francs (FRF) and receives payment in the euro (EUR).

When the receipt is posted, the receipt amount (EUR) is compared to the invoice amount (FRF) to determine if the debt has been satisfied. Because EMU exchange rates are fixed to the euro, the invoice and receipt exchange rates do not fluctuate and there is no exchange rate gain or loss.

However, there might be a slight gain or loss on a transaction when converting amounts back and forth between currencies if the euro, or other alternate currency, is involved. That gain or loss is due to rounding differences and not exchange rate fluctuations, and is recorded in the alternate currency gain/loss account.

Description	Currency	Amount	Exchange Rate 1 January 1999
Invoice (domestic currency)	DEM	447.25	1 EUR = 1.95583 DEM
Invoice (foreign currency)	FRF	1,500	1 EUR = 6.55957 FRF
Receipt	EUR	228.67	
Standard gain/loss	Not applicable		
Alternate gain/loss	DEM	- 0.01 *	

\* Rounding differences are recorded in the alternate currency gain/loss account, as directed by AAls.

The foreign invoice on 1 January 1999 is 1,500 FRF, which is 447.25 DEM in the domestic currency.

$$\text{Calculation: } (1,500 \text{ FRF} / 6.55957) \times 1.95583 = 447.25 \text{ DEM}$$

The alternate currency receipt on 1 February 1999 is 228.67 EUR.

$$\text{Calculation: } (1,500 \text{ FRF} / 6.55957) = 228.67$$

The foreign currency amount applied to the invoice is 1,499.98 FRF.

$$\text{Calculation: } 228.67 \text{ EUR} \times 6.55957 = 1,499.98 \text{ FRF}$$

The domestic currency amount applied to the invoice is 447.25 DEM and is calculated from FRF to DEM through the euro, using triangulation.

$$\text{Calculation: } (1,500 \text{ FRF} / 6.55957) \times 1.95583 = 447.25 \text{ DEM}$$

The domestic currency amount of the receipt is 447.24 DEM.

$$\text{Calculation: } 228.67 \text{ EUR} \times 6.55957 = 1,499.98 \text{ FRF}; \text{ then } (1,499.98 \text{ FRF} / 6.55957) \times 1.95583 = 447.24 \text{ DEM}$$

### Standard Gain/Loss

There is no gain/loss created by exchange rate fluctuations between the invoice (foreign) currency and the domestic currency because both currencies are irrevocably fixed to the euro.

### Alternate Currency Gain/Loss

The alternate currency gain/loss, which is due to rounding differences, is - 0.01 DEM. This amount is the domestic receipt amount applied to the bank minus the domestic currency amount applied to the invoice.

$$\text{Calculation: } 447.24 \text{ DEM} - 447.25 \text{ DEM} = - 0.01 \text{ DEM}$$

## Application Outside of the EMU

If a transaction is not between EMU currencies and an alternate currency receipt is involved, there is the potential for two gains or losses. One gain or loss is between the domestic currency and the invoice currency; the other is between the domestic currency and the alternate (receipt) currency.

The first potential gain or loss is based on the fluctuation of exchange rates between the domestic currency and the invoice currency. This is the same gain or loss that would have been realized if the receipt was not in an alternate currency.

The second potential gain or loss is based on the difference between the following amounts:

- The amount calculated by converting the alternate currency receipt amount to the invoice currency to the domestic currency
- The amount calculated by converting the alternate currency receipt amount directly to the domestic currency (this is the amount that is actually paid from the bank account)

For example, if a Canadian company issues an invoice to a U.S. company in dollars and the U.S. company pays in Japanese yen, there will be two potential gains and losses incurred. One will be based on the fluctuation of exchange rates between the Canadian dollar (domestic currency) and the U.S. dollar (invoice currency); the other will be based on the difference between the amount calculated by converting the following:

- Japanese yen (alternate currency receipt) to U.S. dollar (invoice currency) to Canadian dollar (domestic currency)
- Japanese yen (alternate currency receipt) directly to Canadian dollar (domestic currency)

### Example: Canadian Company Receives JPY for USD Invoice

In the following example, a Canadian company receives payment in Japanese yen (JPY) for a foreign invoice in U.S. dollars (USD).

The Canadian company uses the divisor method for multi-currency transactions. The currencies in this example are all non-EMU currencies, which means the currencies fluctuate against one another. Because of the exchange rate risk, there is the potential for two gains or losses: one between the Canadian dollar (CAD) and USD; the other between JPY, USD, and CAD.

Description	Currency	Amount	Exchange Rate 1 January 1999	Exchange Rate 1 February 1999
Invoice (domestic currency)	CAD	280.56		
Invoice (foreign currency)	USD	200	1 USD = 1.4028 CAD 1 CAD = 0.712860 USD	
Receipt	JPY	26,050		1 USD = 1.4357 CAD 1 CAD = 0.696524 USD 1 CAD = 90.720 JPY 1 USD = 130.25 JPY
Standard gain/loss	CAD	+ 6.58		
Alternate currency gain/loss	CAD	+ 0.01		

The foreign invoice on 1 January 1999 is 200 USD, which is 280.56 CAD in the domestic currency.

$$\text{Calculation: } 200 / 0.71286 = 280.56 \text{ CAD}$$

The alternate currency receipt on 1 February 1999 is 26,050 JPY.

Calculation:  $200.00 \times 130.25 = 26,050 \text{ JPY}$

The foreign currency amount applied to the invoice is 200 USD.

Calculation:  $26,050 \text{ JPY} / 130.25 = 200 \text{ USD}$

The domestic currency amount applied to the invoice is 280.56 CAD.

Calculation:  $200.00 \text{ USD} / 0.71286 = 280.56 \text{ CAD}$

The bank account is debited as follows:

- 26,050 JPY (amount of receipt on alternate currency side)
- 287.14 CAD (total of pay items, including gain/loss on domestic side)

Calculation:  $280.56 \text{ CAD} + 6.58 \text{ CAD} = 287.14 \text{ CAD}$

### Standard Gain/Loss

The gain/loss created by the exchange rate fluctuations between the invoice currency and the domestic currency is + 6.58 CAD.

Calculation:  $(200 \text{ USD} / 0.696524 = 287.14 \text{ CAD}) - 280.56 = + 6.58 \text{ CAD}$

### Alternate Currency Gain/Loss

The alternate currency gain/loss is + 0.01 CAD.

Calculation:  $(26,050 \text{ JPY} / 90.72 = 287.15 \text{ CAD}) - 287.14 \text{ CAD} = + 0.01 \text{ CAD}$

## Viewing Customer Amounts in the Euro

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Before, during, and after converting your base currency to the euro, you can view your customer amounts in three currencies: domestic, foreign, and an “as if” currency, such as the euro. Viewing customer amounts in an “as if” currency allows you to view and compare amounts as if they were entered in a currency other than the currency in which they were actually entered. This should help ease your transition to the euro.

This topic describes the following:

- Customer programs with “as if” currency processing
- Dates that affect the invoice amounts you view
- Viewing invoices in the euro
- Viewing sales orders in the euro
- Application outside of the EMU

### Customer Programs with “As If” Currency Processing

The following programs have processing options that allow you to view customer amounts in an “as if” currency, such as the euro:

- Customer Ledger Inquiry (P032002)
- Print Customer Ledger (P032002P)
- Online Invoice (P42230)
- Customer Service (P42045)

One of the advantages of “as if” currency processing is that it does not impact disk space. The “as if” currency amounts that you view are not written to a file, but are instead stored in temporary memory.

### Processing Options for “As If” Currency Processing

To view amounts in an “as if” currency on Customer Ledger Inquiry, Online Invoice, and Customer Service, you must set the following processing options:

- **As If Currency Display.** The currency code in which you want to view “as if” amounts. If left blank, amounts display in their original currency.
- **As Of Date.** The date to use for calculating the exchange rate for the “as if” currency. If left blank, the Thru Date is used. If both the processing option and the Thru Date are blank, the system date is used.

### Dates That Affect the Invoice Amounts You View

Before you view invoice amounts in the euro, it is important to understand the different dates that affect the amounts you view on the Customer Ledger Inquiry form. These dates are:

- The effective date on the Set Daily Transaction Rates form. The inquiry program searches for the most recent effective date for a currency and uses the corresponding exchange rate in the currency calculation.
- The From and Thru Dates on the Customer Ledger Inquiry form. This date range determines which transactions appear on the form.
- One of the following dates, which is used to retrieve the transaction rate:
  - As of date in the processing options. If the “as of” date is blank, the program uses the Thru Date (described below).
  - Thru Date on the Customer Ledger Inquiry form. If the processing option and Thru date are blank, the program uses the system date.

The Thru Date on the inquiry form does not override the “as of” date in the processing options. For this reason, you might want to set up two different versions of this program, one with an “as of” date in the processing options, the other without an “as of” date so that you can use the Thru Date for the exchange rate.

By understanding these dates and how the inquiry program uses them, you help to ensure that you specify the correct date when you view your invoice amounts.

## Viewing Invoices in the Euro

Regardless of whether you entered an invoice in a domestic or foreign currency, you can view the invoice amounts as if they were entered in the euro. This functionality is especially beneficial during the euro transition period, when companies that have not yet converted their base currency to the euro want to begin adjusting to and preparing for the new currency.

To view your domestic and foreign invoices in the euro, you use the Customer Ledger Inquiry form. First you view the invoices in the currency in which they were entered, then you toggle to view the same amounts in the euro.

For transactions between two EMU currencies, you can use the Customer Ledger Inquiry form to display the domestic side of a foreign invoice, calculating the foreign to domestic amount through the euro (triangulation).

“As if” currency processing was not designed for currency restatement. It does not handle gains and losses, out-of-balance transactions caused by rounding, or integrity between tables. For exact amounts when working with an alternate currency, continue to use the currency restatement program.

► **To view invoices in the euro**

1. From the Customer and Invoice Entry menu (G0311), choose Customer Ledger Inquiry.
2. To view amounts by date, enter 2 (net due date), 3 (invoice date), or 8 (G/L Date) in the Sequence field as you have done in previous releases of WorldSoftware.

032002 Customer Ledger Inquiry									
Customer Number . . .	7481 Company de France				Date From				
Parent Number . . .					Thru				
Invoice Number . . .					Seq	2			
Receipt/Item Number . . .					Paid	0			
Statement Number . . .					Co	00420			
Skip To Page . . .					PayIns	*			
					Cur	*			
0 . . . Document . . . . .	Net Due/	Gross	Open	P	Recpt/	P			
P Tu Number Itm Date Rcpt Dat	Amount	Amount	Amount	I	Item	C	S		
- RI 78239 001 01/01/99 01/31/99	1,000.00	1,000.00					A		
- RI 786372 001 01/01/99 01/31/99	5,000.00	5,000.00					A		
	FRF	Total	6,000.00	6,000.00					
Opt: 1=Inv 2=JE 5=Dtl F2=Formats F9=NS F16=Age&Sts F21=Prt F24=More									

3. To view domestic or foreign invoices in the euro, make sure the Gross Amount and Open Amount columns display and press F19.

```

032002      Customer Ledger Inquiry      Date From _____
Customer Number. . . . . 7481 Company de France      Thru _____
Parent Number. . . . .                               Seq          6
Invoice Number. . . . .                               Paid          0
Recpt/Item Number. . . . .                               Co          00420
Statement Number. . . . .                               PayIns       *
Skip To Page . . . . .                               Cur          *
    
```

				EUR					
P Ty	Number	Itm	Date	Recpt Dat	Gross Amount	Open Amount	P Recpt/ I Item	P C S	P A
- RI	78239	001	01/01/99	01/31/99	152.45	152.45			A
- RI	786372	001	01/01/99	01/31/99	762.25	762.25			A
				FRF	Total	914.69	914.69		

Opt: 1=Inv 2=JE 5=Dtl F2=Formats F9=NS F16=Age&Sts F21=Prt F24=More



If a currency code appears above the amount column on the left, you are viewing amounts in the “as if” currency. If a code does not appear, you are viewing amounts in the domestic or foreign currency.

4. To print euro amounts on a report, press F21 while viewing them on the form.
5. To view the domestic side of a foreign invoice, make sure the Domestic Gross/Open and Foreign Gross/Open columns display. For transactions between two EMU currencies, the domestic side of a foreign invoice is calculated through the euro using triangulation.

```

032002      Customer Ledger Inquiry      Date From _____
Customer Number. . . . . 7481 Company de France      Thru _____
Parent Number. . . . .                               Seq          6
Invoice Number. . . . .                               Paid          0
Recpt/Item Number. . . . .                               Co          00410
Statement Number. . . . .                               PayIns       *
Skip To Page . . . . .                               Cur          *
    
```

				Cur		Domestic		Cur		Foreign			
P Ty	Number	Itm	Date	Recpt Dat	Cod	Gross/Open	Cod	Gross/Open	Cod	Gross/Open	P S	P A	
- RI	673489	001	01/01/99	01/31/99	DEM	745.41	FRF	2,500.00					A
- RI	762389	001	01/01/99	01/31/99	DEM	1,490.82	FRF	5,000.00					A
				DEM	Total	2,236.23							
				FRF	Total			7,500.00					

Opt: 1=Inv 2=JE 5=Dtl F2=Formats F9=NS F16=Age&Sts F21=Prt F24=More

6. To view the foreign invoice amounts in the euro, press F19.

Customer Ledger Inquiry									
032002		Customer Number . . . 7481 Company de France				Date From _____			
		Parent Number . . . _____				Thru _____			
		Invoice Number . . . _____				Seq _____			
		Recpt/Item Number . . . _____				Paid _____			
		Statement Number . . . _____				Co 00410			
		Skip To Page . . . _____				PayIns *			
						Cur *			
EUR									
0	...	Document	...	Net Due/	Cur	Domestic	Cur	Foreign	P
P	Tu	Number	Itm	Date	Rcpt Dat Cod	Gross/Open	Cod	Gross/Open	S
-	RI	673489	001	01/01/99	01/31/99 DEM	381.12	FRF	2,500.00	A
-	RI	762389	001	01/01/99	01/31/99 DEM	762.24	FRF	5,000.00	A
						-----			
						DEM		Total	
						1,143.37			
						-----			
						FRF		Total	
								7,500.00	
						-----			
Opt: 1=Inv 2=JE 5=Dtl F2=Formats F9=NS F16=Age&Sts F21=Prt F24=More									

## Viewing Sales Orders in the Euro

Regardless of whether you enter a sales order in a domestic or foreign currency, you can view amounts as if they were entered in the euro on the following forms:

- Online Invoice
- Customer Service

### ▶ To view sales orders using Online Invoice

Use the Online Invoice form to view sales order amounts in the euro either during sales order entry or afterwards.

1. Do one of the following:
  - To view amounts in the euro at the time you enter a sales order, enter your sales order as usual and press F6 (Online Invoice).
  - To view amounts in the euro after entering a sales order, choose Online Invoice from the Sales Order Inquiries menu (G42112).
2. On Online Invoice, press F19 to toggle between the transaction currency and the euro.

```

42230      Online Invoice      From Status 520 Thru 600
              Mode (F) . . D      Based On Status. . . .
Invoice. . . . .      Order Number . . . . . 10062 S0      Date to Display. . . .
Order Number . . . . .      Sold To. . . . .      7481 Company de France      Include Backorders . .
Ship To. . . . .      7481 Company de France
              EUR
Q  Description              Order  UM  Quantity  Extended Price  T
_ Mountain Bike, Black      01/31/99 EA      10      4,841.78      Y

              Order Total. .      4,841.78
Taxable Amount. .      @      % Tax
Invoice Total. .      4,841.78
Opt:  5=Details      F15=Tax Summary      F16=Discounts      F21=Print      F24=More
    
```

3. To print the euro amounts on a report, press F21 while viewing them on the form.

► **To view sales orders using Customer Service**

Use the Customer Service form to view sales order amounts in the euro after entering the sales order. This form, unlike Online Invoice, allows you to view multiple sales orders in the euro at one time.

1. From the Sales Order Inquiries menu (G42112), choose Customer Service.
2. On Customer Service, press F15 to view amounts.
3. Press F18 to toggle between the transaction currency and the euro. (For all other inquiry programs, you press F19.)

```

42045      Customer Service      Branch/Plant 420
              Status. . 520 Thru 600 St
              Date:      Thru
              Date Range - Based On. .
              Currency Code. . . . . *
Order No . . .      S0
Invoice No . . .      -
Orig Order No. . . .      -
Sold To. . .      -
Ship To. . .      -
Item Number. . .      -
Customer PO. . .      -
              EUR
Q Hd Order Tu Sold To      Description      Amount      Request
_ 10062 S0 Company de France Mountain Bike, Bla      4,841.78      01/31/99
_ 10064 S0 Company de France Helmet      914.69      01/31/99
_ 10065 S0 Company de France Premium Bike Lock      762.25      08/25/99
TOTAL . . . . .      6,518.72
Opt:  1=S0 Entry  2=Text  5=Details      F15=Qty/Amount/Price      F24=More Keys
    
```

4. To print euro amounts on a report, press F21 while viewing them on the form.

## Application Outside of the EMU

“As if” currency processing, which allows you to view customer amounts as if they were entered in an alternate (third) currency, was designed for viewing amounts between two EMU currencies that are irrevocably fixed to one another. However, you can use “as if” processing to view and compare amounts between any currencies, not just EMU member currencies.

For example, a Canadian company can view Japanese yen transaction amounts as if they were entered in U.S. dollars and compare those amounts to the domestic and foreign currency amounts.

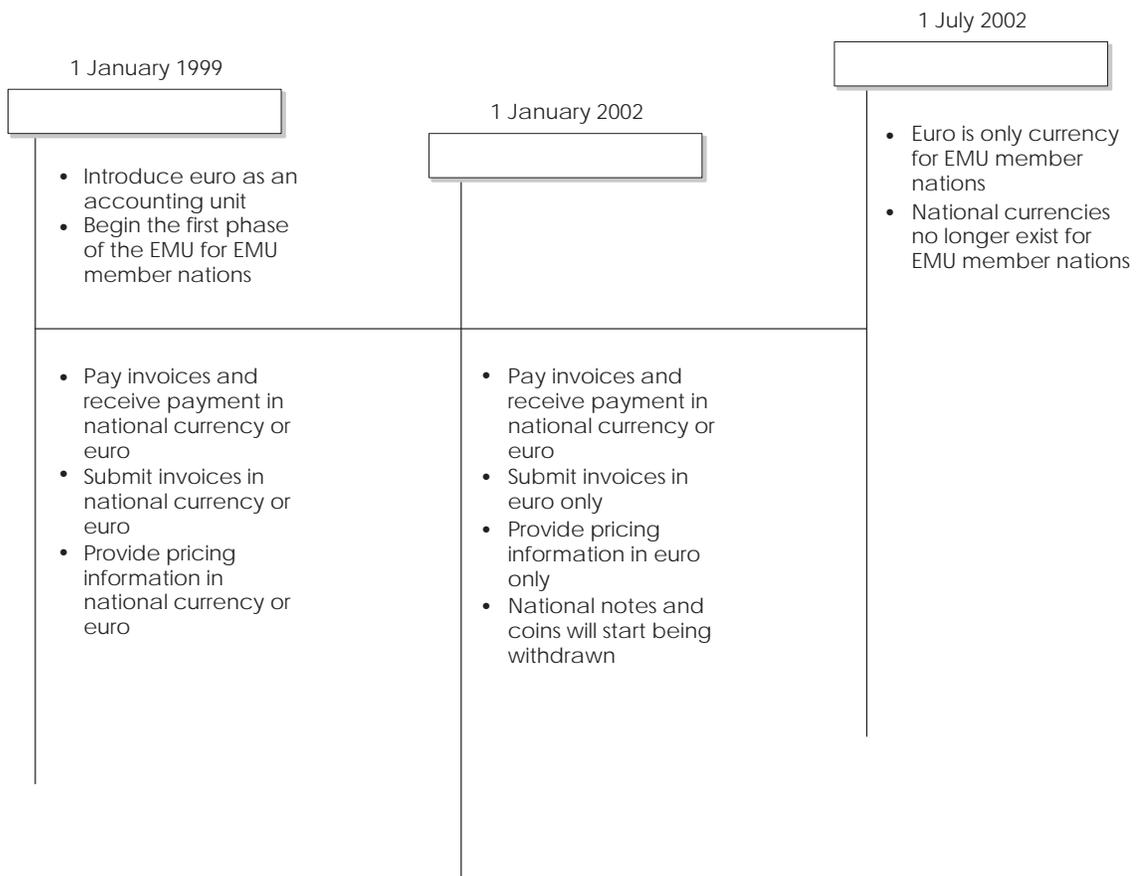
Be aware, however, that if the exchange rates are not fixed, there are limitations. The invoice amount you view, for example, may not be the same amount as the actual receipt because of the fluctuating exchange rates.



## Accounts Payable Transactions and the Euro

The following timeline is based on the principles of “no compulsion, no prohibition.” These principles basically state that companies are under no obligation to transact business in the euro beginning on 1 January 1999. The principles also state that companies cannot prohibit their suppliers or customers from transacting business in the euro.

The timeline illustrates how Economic and Monetary Union (EMU) member nations are expected to handle receipts and payments during the euro transition period, from 1 January 1999 to 1 July 2002.



During the euro transition period, your company must be prepared to process transactions in the euro, regardless of whether the original transaction was in another currency or whether your company has converted its base currency to the euro. For example, a French company can continue to pay a German supplier in German marks during the euro transition period. However, the same company must be able to process receipts in the euro if a German customer chooses to pay in the euro.

Converting prices to the euro presents new challenges to companies since it becomes easier for suppliers to compare prices between countries. Inevitably, prices for products in the euro will vary across countries because the cost of doing business varies across countries.



During the euro transition period, you will run the supplier conversion and price generation programs to convert currency codes and create new prices in the euro. These conversion and generation programs are available in release A7.3 CU9 (and above). Do not confuse them with the euro conversion programs. The euro conversion programs, which are in E9, convert a company's base currency to the euro.

### Checklist: Processing A/P Transactions in the Euro

To process accounts payable transactions in the euro, complete the items in the following checklist:

- Set up accounts, automatic accounting instructions (AAIs), and processing options for alternate currency payment processing
- Calculate A/P gains for euro realization
- Convert supplier default currency code to the euro
- Convert supplier address book amounts and currency code to the euro
- Generate new supplier prices in the euro
- Process alternate currency payments in the euro
- View supplier amounts in the euro

### Topics and Tasks in This Section

This section consists of the following topics and tasks:

- Euro gain realization for accounts payable
- Converting supplier currencies and amounts to the euro

- 
- Generating new supplier prices in the euro
  - Managing purchase orders and vouchers during the euro transition
  - Alternate currency payment setup
  - Processing alternate currency payments
  - Viewing supplier amounts in the euro
  - Electronic formats and the euro



## Euro Realization for Accounts Payable

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With the introduction of the euro, exchange rates between Economic and Monetary Union (EMU) member currencies no longer fluctuate. This means that EMU companies no longer record gains and losses on transactions between EMU currencies. Transactions that were entered before the introduction of the euro must be handled in accordance with EU and EMU regulations.

European Union (EU) regulations required companies in all EMU member nations to realize losses on EMU currency vouchers that were open as of 31 December 1998, using the euro fixed exchange rates. Since these losses were realized at the end of 1998, this topic does not describe them. Instead, it describes the gains for euro realization.

According to EU regulations, all EMU member nations must realize gains on EMU currency vouchers that were open as of 31 December 1998 *no later than* 31 December 1999. Within that framework, each EMU member nation regulates whether companies must realize gains at the end of 1998 or the end of 1999. EMU companies that are allowed to realize gains as late as the end of 1999 will continue to realize gains on EMU currency vouchers as they pay them throughout 1999. As usual, the system will create the gains when you post payments during standard payment processing.

At the end of 1999 and to comply with EU regulations, you must ensure that all gains on any remaining open EMU currency vouchers are realized by running the Currency Gains and Losses program one final time. The likelihood that you have vouchers that are over one year old is minimal, however, you must run this program to ensure that you meet EU requirements.



Companies can calculate gains for euro realization before or after they convert their base currency to the euro. The euro conversion programs, which are available in E9, convert every entry and offsetting entry in your system from your base currency to the euro. For example, if your base currency is Belgian francs, your transactions as well as your gains and losses are in Belgian francs. When you run the E9 conversion programs, each Belgian franc transaction is converted to the equivalent euro amount. For this reason, it does not matter whether you calculate gains for euro realization before or after you convert your company's base currency to the euro.

This topic describes the following:

- A/P setup requirements for euro gain realization
- Calculating euro gain realization for A/P
- Example: Euro gain realization for A/P

### A/P Setup Requirements for Euro Gain Realization

For euro gain realization, ensure that the following are set up:

- Realized gain accounts
- Automatic accounting instructions (AAIs)
- Processing options

At the end of 1999 and according to EU regulations, you must run the Currency Gains and Losses program one final time to ensure that gains for any remaining open EMU currency invoices are realized.

#### Realized Gain Accounts

Verify that the following accounts are set up:

- Realized gain accounts. If you process automatic payments, these realized gain accounts already exist. Some companies will set up special A/P trade accounts to track realized gains for EMU currency transactions separately from other currency transactions.
- Unrealized gain accounts. If you use the Currency Gains and Losses program to calculate unrealized gains, these unrealized gain accounts already exist. You will continue to use these accounts for non-EMU currency transactions.

## Automatic Accounting Instructions

When you calculate gains, the system uses AAIs to distribute the realized or unrealized gain amount to the correct G/L account. Typically, the AAI items for A/P are:

- PGxxx for realized gains
- PVxxx for unrealized gains
- PRyyyy for unrealized gain/loss offsets

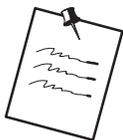
(xxx represents the currency code and yyyy represents the G/L offset code.)

To calculate realized gains on transactions between EMU currencies, you must do the following:

- Set up AAI items PVxxx and PRyyyy to point from unrealized accounts to *realized* accounts. The reason these AAI items point to realized (not unrealized) accounts is that there are no exchange rate differences between EMU currency transactions because of the euro. Therefore, there are no unrealized gains and losses on open items. This explains why an unrealized AAI item can point to a realized account. Realized gain entries flow in and out of the realized accounts until all vouchers that were open before 1 January 1999 are processed.

AAI item PRyyyy usually points offset amounts to an A/P trade account. You might choose, instead, to point offset amounts to an account that rolls up into the A/P trade account.

- Set up all AAI items for PVxxx by currency code. The currency code for item PV separates realized and unrealized transactions within the same company. This allows you to recognize realized gains for EMU currencies while continuing to recognize unrealized gains and losses for non-EMU currencies.



If most of the gains you realize are based on EMU currencies and your gain AAIs are not currently set up by currency, you can save time by doing the following:

- Set up new gain AAIs by currency for each non-EMU currency.
- Change the “old” gain AAIs (these are default AAIs, which do not have a currency code) to point to realized accounts, as described in this documentation. This causes all EMU currency gains to be directed to a realized account.

**Example: AAI Setup for Two Companies**

In the following example, company 1 has foreign vouchers in French francs (FRF) and U.S. dollars (USD). The company directs the gain related to the FRF voucher to a realized account and the gain or loss related to the USD voucher to an unrealized account.

Company 1 and company 2 both have foreign vouchers in FRF so the AAI item is PVFRF. Company 1 directs the AAI item to a realized account, while company 2 directs the same AAI item to an unrealized account.

Company	Domestic	Foreign	AAI Item	Type of Account	Reason
Company 1	DEM	FRF	PVFRF	Realized Gain	Both EMU currencies
Company 1	DEM	USD	PVUSD	Unrealized Gain	One non-EMU currency
Company 2	USD	FRF	PVFRF	Unrealized Gain	One non-EMU currency
Company 2	USD	DEM	PVDEM	Unrealized Gain	One non-EMU currency

**Processing Options**

EU regulations required all EMU companies to realize losses on EMU currency vouchers by the end of 1998. Depending on the EMU country in which your company conducts business, you were required to realize gains at the end of 1998 or by the end of 1999. To handle the requirement, the Currency Gains and Losses program has a processing option for gains only.

**Calculating Euro Gain Realization for A/P**

From the Multi-Currency Monthly Valuation menu (G1121), choose A/P Currency Gains and Losses.

To calculate euro gains on exchange differences for EMU currency vouchers dated through 31 December 1998 that remain open as of the end of 1999, you must run the A/P Currency Gains and Losses program. The gains that are created by this program and the gains that are created during payment processing program comprise the solution for euro gain realization. The payment processing program calculates realized gains for EMU currencies and realized gains and losses for non-EMU currencies, as usual.

When you calculate euro gains, the system creates an entry in the gain account and an offsetting entry in the trade account. On the first day of the next fiscal period, the system creates reversing entries. These entries return the gain account and trade account to the balances that existed before calculating the euro gains.

Euro realization does not impact the original transactions in the Accounts Payable Ledger table (F0411).

## Example: Euro Gain Realization for A/P

In this example, a German company uses DEM as its base currency. The example shows losses on vouchers that were open at the end of 1998. It also shows gains on vouchers that were open at the end of 1998, during 1999, and at the end of 1999.

### 15 December 1998

The company has four open vouchers as of 15 December 1998.

Voucher	Domestic Amounts	Foreign Amounts	Exchange Rate 15 December 1998
PV 1	597.54 DEM	2000 FRF	0.29877
PV 2	484.70 DEM	10000 BEF	0.04847
PV 3	2390.16 DEM	8000 FRF	0.29877
PV 4	911.32 DEM	500 USD	1.82264

### 31 December 1998

On 31 December 1998, the exchange rates were irrevocably fixed to the euro for EMU member currencies. As a result, the exchange rates are calculated using no inverse and triangulation, based on the following rates:

- 1 EUR = 6.55957 FRF
- 1 EUR = 40.3399 BEF
- 1 EUR = 1.0235 USD
- 1 EUR = 1.95583 DEM

Voucher	Calculation	Calculated Exchange Rate
PV 1	$((2000 / 6.55957) \times 1.95583) = 596.33 / 2000$	0.298165
PV 2	$((10000 / 40.3399) \times 1.95583) = 484.84 / 10000$	0.048484

Voucher	Calculation	Calculated Exchange Rate
PV 3	$((8000 / 6.55957) \times 1.95583) = 2385.31 / 8000$	0.298164
PV 4	$((500 / 1.0235) \times 1.95583) = 955.46 / 500$	1.91092

The following table shows the gains and losses calculated from the change in exchange rates:

Voucher	Domestic Amounts	Foreign Amounts	Calculated Exchange Rate	Gain (+) or Loss (-)
PV 1	596.33 DEM	2000 FRF	.298165	+ 1.21 DEM
PV 2	484.84 DEM	10000 BEF	.048484	- 0.14 DEM
PV 3	2385.31 DEM	8000 FRF	.298164	+ 4.85 DEM
PV 4	955.46 DEM	500 USD	1.91092	- 44.14 DEM

Because the German company is an EMU company, it was required to realize losses on EMU currency vouchers that were open at the end of 1998. The processing option for the A/P Currency Gains and Losses program was set to create journal entries for *losses* only. (Germany allows companies to realize gains up until the end of 1999, which is why the processing option was set to create journal entries for losses only.) The following journal entries were created on 31 December 1998.

Journal Entry Type	AAI Item	Type of Account	Amount
JX 2	PWBEF	Realized Loss	+ 0.14 DEM
JX 2	PRBEF	Accounts Payable Trade	- 0.14 DEM
JX 4	PWUSD	Unrealized Loss	+ 44.14 DEM
JX 4	PRUSD	Accounts Payable Other	- 44.14 DEM

The journal entry for PV 2 (BEF) was recorded in a realized loss account because it involves EMU currencies, and the journal entry for PV 4 (USD) was recorded in an unrealized loss account because it does not involve an EMU currency.

The following T-account shows the journal entry for PV 2 in December:

Realized Loss Account December	
0.14	

As of 31 December 1998, the German company realized losses for all open EMU currency vouchers as required by the EU.

### 1 January 1999

On 1 January 1999, reversing journal entries were created for realized and unrealized losses.

Journal Entry Type	AAI Item	Type of Account	Amount
JX 2	PWBEF	Realized Loss	- 0.14 DEM
JX 2	PRBEF	Accounts Payable Trade	+ 0.14 DEM
JX 4	PWUSD	Unrealized Loss	- 44.14 DEM
JX 4	PRUSD	Accounts Payable Other	+ 44.14 DEM

During January, vouchers PV 2 and PV 4 were paid. The losses were realized during payment processing and journal entries were created when the payment was posted. There were no new vouchers entered in January, so the A/P Currency Gains and Losses program did not create journal entries.

Journal Entry Type	Type of Account	Domestic Amounts	Foreign Amounts
PK 2	Cash in Bank	- 484.84 DEM	- 10000 BEF
PG 2	Realized Loss	+ 0.14 DEM	
AE 2	Accounts Payable Trade	+ 484.70 DEM	+ 10000 BEF
PK 4	Cash in Bank	- 955.46 DEM	- 500 USD
PG 4	Realized Loss	+ 73.54 DEM	
AE 4	Accounts Payable Trade	+ 881.92 DEM	+ 500 USD

On 1 January 1999, a reversing journal entry was created to offset the original journal entry and in January, PV 2 was paid. As a result, the overall impact was zero in January. The loss was realized in December. The following T-account shows the journal entries for PV 2 in January:

Realized Loss Account January	
	0.14
* 0.14	

\* This entry was created when the voucher was paid; it was not created by the A/P Currency Gains and Losses program.

### 1 March 1999

During March, voucher PV 1 was paid and the gain was realized during payment processing.

Journal Entry Type	Type of Account	Domestic Amounts	Foreign Amounts
PK 1	Cash in Bank	- 596.33 DEM	- 2000 BEF
PG 1	Realized Gain	- 1.21 DEM	
AE 1	Accounts Payable Trade	+ 597.54 DEM	+ 2000 BEF

The following T-account shows the journal entry for the realized account in March:

Realized Gain Account March	
	* 1.21

\* This entry was created when the voucher was paid; it was not created by the A/P Currency Gains and Losses program.

### 31 December 1999

On 31 December 1999, voucher RV 3 (FRF) is still open. The processing option for the A/P Currency Gains and Losses program is set to realize gains.



Regardless of the EMU country, all gains must be realized no later than 1999 according to EU regulations. Some EMU countries required gains to be realized by the end of 1998, others by the end of 1999.

Journal Entry Type	AAI Item	Type of Account	Amount
JX 3	PVFRF	Realized Gain	- 4.85 DEM
JX 3	PRFRF	Accounts Payable Trade	+ 4.85 DEM

The following T-account shows the journal entry for PV 3 in December:

Realized Gain Account December	
	4.85

### 31 January 2000

During January, voucher PV 3 (FRF) is finally paid. The gain is realized during payment processing and journal entries are created when the payment is posted. Journal entries are not created by the A/P Currency Gains and Losses program.

Journal Entry Type	Type of Account	Domestic Amounts	Foreign Amounts
PK 3	Cash in Bank	- 2385.31 DEM	- 8,000 FRF
PG 3	Realized Gain	- 4.85 DEM	
AE 3	Accounts Payable Trade	+ 2390.16 DEM	+ 8,000 FRF

On 1 January 1999, a reversing journal entry was created to offset the original journal entry and in January, PV 3 was paid. As a result, the overall impact was zero in January. The gain was realized in December. The following T-account shows the journal entries for PV 3 in January:

Realized Gain Account January	
4.85	
	* 4.85

\* This entry was created when the voucher was paid; it was not created by the A/P Currency Gains and Losses program.



## Converting Supplier Currencies and Amounts to the Euro

---



Throughout your company's transition to the euro, you will convert supplier currency codes and address book amounts to the euro for the following reasons:

- Your supplier wants to receive payments in the euro
- You want to submit payments to your suppliers in the euro
- You want to view a supplier's statistical amounts in the euro

Regardless of when your company converts its base currency to the euro, you can submit payments in either the euro or the national currency of your EMU suppliers, as long as it is within the euro transition period. For example, if a French supplier has not yet converted to the euro, you can pay them in the French franc even if your company has converted to the euro.

This topic describes the following:

- How the supplier conversion program works
- Converting supplier currency codes and amounts
- Example: Before and after converting supplier amounts
- How converted limit amounts are rounded
- Parent/child structures with different currencies
- Application outside of the EMU

### How the Supplier Conversion Program Works

The supplier conversion program converts currency codes and amounts for multiple suppliers at one time. You can run the conversion program and convert a supplier's currency code and address book currency and amounts at the same time, or independently of one another.

You might consider setting up different DREAMWriter versions of the conversion program. For example, set up one version to convert default currency codes only, another version to convert address book currency codes and amounts, and still another to convert both.

#### Processing Options for Supplier Master Conversion

To convert supplier currency codes and amounts in proof or final mode, you specify the following in the processing options:

- Exchange rate date to use to convert address book amounts
- Currency code to use to convert supplier address book currency code and address book (statistical) amounts. The conversion updates the Amount Currency (CRCA) field in the F0401 table.
- Currency code to use to convert supplier default currency codes. The conversion updates the Currency Code (CRRP) field in the F0401 table.
- Rounding factor to use to round converted limit amounts. See *How Converted Limit Amounts Are Rounded* in this chapter.

#### Data Selection for Supplier Master Conversion

Use the data selection for the Supplier Master Conversion program to select only those suppliers you want to convert to the euro. To convert currency codes and address book amounts, specify the supplier address book numbers. If you do not do this, the conversion program converts all suppliers. To convert amounts for all suppliers assigned a certain category code, specify the category code.

## Converting Supplier Currency Codes and Amounts

From the Multi-Currency Conversion Operations menu (G1132), choose Supplier Master Conversion.

Depending on how you set your processing options, the Supplier Master Conversion program converts either or both of the following:

- Supplier default currency (Currency field)
- Supplier address book amounts and address book currency (Amount Currency field)

```

01054          Supplier Master Information
Action Code. . . I
Supplier Number. 7499 Deutsche Company
Long Address Number.
. . . . . Payment Information . . . . .
Credit Message . . .
Factor/Special P 7499 Deutsche Company
Parent Number.
Approver Number.
Hold Payment . . N
Payment Terms. . . Net 30 Days           Multiple Checks (Y/N/C). N
Payment Instr. . . Default               Check Float Days . . .
. . . . . Currency & Tax Information . . . . .
Withholding %. . . . . Tax Authority. . .
Tax ID . . . . . Person/Corporation Code.
Add'l Ind Tax ID . . . . . Currency. DEM German Mark
Tax Expl Code. . . Tax Rate/Area. . . . . Amt. Currency. . EUR
. . . . . Accounting Distribution Information . . . . .
G/L Class. . . . . Model JE Type/Doc/Co
Default Exp Acct

F5=Who F6=Memo F8=Bank codes F9=Srch F11=Addr F14=Cat codes F24=More
    
```

### Supplier Default Currency Code

To comply with a supplier's request to receive payments in the euro, run the Supplier Master Conversion program to convert the default currency code on that supplier's master record.

Alternatively, you can change a supplier's currency code manually on the Supplier Master Information form. You might do this if you have just one or two supplier currency codes to change on a particular day.

### Supplier Address Book Currency Code and Amounts

Before you convert supplier address book currency codes and amounts, ensure that you have set up Economic and Monetary Union (EMU) member currency relationships and exchange rates. See *Setting Up Euro Currency Relationships*.

To convert address book currency codes and amounts for suppliers to the euro, run the Supplier Master Conversion program. When you convert supplier amounts, you convert amounts in the Supplier Master table (F0401) only. For consistency and integrity reasons, you do not convert supplier transaction amounts (F0411) until you convert your company's base currency to the euro.

The Supplier Master Conversion program converts the following address book amounts:

- |                                |  |
|--------------------------------|--|
| <b>Summary balance amounts</b> | <ul style="list-style-type: none"><li>• Year-to-date voucher amounts</li><li>• Prior year voucher amounts</li><li>• Open order amounts</li></ul> |
| <b>Limit amounts</b>           | <ul style="list-style-type: none"><li>• Minimum and maximum order values</li></ul>   |

These statistical and limit amounts appear on the Supplier Information form. To access this form, press F1 on the Supplier Number field on the Supplier Master Information form. On Name Search, enter the supplier name and a V in the Search Type field and press Enter. Enter 4 in the Option field next to the supplier and press Enter to access the Supplier Information window. Scroll down to view more statistical amounts.

### Exceptions Report

When you run the Supplier Master Conversion program, an exceptions report prints with any of the following messages:

- *No processing errors.* If you entered 1 for processing option 1, the conversion updates the address book amounts in the Supplier Master Information table.
- *Currency exchange rate not found.* Cause: The currency code that you are converting to is not set up in the exchange rate table, or the exchange rate or effective date is not set up for the currency code.
- *Invalid currency entered.* Cause: The currency code you entered for processing option 3 or 4 or both is not valid.
- *Update error – record locked or not found.* Cause: The supplier master record is in use.

## Example: Before and After Converting Supplier Amounts

The following example shows supplier address book amounts before and after converting from the German mark (DEM) to the euro (EUR). For this example, program values are set as follows:

<b>Program</b>	<b>Field or Processing Option Value</b>
Supplier Master Information	Currency field = DEM Amount Currency field = DEM
Set Daily Transaction Rates	(DEM to EUR currency relationship) Exchange Rate field =1.95583 (divisor)
Supplier Master Conversion	Amount Currency processing option = EUR Currency Code processing option = blank Rounding Factor processing option = 50

After converting to the euro, the supplier's address book amounts will be in the euro; however, their payments will remain in German marks.

<b>F0401 Field</b>	<b>Description</b>	<b>Before Conversion</b>	<b>After Conversion</b>	<b>Rounded From</b>
A6CRRP	Currency Code - A/P	DEM	DEM	Not applicable
A6CRCA	Currency Code - A/B	DEM	EUR	Not applicable
A6AYPD	Amount Vouchered Year-to-Date	157,500	80,528.47	Not applicable
A6APPD	Amount Vouchered Prior Year End	138,000	70,558.28	Not applicable
A6ABAM	Address Book Amount	Not used	Not used	Not applicable
A6ABA1	Address Book Amount	Not used	Not used	Not applicable
A6APRC	Open Order Amount	3,000	1,533.88	Not applicable
A6MINO	Minimum Order Value	15,000	7,650	7,669.38
A6MAXO	Maximum Order Value	30,000	15,350	15,338.76



In the Supplier Master table, the field A6ABAM stores a user-defined fixed amount and the field A6ABA1 is for future use. If you use either of these fields, be aware that the Supplier Master Conversion program converts the amounts,

regardless of whether they are monetary amounts.

### How Converted Limit Amounts Are Rounded

Limit amounts are minimum and maximum order amounts that you assign to a supplier master record. Limit amounts are usually rounded numbers and are stored without decimals. When you convert address book amounts, you designate the rounding factor for limit amounts in a processing option for the Supplier Master Conversion program.

The following example shows how the Supplier Master Conversion program rounds converted limit amounts when converting from French francs (FRF) to euros (EUR). The example is based on an exchange rate of 1 EUR = 6.55957 FRF and a rounding factor of 50. The conversion program rounds amounts up or down as follows:

#### Round Up

The conversion program converts 7,500 FRF to 1,143 EUR. It rounds up 1,143 EUR to 1,150 EUR, based on the following calculation:

Converted amount / Rounding Factor = Q with a remainder of R. If R is greater than or equal to one half of the rounding factor, then subtract R from the rounding factor and add that amount to the converted amount.

In the example,  $1,143 \text{ EUR} / 50 = 22$  with a remainder of 43. 43 is greater than one half of 50 (25). Subtract 43 from 50 ( $50 - 43 = 7$ ) and add 2 to 1,143 to get a rounded value of 1,150 EUR.

#### Round Down

The conversion program converts 5,000 FRF to 762 EUR. It rounds down 762 EUR to 750 EUR, based on the following calculation:

Converted Amount / Rounding Factor = Q with a remainder of R. If R is less than one half of the rounding factor, then subtract R from the converted amount.

In the example,  $762 \text{ EUR} / 50 = 15$  with a remainder of 12. 12 is less than one half of 50 (25). Subtract 12 from 762 to get a rounded value of 750 EUR.

### Parent/Child Structure with Different Currencies

If you have a parent/child structure with different default and address book currencies, you can convert the parent independently from its children or vice versa. This flexibility allows you to continue to track address book amounts in

the parent company's currency while submitting payments to some of the subsidiaries in the euro. It also allows you to convert address book amounts to the euro at the subsidiary level or convert the currencies of a parent and its children at the same time, and so on.

The following table shows a parent/child relationship with different currencies before the conversion.

<b>Relationship</b>	<b>Default Currency</b>	<b>Address Book Currency</b>
Parent	ITL	ITL
Child 1	FRF	ITL
Child 2	FRF	ITL
Child 3	DEM	ITL

Child 1, Child 2, and Child 3 have requested that you submit payments in the euro. You run the Supplier Master Conversion program to convert their default currencies from French franc (FRF) and German mark (DEM) to euro (EUR).

The following table shows the results after the conversion.

<b>Relationship</b>	<b>Default Currency</b>	<b>Address Book Currency</b>
Parent	ITL	ITL
Child 1	EUR	ITL
Child 2	EUR	ITL
Child 3	EUR	ITL

### Application Outside of the EMU

Companies outside of the EMU can use the Supplier Master Conversion program to convert default currency codes and address book currency codes and amounts for multiple suppliers. Based on the currency code and exchange rate date you set in the processing options, you can convert default currency codes, address book (statistical and limit) amounts, or both from one currency to another. For example, you can convert from U.S. dollars to Canadian dollars.



## Generating New Supplier Prices in the Euro

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You can provide prices in the euro for existing suppliers who convert to the euro, and at the same time continue to provide prices in a national currency for other suppliers. You control the currency in which to create prices for a supplier on the supplier master record.

Some companies will create new prices in the euro as early as 1 January 1999, others will wait until 2002 when it is mandatory, and still others will use a transitional approach and create new prices for suppliers over an extended period of time.

This topic describes the following:

- Planning a strategy for new supplier prices
- How the price generation program works
- Generating new supplier prices in the euro
- Example: Before and after generating new supplier prices
- Application outside of the EMU

### Planning a Strategy for New Supplier Prices

Before you generate new supplier prices in the euro, you should review your current pricing structure and plan a strategy.

Assume your current pricing structure has several currencies associated with each supplier. Before you generate new prices, think about which currency you want to base your new prices on. You might choose the most common currency used in your pricing structure or you might choose a currency based on a fixed rate that is more favorable for your pricing.

To plan a strategy for your new supplier prices, it is important that you understand how the generation program works. When you run the program, it creates only one euro price for each unit of measure. It does not create one euro price for each currency. If a euro price exists for a supplier, item, or branch/plant, the price generation program does not create another euro price.

If you have a complex pricing structure, you might new euro prices manually. Or, you might create some new euro prices manually and others automatically, using the generation program.

### Example: A Pricing Structure Strategy

The following example describes the current pricing structure for a group of suppliers and suggests a strategy for revising the structure before generating new euro prices.

The current pricing structure for a group of suppliers is based on different currency codes. When a new euro price is created for that supplier group, the new price is based on only one currency code. For this reason you will want to review and revise your current pricing structure to adjust for any price differences before you create new euro prices.

Item	Currency Code	Current Price
Item 1	DEM	8 DEM
Item 1	FRF	50 FRF
Item 1	ITL	100,000 ITL

In this example, the processing options for the Generate Purchase Price by Currency program are set to create a new euro (EUR) price, based on the existing French franc (FRF) price. The exchange rate is 1 EUR = 6.55957 FRF.

The generation program creates a new price for 7.6225 EUR (50 FRF / 6.55957). It does not create new euro prices for the German and Italian amounts. This means that the German, Italian, and French suppliers all have the same euro price for item 1, which is probably not the desired result. This example helps illustrate why you should review and, if necessary, revise your pricing structure before you generate new euro prices.

Instead of using currency codes to differentiate between your supplier prices, consider revising your current pricing structure. One strategy is to use branch/plants to differentiate between supplier prices. This strategy would allow you to generate different euro prices for different locations.

## How the Price Generation Program Works

The price generation program creates new euro prices based on existing prices and is useful if you want to create prices for multiple suppliers at one time. To update an individual price record, you can manually enter the new currency and amount on the Supplier/Item Price Revisions form, located on the Price Management menu (G43A17). You do not have to run the generation program.

The Generate Purchase Price by Currency program does the following:

- Copies the original currency supplier price
- Calculates a new price in the euro, based on the exchange rate you specify
- Creates a new supplier price in the euro

You run the generation program one currency at a time. The program was designed to create new prices one currency at a time to avoid confusion about from which currency a new price was based on.

The generation program creates only one new euro price for each unit of measure. It does not create one euro price for each currency. If a euro price already exists, the generation program does not create another euro price because both records would have the same key. The exception to this rule is when currency codes associated with a supplier, item, or branch/plant have different effective through dates. Depending on the dates, the generation program might create more than one euro price.

When the generation program creates a new euro price, it sequences that record alphabetically along with the existing records. It automatically rounds converted euro amounts according to the decimal places that are set up in the data dictionary.

## Processing Options for Price Generation

To generate new supplier prices in proof or final mode, you specify the following in the processing options for Generate Purchase Price by Currency:

- Date as of when you want to create new prices. If the expiration date of a price is greater than or equal to this date, a new price will be generated.
- Currency in which you want to create new prices.
- Currency of the existing prices. The currency code of the price that you want to base new prices on.
- Exchange rate to use to calculate the new prices.

- Conversion method (multiplier or divisor) to use to perform the exchange rate calculation. When calculating amounts from an Economic and Monetary Union (EMU) currency to the euro, you must designate the divisor method. This way, new prices are based on the no inverse method, which is required by the European Union (EU).

### Data Selection for Price Generation

Typically, companies will generate new supplier prices by branch/plant. If your company has multiple branch/plants with different currencies, you can run the generation program multiple times. You can also run the generation program by item number or any other value in the data selection.

If your company has items that are at purchase price level 1 and you want to ensure that those items are selected for the price generation, designate \*blanks for branch/plant in the data selection if you are not using \*all for branch/plant.

### Generating New Supplier Prices in the Euro

From the Purchasing Advanced and Technical Operations menu (G43A31), choose Generate Purchase Price by Currency.

After you run the program in final mode, review the newly created prices on the audit report and adjust them accordingly. For example, if the program creates a new price record for 1,500 FRF as 228.6735, you might manually adjust the amount to 230 EUR.

### Example: Before and After Generating New Supplier Prices

To access the form in this example, choose Supplier/Item Price Revisions on menu G43A17.

The following form shows an existing price record before a new price is generated. Notice that the item has several currency codes and prices.

```

41061      Supplier/Item Price Revisions  Default Values:
                                                Branch/Plant . .
                                                Effective From .
                                                Effective Thru .
                                                Currency . . . .
Action Code. . . . . I
Supplier . . . . . 7481 Company de France
Catalog. . . . .
Skip To Item Number. . LK2200

  0      Item                Unit Price  UM      Description
  - LK2200                280.0000  EA      Premium Bike Lock
    Effective From . 01/01/99 Currency Code. BEE
    Effective Thru . 12/31/99 Branch/Plant . .
  - LK2200                45.0000   EA      Premium Bike Lock
    Effective From . 01/01/99 Currency Code. DEM
    Effective Thru . 12/31/99 Branch/Plant . .
  - LK2200                125.0000  EA      Premium Bike Lock
    Effective From . 01/01/99 Currency Code. FRF
    Effective Thru . 12/31/99 Branch/Plant . .

    Effective From .      Currency Code.
    Effective Thru .      Branch/Plant . .

Opt:  2=Price Breaks      F8=Catalogs      F14=Memo      F24=More Keys
    
```

In this example, the processing options for the generation program are set as follows:

- Mode = Final
- Effective date = 01/01/99
- Convert to currency = EUR
- Convert from/exchange rate = DEM 1.95583
- Method = divisor

Even though there are several currency amounts associated with the item number, the generation program will create only one new euro amount, based on the German mark (DEM). This example illustrates the importance of reviewing and, if necessary, revising your current pricing structure before you generate new prices in the euro.

The following form shows the results after the generation program ran in final mode. The generation program creates only one euro record based on the German mark. Notice that the original price remains. This is so you can continue to pay suppliers in the national currency, as needed.

41061 Supplier/Item Price Revisions		Default Values:	
Action Code . . . . .	I	Branch/Plant . . . . .	_____
Supplier . . . . .	7481 Company de France	Effective From . . . . .	_____
Catalog . . . . .	_____	Effective Thru . . . . .	_____
Skip To Item Number . . . . .	LK2200	Currency . . . . .	_____
<u>Q</u>	<u>Item</u>	<u>Unit Price</u>	<u>UM</u> <u>Description</u>
-	LK2200	280.0000	EA Premium Bike Lock
	Effective From . 01/01/99	Currency Code. BEF	
	Effective Thru . 12/31/99		Branch/Plant . .
-	LK2200	45.0000	EA Premium Bike Lock
	Effective From . 01/01/99	Currency Code. DEM	
	Effective Thru . 12/31/99		Branch/Plant . .
-	LK2200	23.0081	EA Premium Bike Lock
	Effective From . 01/01/99	Currency Code. EUR	
	Effective Thru . 12/31/99		Branch/Plant . .
-	LK2200	125.0000	EA Premium Bike Lock
	Effective From . 01/01/99	Currency Code. FRF	
	Effective Thru . 12/31/99		Branch/Plant . .
Opt: 2=Price Breaks		F8=Catalogs	F14=Memo F24=More Keys

Once a euro price is created, the program will not create any additional euro prices for an item unless another currency on the existing record has a different effective through date.

### Application Outside of the EMU

The generation program is designed to create new prices in any currency, based on existing supplier prices.

## Managing Purchase Orders and Vouchers During the Euro Transition

---



This topic describes how to handle purchase orders and supplier invoices (vouchers) in different currencies during the euro transition period.

If you enter a purchase order in a domestic or foreign currency, and your supplier submits an invoice in the euro, you cannot automatically match the domestic or foreign purchase order to the euro voucher. Instead, you must manually convert the euro invoice amount to the domestic or foreign currency and then enter the voucher with that (domestic or foreign currency) amount.

For example, if you enter a purchase order in German marks (DEM) and your supplier submits an invoice in the euro, you must manually convert the euro invoice amount to DEM and then enter the voucher in DEM.

For future transactions, consider changing the currency code on the supplier master record so that subsequent purchase orders, vouchers, and payments for that supplier are processed in the euro.



## Alternate Currency Payment Setup

---



With the introduction of the euro, you can process automatic payments and manual payments in an alternate, or third, currency. This means that you can create payments in a currency other than the domestic or foreign currency of a voucher.

To pay vouchers in an alternate currency, you must set up the following:

- Alternate currency clearing account and AAI
- Alternate currency payment gain accounts and AAI
- Alternate currency payment loss accounts and AAI
- Processing options for alternate currency payments

### Alternate Currency Clearing Account and AAI (P7)

To process a payment in an alternate currency, you must set up an alternate currency clearing account and AAI to track the conversion of the payment amount to the original voucher amount.

The original voucher amount is in a domestic or foreign currency and is recorded against the payables trade account. This means that the offset amount must also be in the same currency. To calculate the offset amount, the payment currency is converted to the domestic or foreign currency and then stored in an alternate currency clearing account. The alternate currency clearing account provides an audit trail from the cash account entry in the payment (alternate) currency to the offset trade account entry in the voucher (domestic or foreign) currency.

The entries in the alternate currency clearing account are as follows:

Alternate Currency Payment Amount		Foreign Payment Amount	
Alternate Currency Clearing Account	Cash Account	Gains/Losses Trade Account	Alternate Currency Clearing Account

The alternate currency clearing account will balance on the domestic side, but not on the foreign side. This is because the foreign side contains different currencies, which will never balance.

The alternate currency clearing account is assigned to AAI item P7 and must follow these rules:

- It must be in the same company as the bank account from which the payment is made.
- It cannot be a monetary account.
- It must be company specific. You cannot use company 00000 as a default.
- It must include a business unit.

For more information about how transactions move in and out of the alternate currency clearing account, see *Processing Alternate Currency Payments*.

## Alternate Currency Payment Gain Accounts and AAI (PY)

To record a gain incurred on an alternate currency payment, you must set up a new gain account and AAI. The gains for alternate currency payments are recorded separately from standard gains and are handled by using different accounts and AAI.

The gain account for alternate currency payments stores the amount that is realized when the domestic amount of a payment is greater than the amount derived by calculating from the alternate currency to the invoice currency to the domestic currency. The amount in the alternate currency gain account, which occurs because of rounding issues, should be minimal.

The gain account for the alternate currency payment is assigned to AAI item PY. The AAI search sequence used during alternate currency payment processing is the same one used for standard gains and losses during regular payment processing:

1. The program searches for alternate currency code and company.

2. If not found, the program searches for G/L offset and company.
3. If not found, the program searches for company.
4. If not found, the program searches for alternate currency code and company 00000.
5. If not found, the program searches for G/L offset and company 00000.
6. If not found, the program searches for company 00000.

## Alternate Currency Payment Loss Accounts and AAIs (PZ)

To record a loss incurred on an alternate currency payment, you must set up a new loss account and AAI. The losses for alternate currency payments are recorded separately from standard losses and are handled by using different accounts and AAIs.

The loss account for alternate currency payments stores the amount that is realized when the domestic amount of a payment is less than the amount derived by calculating from the alternate currency to the foreign currency to the domestic currency. The amount in the alternate currency loss account, which occurs because of rounding issues, should be minimal.

The loss account for alternate currency payments is assigned to AAI item PZ. The AAI search sequence used during alternate currency payment processing is the same one that is used for standard gains and losses during regular payment processing, which is described in *Alternate Currency Payment Gain Accounts and AAIs* in this chapter.

## Processing Options for Alternate Currency Payments

To process payments in the euro or other alternate currency, you must set processing options for the following programs:

<b>Program</b>	<b>Processing Option</b>
<b>Create Payment Groups (P04570)</b>	<p>Currency Processing.</p> <p>To allow payments to be created in an alternate currency, enter 4 (alternate currency).</p> <p>Enter the currency code of the alternate currency, such as EUR, if paying in an alternate currency.</p>

<b>Program</b>	<b>Processing Option</b>
<b>Work with Payment Groups (P04257)</b>	<p>Display Alternate Currency Amounts</p> <p>To display payment group amounts in an alternate currency, enter 1.</p> <p>Enter an effective date to use for the alternate currency exchange rate.</p>
<b>Voucher Functional Server (XT0411Z1) and Speed Release (P04114)</b>	<p>Edit on Bank Account</p> <p>To not edit the G/L bank account currency when entering a voucher, enter 1. If you pay in an alternate currency, the currency of the voucher does not have to be the same as the currency of the monetary bank account.</p>
<b>Manual Payment with Voucher Match (P04102)</b>	<p>Alternate Payment</p> <p>To display the Alternate Currency Code field, enter 1.</p> <p>To display the alternate to domestic exchange rate, leave blank. To display the alternate to foreign exchange rate, enter 1.</p>

# Processing Alternate Currency Payments

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According to the “no compulsion, no prohibition” principle, supplier invoices (vouchers) and payments can be handled as follows:

- Suppliers can submit invoices to their customers in their national currency or the euro through 31 December 2001.
- Customers can submit payments to their suppliers in their national currency or the euro through 30 June 2002.

Based on this principle, companies can submit and pay invoices in the euro or their national currency, as long as it is within the euro transition period. During the euro transition period, for example, a French company that submits an invoice in German marks to a German company could receive payment in either marks or the euro.

This topic describes the following:

- Processing multi-currency drafts
- Processing alternate currency payments
- Calculating gains/losses on alternate currency payments
- Application outside of the EMU

## Before You Begin

- Make sure you complete the setup requirements described in *Alternate Currency Payment Setup*.

Most processing for alternate currency payments is based on the setup you do beforehand. Minimal user intervention is needed during the actual processing of payments.

### Processing Multi-Currency Drafts

As an alternative to processing A/P drafts in an alternate currency, you can process them in a foreign currency as long as there are only two currencies involved in the transaction. This multi-currency functionality is available in the following:

- Manual payment processing. Enter an A/P draft and match it to a foreign voucher using the Manual Payment with Voucher Match program. The draft is paid in the foreign amount and booked to a drafts payable account, instead of a bank account.
- Automatic payment processing. Create a payment group based on the foreign amount of vouchers. When writing and updating the payment group, the paper draft is created with the foreign amount. As of release A7.3 CU11, the foreign currency code prints on the paper draft, along with the foreign amount.

### Processing Alternate Currency Payments

You can process alternate currency payments using:

- Automatic payments
- Manual payments
- A/P drafts

The ability to process alternate currency payments is controlled by processing options in the Create Payment Groups, Work with Payment Groups, and Manual Payment with Voucher Match programs.

Alternate currency payment amounts are stored in the A/P Matching Document table (F0413). The currency in this table will be different from the currency in the A/P Matching Document Detail table (F0414) because an alternate currency payment is involved. The historical exchange rate stored in the A/P Matching Document Detail table contains the exchange rate that is used to calculate from the foreign currency to the alternate currency.

Processing alternate currency payments is similar to processing other payments. The differences are described in the following tasks:

- Creating payment groups
- Writing payments
- Entering manual payments
- Updating the A/P ledger

## Creating Payment Groups

To pay foreign vouchers in an alternate currency, you associate the payment group with a specific bank account just as you normally do. This allows you to create payments from a bank account that deals specifically in an alternate currency, such as the euro.

### Error Messages

If an error occurs when you create a payment group, a message prints on the Payment Group Edit Report. For example, an error message prints if you try to create a payment in the euro using a French bank account. The following error messages are specific to alternate currency payments:

- Alternate currency clearing account is invalid or is a monetary account
- Alternate currency clearing account company is not the same as the transaction company
- AAI for alternate gain/loss account is invalid
- Alternate currency gain/loss account company is not the same currency as transaction company
- The currency of the alternate payment did not match the currency of the bank account

## Writing Payments

When you write payments for foreign vouchers in an alternate currency, the system calculates the payment amount as follows:

- Adds the total amount of the vouchers in the supplier's invoice currency.
- Uses the exchange rate between the invoice currency and the payment currency to calculate the payment amount.

For example, a German company receives an invoice from a French supplier for 2,000 French francs (FRF) and pays the supplier 304.90 EUR. The payment amount is calculated by dividing the invoice amount by the exchange rate, as follows:  $2,000 / 6.55957$ .

The following form, Review Payment Group – Write, shows the invoice amount in the *transaction* currency (2,000.00 FRF).

```

042571          Review Payment Group - Write
Bank Acct. . . 410.1110.EUR      Bank Transit _____
Version. . . 0003                Amount From. _____
Print Queue.          Curr Code. . EUR  Amount Thru. _____
                                   Value Date . _____
Print Total.          2,000.00    Payee. . . . _____
No. of Pmts.         1

O . . . . . Payee. . . . .      Payment          Discount
P Address      Name            Amount            Taken
- 7528 Company de France      2,000.00

Opt: 1=Vch Detail 3=Write 9=Undo  F4=Details F10=Wrt All F11=Undo All
    
```

The following form, Work with Payment Groups, shows the actual payment amount (304.90 EUR).

```

04257          Work with Payment Groups
Bank Account . . 410.1110.EUR    Write/Update . . _
Version. . . . .                Pay Instr. . . . _
Originator . . .                Print Queue. . . _
                                   Currency Code. . _

O                               Payment          P Nxt
P Bank Account      Version      Amount      Originator  I Sts
- 410.1110.EUR    0003          304.90    BJ857143   WRT

O: 1=Pmts 3=Write 4=Update 8=Reset 9=Undo  F10=Wrt All F11=Upd All
    
```

When you write payments in an alternate currency, the exchange rate on the date of payment is recorded as follows:

- The foreign to domestic currency rate is recorded as a standard gain/loss
- The alternate to domestic currency rate is recorded as an alternate gain/loss

The system calculates and writes A/P drafts in an alternate currency in the same way.

### Error Messages

If an error occurs when you write payments, a message appears after you enter the payment date. The error message that is specific to alternate currency payments is *currency exchange rate not found*.

### Entering Manual Payments

Before you enter a manual payment in an alternate currency, make sure you set the processing options:

- To display the Alternate Currency field
- To display the alternate to foreign exchange rate

To enter a manual payment in an alternate currency, you must apply the payment to existing vouchers. You designate the alternate currency in which you want to pay when you enter the manual payment. The system then converts the open voucher amount to the alternate currency amount, using the exchange rates from the Currency Exchange Rates table (F0015).

#### **To enter manual payments in an alternate currency**

---

Entering manual payments in an alternate currency is similar to entering domestic and foreign payments. The differences are described in the following steps.

1. From the Manual Payment Processing menu (G0412), choose Payment With Voucher Match.
2. On Payment With Voucher Match, do the following:
  - Enter the supplier number and payment G/L date, as usual
  - Enter the payment number, if required
  - To override the default bank account, enter a value in the G/L Bank field; otherwise, leave blank
3. To pay a foreign voucher in an alternate currency, enter the transaction currency in the Currency Code field.
4. Press Enter to display the existing vouchers.

```

04102          Payment With Voucher Match  Prev Paymt:
                                     Mode (F) . . E
Print Payment. . . _
Action Code. . . A          Batch Number 6070828
Supplier Number. 7528      Alternate Amount
Payment Number . 67238611  Company de France
Payment Amount .          G/L Bank 410.1110.EUR
Payment-G/L Date 013199   Remark
                                     Currency Code FRF Alternate Currency ___
                                     Exchange Rate
                                     Alternate to Domestic
Remaining. . . .
. . . . . Payment Schedule . . . . .
Voucher Pay Invoice Net Due Amount Discount
Number Itm Number Date Applied Taken
12871 001 782390 01/31/99
Ty PV Key Co 00410 Co 00410 Cd FRF Open 2,000.00 PS A
Rmk
Ty Key Co Co Cd Open PS
Rmk
Ty Key Co Co Cd Open PS
Rmk
F4=Details F16=Ledger Inq F11=Supplier F9=Name Srch F17=Void F24=More
    
```

5. In the Payment Amount field, enter the amount in the *transaction* currency of the voucher.
6. In the Alternate Currency field, enter the alternate currency code (EUR) for the manual payment.

If the currency code in the Alternate Currency field does not match the transaction currency code in the Currency Code field, the system creates an alternate currency payment.

7. Do not enter exchange rates if the transaction is between EMU member currencies. The system will retrieve the rates from the Currency Exchange Rate table.
8. Press F5 to view the payment amount in the alternate currency. The Alternate Amount field appears under the batch number.

```

04102          Payment With Voucher Match  Prev Paymt:
                                     Mode (F) . . E
Print Payment. . . 0
Action Code. . . A          Batch Number 6070828
Supplier Number. 7528      Alternate Amount 304.90
Payment Number . 67238611  Company de France
Payment Amount . 2,000.00  G/L Bank 410.1110.EUR
Payment-G/L Date 01/31/99  Remark
                                     Currency Code FRF Alternate Currency EUR
                                     Exchange Rate
                                     Alternate to Domestic
Remaining. . . . 2,000.00
. . . . . Payment Schedule . . . . .
Voucher Pay Invoice Net Due Amount Discount
Number Itm Number Date Applied Taken
12871 001 782390 01/31/99
Ty PV Key Co 00410 Co 00410 Cd FRF Open 2,000.00 PS A
Rmk
Ty Key Co Co Cd Open PS
Rmk
Ty Key Co Co Cd Open PS
Rmk
F4=Details F16=Ledger Inq F11=Supplier F9=Name Srch F17=Void F24=More
    
```

9. In the Amount Applied field, enter the amount in the *transaction* currency of the voucher and press Enter.

After entering the manual payment, you can review the exchange rates.

- Inquire on the supplier on Payment With Voucher Match.

```

04102          Payment With Voucher Match  Prev Paymt: 67238611
                                     Mode (F) . . E   Company de France
Print Payment. . . _                 Batch Number 6070828
Action Code. . . I                   Alternate Amount 304.90
Supplier Number. 7528                 Company de France
Payment Number . 67238611             G/L Bank 410.1110.EUR
Payment Amount . 2,000.00             Remark
Payment-G/L Date 01/31/99             Currency Code FRF Alternate Currency EUR
                                     Exchange Rate
Remaining. . . .                      Foreign to Alternate 6.5595700
. . . . . Payment Schedule . . . . .
Voucher Pay Invoice Net Due Amount Discount
Number  Itm  Number  Date  Applied  Taken
12871 001 782390 01/31/99 2,000.00
Ty PV Key Co 00410 Co 00410 Cd FRF Open PS P
Rmk
Ty Key Co Co Cd Open PS
Rmk
Ty Key Co Co Cd Open PS
Rmk
F4=Details F16=Ledger Inq F11=Supplier F9=Name Srch F17=Void F24=More
    
```

- Press F6 to toggle between the foreign to alternate and the alternate to domestic exchange rates.

```

04102          Payment With Voucher Match  Prev Paymt: 67238611
                                     Mode (F) . . E   Company de France
Print Payment. . . _                 Batch Number 6070828
Action Code. . . I                   Alternate Amount 304.90
Supplier Number. 7528                 Company de France
Payment Number . 67238611             G/L Bank 410.1110.EUR
Payment Amount . 2,000.00             Remark
Payment-G/L Date 01/31/99             Currency Code FRF Alternate Currency EUR
                                     Exchange Rate
Remaining. . . .                      Alternate to Domestic 1.9558300
. . . . . Payment Schedule . . . . .
Voucher Pay Invoice Net Due Amount Discount
Number  Itm  Number  Date  Applied  Taken
12871 001 782390 01/31/99 2,000.00
Ty PV Key Co 00410 Co 00410 Cd FRF Open PS P
Rmk
Ty Key Co Co Cd Open PS
Rmk
Ty Key Co Co Cd Open PS
Rmk
F4=Details F16=Ledger Inq F11=Supplier F9=Name Srch F17=Void F24=More
    
```

### Updating the A/P Ledger

If no errors occur when you update a payment group, a Payment Register prints.

When you update the A/P ledger for alternate currency drafts, the system creates a matching document with a document type of P1 to close the voucher, just as it does for a multi-currency draft.

### Error Messages

If an error occurs when you update payment groups, a message prints on the Update Payments Error Report. The following error messages are specific to alternate currency payments:

- *Currency exchange rate not found*
- *Exchange rate cannot be changed between writing and updating payments*

### Calculating Gains/Losses on Alternate Currency Payments

The exchange rates for EMU member currencies no longer fluctuate because they are irrevocably fixed to the euro. This means that invoices (vouchers) and payments between EMU member currencies no longer incur exchange rate gains or losses.

For example, if a German company submits an invoice to a French company in French francs and the French company pays in euros, there is no exchange rate gain or loss. A slight gain or loss might occur when converting amounts back and forth between currencies if an alternate currency is involved, but the gain or loss would be due to rounding difference, not exchange rate fluctuations. These slight rounding differences can occur because of EU requirements for converting from an alternate currency to a foreign currency to a domestic currency.

When you post payments, the system creates journal entries for realized gains and losses. To calculate the gain or loss on a foreign currency payment, the post program multiplies the voucher amount by the difference in the exchange rate from the time the voucher was entered and the payment was entered, and creates a gain and loss entry.

#### Example: German Company Pays DEM Voucher in EUR

In the following example, a German company pays a domestic (DEM) voucher in the euro (EUR).

When the payment is posted, the payment amount (EUR) is compared to the voucher amount (DEM) to determine if the debt has been satisfied. Because EMU exchange rates are fixed to the euro, the voucher and payment exchange rates do not fluctuate and there is no gain or loss on the transaction.

However, there might be a slight gain or loss on a transaction when converting amounts back and forth between currencies if the euro, or other alternate currency, is involved. That gain or loss is due to rounding differences and not exchange rate fluctuations, and is recorded in the alternate currency gain/loss account.

Description	Currency	Amount	Exchange Rate 1 January 1999
Voucher (domestic currency)	DEM	950	
Payment currency	EUR	485.73	1 EUR = 1.95583 DEM
Standard gain/loss	DEM	Not applicable	
Alternate gain/loss	DEM	- 0.01 *	

\* Rounding differences are recorded in the alternate currency gain/loss account, as directed by AAIs.

The voucher on 1 January 1999 is 950 DEM.

The payment on 1 February 1999 is 485.73 EUR.

Calculation:  $950 \text{ DEM} / 1.95583 = 485.73 \text{ EUR}$

### Alternate Currency Gain/Loss Calculation

The alternate currency gain/loss, which is due to rounding differences and not exchange rate fluctuations, is - 0.01 DEM.

Calculation:  $950 \text{ DEM} - (485.73 \times 1.95583 = 950.01 \text{ DEM}) = - 0.01 \text{ DEM}$

### Example: German Company Pays FRF Voucher in EUR

In the following example, a German company pays a foreign (FRF) voucher in the euro (EUR).

When the payment is posted, the payment amount (EUR) is compared to the voucher amount (FRF) to determine if the debt has been satisfied. Since the DEM and FRF exchange rates are fixed to the euro, the voucher and payment exchange rates do not fluctuate and there is no exchange rate gain or loss on the transaction.

However, there might be a slight gain or loss on a transaction when converting amounts back and forth between currencies if the euro, or other alternate currency, is involved. That gain or loss is due to rounding differences and not exchange rate fluctuations, and is recorded in the alternate currency gain/loss account.

Description	Currency	Amount	Exchange Rates 1 January 1999
Voucher (domestic currency)	DEM	596.33	
Voucher (foreign currency)	FRF	2000	1 EUR = 6.55957 FRF 1 EUR = 1.95583 DEM
Payment	EUR	304.90	
Standard gain/loss	DEM	Not applicable	
Alternate gain/loss	DEM	0.00	

The voucher on 1 January 1999 is 2000 FRF, or 596.33 DEM in the domestic currency.

$$\text{Calculation: } (2000 \text{ FRF} / 6.55957) \times 1.95583 = 596.33 \text{ DEM}$$

The payment on 1 February 1999 is 304.90 EUR.

$$\text{Calculation: } 2000 \text{ FRF} / 6.55957 = 304.90 \text{ EUR}$$

The bank account is credited as follows:

- 304.90 EUR (the amount of the payment on the foreign side)
- 596.33 DEM (the total of the pay items including gains/losses on the domestic side)

### Standard Gain/Loss Calculation

There is no gain/loss created by exchange rate fluctuations between the invoice (foreign) currency and the domestic currency because both currencies are irrevocably fixed to the euro.

### Alternate Currency Gain/Loss Calculation

There is no alternate currency gain/loss, which can occur because of rounding differences, in this calculation.

$$\text{Calculation: } 596.33 \text{ DEM} - (304.90 \times 1.95583 = 596.33 \text{ DEM}) = 0.00 \text{ DEM}$$

## Application Outside of the EMU

If a transaction is not between EMU currencies and an alternate currency payment is involved, there is the potential for two gains or losses. One gain or loss is between the domestic currency and the invoice currency; the other is

between the domestic currency and the alternate (payment) currency.

The first potential gain or loss is based on the fluctuation of exchange rates between the domestic currency and the invoice currency at the time of payment. This is the same gain or loss that would have been realized if the payment was not in an alternate currency.

The second potential gain or loss is based on the difference between the following amounts:

- The amount calculated by converting the alternate currency payment amount to the supplier invoice currency to the domestic currency.
- The amount calculated by converting the alternate currency payment amount directly to the domestic currency. (This is the amount that is actually paid from the bank account.)

For example, if a Canadian company submits an invoice to a U.S. company in dollars and the U.S. company pays in Japanese yen, there will be two potential gains and losses incurred. One will be based on the fluctuation of exchange rates between the Canadian dollar (domestic currency) and the U.S. dollar (invoice currency); the other will be based on the difference between the amount calculated by converting the following:

- Japanese yen (alternate currency payment) to U.S. dollar (invoice currency) to Canadian dollar (domestic currency)
- Japanese yen (alternate currency payment) directly to Canadian dollar (domestic currency)

### Example: Canadian Company Pays USD Voucher in JPY

In the following example, a Canadian company receives an invoice in U.S. dollars (foreign currency) and pays it in Japanese yen (alternate currency).

The Canadian company uses the divisor method for multi-currency transactions. The currencies in this example are all non-EMU currencies, which means the currencies fluctuate against one another. Because of the exchange rate risk, there is the potential for two gains or losses: one between Canadian dollar (CAD) and USD; the other between JPY, USD, and CAD.

Description	Currency	Amount	Exchange Rate	Exchange Rates
			1 January 1999	1 February 1999
Voucher (domestic currency)	CAD	280.56		
Voucher (foreign currency)	USD	200.00	1 USD = 1.4028 CAD 1 CAD = 0.712860 USD	

Description	Currency	Amount	Exchange Rate	Exchange Rates
			1 January 1999	1 February 1999
Payment	JPY	26,050		1 USD = 1.4357 CAD 1 CAD = 0.696524 USD 1 CAD = 90.72 JPY 1 USD = 130.25 JPY
Standard gain/loss	CAD	- 6.58		
Alternate gain/loss	CAD	- 0.01		

The foreign voucher on 1 January 1999 is 200.00 USD, or 280.56 CAD in the domestic currency.

Calculation:  $200.00 \text{ USD} \times 1.4028 = 280.56 \text{ CAD}$ .

The payment on 1 February 1999 is 26,050 JPY.

Calculation:  $200.00 \text{ USD} \times 130.25 = 26,050 \text{ JPY}$

The bank account is credited as follows:

- 26,050 JPY (the amount of the payment on the foreign side)
- 287.14 CAD (the total of the pay items, including gains/losses on the domestic side)

Calculation:  $280.56 \text{ CAD} + 6.58 \text{ CAD} = 287.14 \text{ CAD}$

### Standard Gain/Loss

The gain/loss created by the exchange rate fluctuations between the voucher (foreign) currency and the domestic currency is - 6.58 CAD.

Calculation:  $(200.00 \text{ USD} / 0.696524 = 287.14 \text{ CAD}) - 280.56 \text{ CAD} = - 6.58 \text{ CAD}$

### Alternate Currency Gain/Loss Calculation

The alternate currency gain/loss is - 0.01 CAD

Calculation:  $(26,050 \text{ JPY} / 90.72 = 287.15 \text{ CAD}) - 287.14 \text{ CAD} = - 0.01 \text{ CAD}$

## Viewing Supplier Amounts in the Euro

---



Before, during, and after converting your base currency to the euro, you can view your supplier amounts in three currencies: domestic, foreign, and an “as if” currency, such as the euro. Viewing supplier amounts in an “as if” currency allows you to view amounts as if they were entered in a currency other than the currency in which they were actually entered. This should help ease your transition to the euro.

This topic describes the following:

- Supplier programs with “as if” currency processing
- Dates that affect the voucher amounts you view
- Viewing vouchers in the euro
- Viewing purchase orders in the euro
- Application outside of the EMU

### Supplier Programs with “As If” Currency Processing

The following programs have processing options that allow you to view supplier amounts in an “as if” currency, such as the euro:

- Supplier Ledger Inquiry (P042003)
- Print Supplier Ledger (P042003P)
- Open Orders (P430301)

One of the advantages of “as if” currency processing is that it does not impact disk space. The “as if” currency amounts that these programs display are not written to a file, but are instead stored in temporary memory.

### Processing Options for “As If” Currency Processing

To view amounts in an “as if” currency on Supplier Ledger Inquiry and Open Orders, you must set the following processing options:

- **As If Currency Display.** The currency code in which you want to view “as if” amounts. If left blank, amounts display in their original currency.
- **As Of Date.** The date to use for calculating the exchange rate for the “as if” currency. If left blank, the Thru Date is used. If both the processing option and the Thru Date are blank, the system date is used.

### Dates that Affect the Voucher Amounts You View

Before you view voucher amounts in the euro, it is important to understand the different dates that affect the amounts you view on the Supplier Ledger Inquiry form. These dates are:

- The effective date on the Set Daily Transaction Rates form. The inquiry program searches for the most recent effective date for a currency and uses the corresponding exchange rate in the currency calculation.
- The From and Thru Dates on the Supplier Ledger Inquiry form. This date range determines which transactions appear on the form.
- One of the following dates, which is used to retrieve the transaction rate:
  - As of date in the processing options. If the “as of” date is blank, the program uses the Thru Date (described below).
  - Thru Date on the Supplier Ledger Inquiry form. If the processing option and Thru date are blank, the program uses the system date.

The Thru Date on the inquiry form does not override the “as of” date in the processing options. For this reason, you might want to set up two different versions of this program, one with an “as of” date in the processing options, the other without an “as of” date so that you can use the Thru Date for the exchange rate.

By understanding these dates and how the inquiry program uses them, you help to ensure that you specify the correct date when you view your voucher amounts.

## Viewing Vouchers in the Euro

Regardless of whether you entered a voucher in a domestic or foreign currency, you can view the voucher amounts as if they were entered in the euro. This functionality is especially beneficial during the euro transition period, when companies that have not yet converted their base currency to the euro want to begin adjusting to and preparing for the new currency.

To view your domestic and foreign vouchers in the euro, you use the Supplier Ledger Inquiry form. First you view the vouchers in the currency in which they were entered, then you toggle to view the same amounts in the euro.

For transactions between two EMU currencies, you can use the Supplier Ledger Inquiry form to display the domestic side of a foreign voucher, calculating the foreign to domestic amount through the euro (triangulation).

“As if” currency processing was not designed for currency restatement. It does not handle gains/losses, out-of-balance transactions caused by rounding, or integrity between tables. For exact amounts when working with an alternate currency, continue to use the currency restatement program.

### ► To view vouchers in the euro

1. From the Supplier Voucher Entry menu (G0411), choose Supplier Ledger Inquiry.
2. To view amounts by date, you must enter 2 (net due date), 3 (invoice date), or 8 (G/L Date) in the Ledger Inquiry Sequence field as you have done in previous releases of WorldSoftware.

Supplier Ledger Inquiry									
042003									
Address Number . . . . . 7528 Company de France									
Parent Number . . . . . _____									
Document Number . . . . . _____									
P.O. Number . . . . . _____									
Invoice Number . . . . . _____									
Skip To Page . . . . . _____									
Date From . . . . . _____									
Date Through _____									
Ledger Inq Sequence. 2									
Paid . . . . . 0									
Company . . . . . 00420									
Currency Code . . . . *									
0 . . . . Document . . . . Net Due . . . . Gross . . . . Open . . . . P P									
P Ty Number Itm Date Date Amount Amount C S									
- PV 12872 001 01/01/99 01/31/99 5,000.00 5,000.00 A									
- PV 12874 001 01/01/99 01/31/99 3,200.00 3,200.00 A									
FRF TOTAL 8,200.00 8,200.00									
Opt: 1=Vouch 2=JE 3=Pmts 5=Detail F10=Pmt Ledger F21=Print F24=More									

3. To view domestic or foreign vouchers in the euro, make sure the Gross Amount and Open Amount columns display and press F19.

```

042003      Supplier Ledger Inquiry
Address Number . . . 7528 Company de France
Parent Number . . .
Document Number . . .
P.O. Number . . .
Invoice Number . . .
Skip To Page . . .

Date From . .
Date Through
Ledger Inq Sequence. 2
Paid . . . . . 0
Company . . . . . 00420
Currency Code . . . *

O . . . .Document. . . . Net Due      EUR
P Ty Number Itm Date Date      Gross
- PV 12872 001 01/01/99 01/31/99 762.25
- PV 12874 001 01/01/99 01/31/99 487.84
-----
FRF          TOTAL          1,250.08      1,250.08

Opt: 1=Youch 2=JE 3=Pmts 5=Detail F10=Pmt Ledger F21=Print F24=More
    
```



If a currency code appears above the amount column on the left, you are viewing amounts in the “as if” currency. If a code does not appear, you are viewing amounts in the domestic or foreign currency.

4. To print euro amounts on a report, press F21 while viewing them on the form.
5. To view the domestic side of a foreign voucher, make sure the Domestic Gross/Open and Foreign Gross/Open columns display. For transactions between two EMU currencies, the domestic side of a foreign voucher is calculated through the euro using triangulation.

```

042003      Supplier Ledger Inquiry
Address Number . . . 7528 Company de France
Parent Number . . .
Document Number . . .
P.O. Number . . .
Invoice Number . . .
Skip To Page . . .

Date From . .
Date Through
Ledger Inq Sequence. 2
Paid . . . . . 0
Company . . . . . 00410
Currency Code . . . *

O . . . .Document. . . . Cur      Domestic      Cur      Foreign      P P
P Ty Number Itm Date Cod      Gross/Open      Cod      Gross/Open      C S
- PV 12881 001 01/01/99 DEM      596.33      FRF      2,000.00      A
- PV 12882 001 01/01/99 DEM      1,043.58      FRF      3,500.00      A
-----
TOTAL      DEM      1,639.91
TOTAL      FRF      5,500.00

Opt: 1=Youch 2=JE 3=Pmts 5=Detail F10=Pmt Ledger F21=Print F24=More
    
```

6. To view the foreign voucher amount in the euro, press F19.

Supplier Ledger Inquiry									
042003		Address Number . . . 7528 Company de France							
Parent Number . . .		Date From . . .							
Document Number . . .		Date Through . . .							
P.O. Number . . .		Ledger Inq Sequence. 2							
Invoice Number . . .		Paid . . . . . 0							
Skip To Page . . . . .		Company . . . . . 00410							
		Currency Code . . . *							
EUR									
Domestic									
Foreign									
P	Tu	Number	Itm	Date	Cod	Gross/Open	Cod	Gross/Open	C S
-	PV	12881	001	01/01/99	DEM	304.90	FRF	2,000.00	A
-	PV	12882	001	01/01/99	DEM	533.57	FRF	3,500.00	A
TOTAL					DEM	838.47			
TOTAL					FRF		5,500.00		
Opt: 1=Vouch 2=JE 3=Pmts 5=Detail F10=Pmt Ledger F21=Print F24=More									

### Viewing Purchase Orders in the Euro

Regardless of whether you enter a purchase order in a domestic or foreign currency, you can view amounts as if they were entered in the euro on the Open Orders form. For example, you can view purchase orders in the French franc as if they were entered in the euro.

► **To view purchase orders in the euro**

1. From the Purchasing Inquiries menu (G43A112), choose Open Orders.
2. On Open Orders, press F15 to view amounts.
3. Press F19 to toggle between the transaction currency amounts and the euro.

Open Orders									
430301		Branch/Plant . . . 420							
Currency Code . . . . . *		Status . . 220 Thru 400 St _							
Order Number . . . . . OP		Date: . . . . . Thru . . . . .							
Orig Order No. . . . . *		Date Range - Based On. . . . .							
Supplier . . . . .		Subledger. . . . .							
Buyer Number . . . . .									
Item Number . . . . .									
Account Number . . . . .									
EUR									
O	Hd	Order	Tu	Supplier	Description	Open	Amount	Request	
-		9561	OP	Company de France	Mountain Bike, Bla	7,262.67		01/31/99	
-		9562	OP	Company de France	Helmet	731.76		01/31/99	
-		9563	OP	Company de France	Premium Bike Lock	762.25		01/31/99	
Opt: 5=Details 2=P0 Entry 3=W0 Entry F15=Amount/Quantity F24=More Keys									

4. To print euro amounts on a report, press F21 while viewing them on the form.

### Application Outside of the EMU

“As if” currency processing, which allows you to view supplier amounts as if they were entered in another currency, was designed for viewing amounts between two EMU currencies that are irrevocably fixed to one another. However, you can use “as if” processing to view and compare amounts between any currencies, not just EMU member currencies.

For example, a Canadian company can view Japanese yen transaction amounts as if they were entered in U.S. dollars and compare those amounts to the domestic and foreign currency amounts.

Be aware, however, that if the exchange rates are not fixed, there are limitations. The voucher amount you view, for example, may not be the same amount as the actual payment because of the fluctuating exchange rates.

## Electronic Formats and the Euro

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The new euro currency impacts the electronic formats that companies in Economic and Monetary Union (EMU) member nations currently use. With the introduction of the euro, several countries created new electronic formats, while others enhanced their existing formats.

The formats, which vary between countries, support either domestic or foreign payments. Some countries have identified and published their revised formats for the euro, while others are in the process of doing so. Many domestic payment formats are being enhanced to support both the euro and the domestic currency. J.D. Edwards research thus far indicates that the changes to the formats are minor.

J.D. Edwards research on the electronic format requirements for each EMU member nation has been dependent on each country's timetable for the completion of their requirements. As a result, the software enhancements for electronic formats are in several cumulative updates.

This document describes the following:

- Electronic format changes by country
- Special setup requirement for A/R French and Italian formats

As additional format requirements are published by EMU member nations, J.D. Edwards will make changes to electronic formats and include them in future cumulative updates.

### Electronic Format Changes by Country

The following tables list the country requirement number and the electronic formats (program number and description) that J.D. Edwards has enhanced thus far to support the euro. The formats are listed by country and the release in which they are available.

## France

<b>Release</b>	<b>Country Requirement Number</b>	<b>Program Number/ Description</b>
A7.3 CU10	F1	P04572F1 A/P EFT Domestic Tape
	F3	P03575FD A/R Auto Debit file
	F4	P03572 A/R Drafts Remittance

## Germany

<b>Release</b>	<b>Country Requirement Number</b>	<b>Program Number/ Description</b>
A7.3 CU9	D1	P04572G1 A/P EFT Domestic Tape
	D2	P04572G2 A/P EFT Domestic Diskette

## Italy

<b>Release</b>	<b>Country Requirement Number</b>	<b>Program Number/ Description</b>
A7.3 CU10	I1	P04572I1 A/P EFT Domestic and Foreign Tape
A7.3 CU10	I3	P03577 A/R Magnetic RiBa Remittance

## the Netherlands

<b>Release</b>	<b>Country Requirement Number</b>	<b>Program Number/ Description</b>
A7.3 CU9	NL1	P04572H1 A/P Payments - Domestic (ClieOp2)
	NL2	P04572H2 A/P Payments - Foreign (BTL91)
A7.3 CU10	NL3	business partner owned A/R Auto Debits (ClieOp2)
	NL4	version of P04572H1 A/P Payments - Foreign (ClieOp3)

### Special Setup Requirement for A/R French and Italian Formats

French and Italian companies that use domestic electronic formats in accounts receivable have a special setup requirement. This requirement is necessary so that the domestic formats, which state bank file amounts in the domestic currency, can also state amounts in the euro. This allows French and Italian companies to state amounts in either the franc or lire and the euro, regardless of their company's domestic currency.

To state domestic format amounts in A/R in the domestic currency or the euro, French and Italian companies must assign a currency value to the corresponding currency code on the EMU Member Setup form.

On EMU Member Setup, assign a one-character currency value as follows:

- E (for the euro currency code, EUR)
- Blank or F (for the French franc currency code, FRF)
- Blank or I (for the Italian lire currency code, ITL)

Leave the field blank if the currency code is your default domestic currency.

03 Character		
Code	Description	Description-2
ATS	Austrian Shilling	
BEF	Belgian Franc	
DEM	German Mark	
ESP	Spanish Pesetas	
EUR	Euro	E - Electronic Format Euro
FIM	Finland Markka	
FRF	French Franc	F - Electronic Format French
IEP	Irish Pounds	
ITL	Italian Lira	I - Electronic Format Italian
LUF	Luxembourg Franc	
NLG	Netherlands Dutch Guilder	
PTE	Portuguese Escudo	

00051                      EMU Member Setup                      System Code . . . . . 00  
 User Defined Codes . . . . . EU  
 Action Code . . . . . C                      Skip To Code . . . . .  
 EMU Member Setup

F5=Code Types    F14=Memo    F15=Where Used    F18=Translate    F21=Print    F24=More



## Financial Reporting and the Euro Transition Period

During the euro transition period, which continues through 31 December 2001, companies may need to provide financial and fiscal reports in their national currency as well as in the euro.

For example, a German company that continues to use German marks (DEM) as its base currency might need to provide its parent company with consolidation information in the euro. Another German company that has already converted its base currency to the euro might need to provide the German fiscal and tax authorities with reports in German marks.

### Checklist: Financial Reporting During the Euro Transition Period

During the euro transition period, you might need to complete some or all of the items in the following checklist:

- Create balance reports in the euro
- Create detail reports in the euro
- View detail transactions in the euro
- Create Intrastat reports in the euro
- Create tax reports in the euro
- Restate asset costs in the euro

### Tasks in This Section

This section consists of the following tasks:

- Creating balance reports in the euro
- Creating detail reports in the euro
- Viewing transaction amounts in the euro
- Creating Intrastat reports in the euro
- Creating tax reports in the euro



- Revaluing assets in the euro

## Creating Balance Reports in the Euro

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For financial and fiscal reporting during the euro transition period, you can create balance reports in the euro even if your base currency continues to be an Economic and Monetary Union (EMU) member currency.

Balance currency restatement allows you to restate existing company balances in another currency, including the euro. The advantages of balance currency restatement over detailed currency restatement include the following:

- You can restate balance amounts in many different currencies
- You use far less disk space with balance currency restatement

The balance restatement program uses the no inverse method when restating balance amounts in the euro. It does this by using the override conversion method designated on the Set Daily Transaction Rates form instead of the conversion method designated on the General Accounting Constants form. In this way, the balance restatement program does not violate the no inverse rule.

It is possible to follow the triangulation rule with balance restatement by restating amounts into the euro and then the desired currency. To do this, you use triangulation to restate your balance amounts from one Economic and Monetary Union (EMU) currency to the euro and then restate those balance amounts from the euro to the other EMU currency. For example, you would restate balance amounts from the German mark (DEM) to the euro (EUR) and then from the EUR to the French franc (FRF). The reason you must triangulate euro balances manually is that the balance restatement program uses exchange rates defined in the Currency Restatement Rates table (F1113), not the Exchange Rate tables (F0015 and F00151).

The balance restatement program allows you to restate two ledgers into one alternate currency ledger. For example, you can restate actual amounts and local adjustments into one ledger for local books. You can then restate that amount into one euro amount in the AC (restatement) ledger.

If you make prior year adjustment entries (document type ##), you must run the balance restatement program from inception-to-date to include those adjustments. Otherwise, prior year adjustments will not be included.

For more information about balance currency restatement, see the following in the *General Accounting Guide*:

- *Understanding Balance Currency Restatement*
- *Working with Calculations for Balance Restatement*
- *Calculating Restated Balances*

## Creating Detail Reports in the Euro

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For financial and fiscal reporting during the euro transition period, you can create detailed reports in the euro even if your base currency continues to be an Economic and Monetary Union (EMU) member currency.

Companies should carefully consider whether there is a valid business need to produce reports at the transaction level in both their base currency and the euro. To accommodate this need, you must create a separate set of books in the euro.

This topic describes the following:

- Restating currency amounts using detailed restatement
- Restating transactions using allocations (alternate method)



Use allocations as an alternate method only if you already use detailed currency restatement for another purpose.

### Restating Currency Amounts Using Detailed Restatement

Before you restate your base currency amounts in the euro, determine whether you really need those amounts restated at a detail level. Most companies should be able to satisfy their reporting requirements by restating their currency amounts at the balance level, instead of the detail level.

Restating amounts at the detail level has sizing implications. For example, if you enter approximately 2,000 records on a monthly basis, you will have 4,000 records for each month after you run detailed currency restatement. This can have a considerable impact on your system disk resources.

When you restate amounts using Detailed Currency Restatement, all domestic currency transactions (AA ledger) are duplicated in the alternate currency ledger (XA ledger). To restate EMU currency amounts in the euro, the Detailed Currency Restatement program uses the most recent effective exchange rate and the override conversion (no inverse) method in the exchange rate table to create euro transactions.

For purposes of currency restatement, the no inverse functionality is available for Detailed Currency Restatement (P11411) only and is not available for Compute Restated Balances (P11414). This is because the Compute Restated Balances program uses a different rate table, which has not been enhanced. See *Creating Balance Reports in the Euro*.

If your company requires detailed reports in the euro, remember that the Detailed Currency Restatement program allows you to restate amounts in one currency only. This means that if you already use the program for another currency or purpose, you cannot use it to restate amounts in the euro. Instead consider using allocations, the alternate method described in this chapter.

For more information about detailed currency restatement, see the following in the *General Accounting Guide*:

- *Understanding Detailed Currency Restatement*
- *Calculating Detailed Currency Restatement*

### Restating Transactions Using Allocations

For companies that use detailed currency restatement for another purpose, the Indexed Allocation program provides an alternate method for restating amounts at the transaction level during the euro transition period.

Regardless of whether you have converted your base currency to the euro, you can create transactions for detailed reporting either from the euro to an EMU member currency or from an EMU member currency to the euro. To create detailed transactions, you must use allocation method T when you run the Indexed Allocation program. The program copies transactions in the general ledger, applies a rate, and creates new detailed transactions in a different ledger type in the Account Ledger table (F0911).

For more information about indexed allocations, see *Working with Indexed Allocations* in the *General Accounting Guide*.



Rounding issues occur when using this method. Use it cautiously.

## Viewing Transaction Amounts in the Euro

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Before, during, and after converting your base currency to the euro, you can view transaction amounts in three currencies: domestic, foreign, and an “as if” currency, such as the euro. Viewing transactions in an “as if” currency allows you to view and compare amounts as if they were entered in a currency other than the currency in which they were actually entered. In this regard, using “as if” currency processing is different from viewing transactions created by balance restatement and was not designed for purposes of balance currency restatement.

This topic describes the following:

- General ledger programs with “as if” currency processing
- Viewing account ledgers in the euro
- General ledger reports in the euro
- Localization reports in the euro
- Application outside of the EMU

### General Ledger Programs with “As if” Currency Processing

The Account Ledger Inquiry program and various general ledger and localization reports have processing options that allow you to view transaction amounts in an “as if” currency, such as the euro. The reports that use “as if” currency processing are described later in this chapter.

One of the advantages of “as if” currency processing is that it does not impact disk space. The “as if” currency amounts that you view and print are not written to a file, but are instead stored in temporary memory.

### Processing Options for “As If” Currency Processing

To use “as if” currency processing for the Account Ledger Inquiry program and selected reports, you must set the following processing options:

- **As If Currency Display.** The currency code in which you want to view “as if” amounts. If left blank, amounts display or print in their original currency.
- **As Of Date.** The date to use exchange rate calculations for the “as if” currency. If left blank, the Thru Date is used.

### Viewing Account Ledgers in the Euro

“As if” currency processing for the Account Ledger Inquiry program is the same as the Customer and Supplier Ledger Inquiry programs in that you can view amounts in your domestic currency and the euro, or other “as if” currency. It is different in the following ways:

- You can view two ledger types simultaneously on the Account Ledger Inquiry form, whereas you can view only one ledger type on the other ledger inquiry forms. To view two ledger types, you must set the Dual Ledger Display processing option.
- You can view transactions for a fiscal period only. The From and Thru Date/Period fields must encompass a fiscal period on the Account Ledger Inquiry, whereas you can view a specific range of dates with the other ledger inquiry programs.

Depending on how you set the Dual Ledger Display, you can display amounts on the Account Ledger Inquiry form in one of the following formats:

**One Ledger Format**                      Displays amounts in the Debit and Credit columns for one ledger only. You must toggle to view the corresponding euro (“as if” currency) amounts.

**Two Ledger Format**                      Displays amounts in the left and right General Ledger columns for two ledgers. To view domestic amounts alongside the euro, use the two ledger format.

#### **To view accounts ledgers in the euro**

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1. From the Journal Entries, Reports, and Inquiries menu (G0911), choose Account Ledger Inquiry.

- For the one ledger format, enter AA in the Ledger Type field to view domestic currency amounts. To toggle between the domestic currency and euro amounts, press F19.

09200 Account Ledger Inquiry						
Account . . . . . 410.8730			From Date/Period	01/01/99		
Office Supply Expense			Thru Date/Period	01/31/99		
Skip to Doc/Type . . . . .			Ledger Type . . .	AA		
Y-T-D Period End . . . . .			Subledger . . . .	*		
Cumul Period End . . . . .			Currency Code . .	*		
				EUR		
Q	DI	Document	Date	Explanation	Debit	Credit
-	PV	12883	01/31/99	Company de France	533.57	
-	PV	12881	01/31/99	Company de France	304.90	
					-----	
					838.47	
				Ledger Total	838.47	
				Unposted Total	838.47	
Opt: 1/2=Orig Entry 5=Details F17=Top F18=Totals F21=Prt Ledg F24=More						



A currency code appears above the column on the left if you are viewing amounts in the “as if” currency.

- For the two ledger format, enter AA in both Ledger Type fields to view domestic currency amounts alongside the euro. Press F19 to display the euro amount in the left column. The domestic amount displays in the right column.

09200 Account Ledger Inquiry						
Account . . . . . 410.8730			From Date/Period	01/01/99		
Office Supply Expense			Thru Date/Period	01/31/99		
Skip to Doc/Type . . . . .			Ledger Type . . .	AA AA		
Y-T-D Period End . . . . .			Subledger . . . .	*		
Cumul Period End . . . . .			Currency Code . .	*		
				EUR		
Q	DI	Document	Date	Explanation	General Ledger	General Ledger
-	PV	12883	01/31/99	Company de France	533.57	1,043.58
-	PV	12881	01/31/99	Company de France	304.90	596.33
					-----	-----
				Ledger Total	838.47	1,639.91
				Debit Total	838.47	1,639.91
				Credit Total		
				Unposted Total	838.47	1,639.91
Opt: 1/2=Orig Entry 5=Details F17=Top F18=Totals F21=Prt Ledg F24=More						

If you view foreign currency amounts alongside the euro, be aware that the amounts that appear in the left column will be meaningless. That is because the CA (foreign currency amounts) ledger contains more than one currency and “as if” currency processing displays only one currency at a time.

4. To print euro amounts for an account, press F21 while viewing them on the form.

### General Ledger Reports in the Euro

The following reports use “as if” currency processing:

- Print Account Ledger (P09200P)
- G/L Legal Name Register (P09404)
- G/L by Object Report (P09421)
- G/L by Category Code (P09470)

You can view amounts in an “as if” currency online using the Account Ledger Inquiry program (P09200).

### Localization Reports in the Euro

The following localization reports use “as if” currency processing. The reports are listed by country, and then by report name and program number.

#### France

<b>Report Name</b>	<b>Program Number</b>
VAT Report Print	P7400C1
VAT on Receipts	P7400C2
VAT on Payments	P7400C3
General Journal	P7409C5
A/P Open Amount Report	P7404026

#### Italy

<b>Report Name</b>	<b>Program Number</b>
G/L by Object	P7409C1

<b>Report Name</b>	<b>Program Number</b>
G/L by Category Code	P7409C2
General Ledger	P7409C2A
Trial Balance by Object	P7409C3
Trial Balance by Category Code	P7409C4
Italian Suspected VAT Report	P74079
Italian Monthly VAT Report	P004051
Italian VAT Summary Report	P74093
Italian Annual VAT File Build	P00911
A/P Ledger Report	P7404014
A/R Ledger Report	P7403013
A/R Open Amount Report	P7403025

\*\* The Italian Annual VAT File Build (and two Intrastat Update programs) is unlike other programs that use “as if” currency processing. It writes amounts to a table, whereas the other programs do not.

## Application Outside of the EMU

“As if” currency processing, which is useful in any multi-currency environment, allows you to view transaction amounts and print selected general ledger and localization reports as if the amounts were entered in a currency other than the currency in which they were actually entered. You can use “as if” processing to view and compare amounts between any currencies, not just EMU member currencies. For example, a Canadian company can view amounts as if they were entered in the Japanese yen and compare those amounts to their domestic currency amounts.

If you view amounts for the CA (foreign currency amount) ledger in an “as if” currency on the Account Ledger Inquiry form, be aware that the amounts are meaningless. That is because the CA ledger contains more than one currency and “as if” currency processing displays only one currency at a time.

“As if” currency processing does not replace balance currency restatement. You will continue to use balance currency restatement when restating currencies with exchange rates that fluctuate against other currencies.

## Creating Intrastat Reports in the Euro

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With the introduction of the euro, Eurostat (Statistical Office of the European Communities) and the national Statistical Offices of the Economic and Monetary Union (EMU) member nations have made or are in the process of making changes to their Intrastat reporting requirements. Each EMU member nation will continue to determine its own Intrastat requirements, including whether reports are to be submitted in the euro, the national currency, or both.

Regardless of whether your company has converted its base currency to the euro, it can meet its Intrastat reporting requirements. One of the following situations might apply:

- Your company has not converted its base currency to the euro, but the Statistical Office of the EMU member nation in which you do business requires that you submit Intrastat reports in the euro
- Your company has converted its base currency to the euro, but the Statistical Office of the EMU member nation in which you do business is not prepared to handle Intrastat reports in the euro and requires that you submit them in the national currency

The “as if” currency processing option in the Update Extra Tax File program for Sales and Procurement provides a simplified approach to reviewing and printing amounts in a currency different from your base currency for Intrastat reporting.

This topic describes the following:

- Considerations before you create Intrastat reports
- Updating the Intrastat workfile
- Intrastat format changes for Germany

For more information about Intrastat reporting, see the *Global Solutions Guides*.

## Considerations Before You Create Intrastat Reports

Before you create Intrastat reports, determine the following:

- The base currency of each of your companies
- The currency in which you must submit Intrastat reports for each of your companies

If your business has multiple companies with multiple currencies, it is important that you approach your Intrastat reporting carefully during the euro transition period. You should always be aware of each company's base currency and whether Intrastat reports must be in a national currency or the euro. In this way, you ensure that you convert currencies for Intrastat reporting only as necessary, depending on the company and country.

To convert only the necessary data to the euro, use the data selection and create different versions of the Update Extra Tax File programs.

### Example: Company and Intrastat Reporting in Different Currencies

Your business has three companies, each with a different base currency. You process all Intrastat reports at the end of 1998.

As of 1999, the following scenario applies:

<b>Company</b>	<b>Base Currency as of 1999</b>	<b>Intrastat Currency for 1999</b>
Company 1	EUR	DEM
Company 2	BEF	BEF
Company 3	FRF	EUR

In 1999, company 1 converted its base currency from the German mark to the euro. Companies 2 and 3 did not convert their base currencies.

The Statistical Office for company 1 and company 2 require that they submit Intrastat reports in the German mark and Belgian franc, respectively. The Statistical Office for company 3 requires that they submit reports in the euro.

For Intrastat reporting purposes, you should convert the euro amounts for company 1 back to the German mark and convert the amounts for company 3 to the euro. You do not need to convert the amounts for company 2.

For company 1 and 3, you run the Intrastat update programs to load the information in the Intrastat workfile (F0018T) and at the same time convert the amounts. You do this one company at a time, creating a separate version to designate German mark (DEM) and the euro (EUR) in the "as if" currency processing option, respectively.

## Updating the Intrastat Workfile

From the EU VAT Processing menu (G00211), choose one of the following:

- Update Extra Tax File – Sales (P0018I1)
- Update Extra Tax File – Purchasing (P0018I2)

These two update programs are unlike other report programs that use the “as if” currency processing option. They update amounts to a file, whereas the other programs print reports but do not update amounts.

Before you can create Intrastat reports in the euro, you must run the Update Extra Tax File programs for Sales and Purchasing. These programs use the “as if” currency processing option to convert the transaction amounts to the euro and write them to the Intrastat workfile (F0018T). Each amount is converted separately, following the EMU conversion rules when applicable (the no inverse method of exchange rate calculation and triangulation).

If you have converted all of your companies to the euro and you must submit Intrastat reports in a national currency, you can run the update programs to update the Intrastat workfile, specifying the national currency in the “as if” currency processing option. You can then create Intrastat reports in the national currency. For example, a German company has converted its base currency to the euro but plans to report all Intrastat information in German marks. They will run the Update Extra Tax File program to convert the euro (base currency) to the German mark (“as if” currency) and update the German mark amount in the F0018T table for Intrastat reporting.

If you use “as if” currency processing, you lose the direct audit trail for the amount fields between the Intrastat workfile (F0018) and the original file in the Sales Order Management and Purchase Order Management systems.

### Processing Options for Update Extra Tax File/“As If” Currency

To use “as if” currency processing for the Update Extra Tax File programs for Sales and Purchasing, you must set the following processing options:

- **Currency Code.** The currency code, such as EUR, for “as if” reporting. The update program converts and writes amounts to a tax table, based on the currency code entered. If left blank, amounts print in their original currency.
- **As Of Date.** The date to use for exchange rates for the “as if” currency. If left blank, the system date is used. If you have records prior to 1 January 1999, be careful that you do not inadvertently convert them to the euro. Make sure that the as of date in the processing options is 01/01/99 (or later).

### Performance Considerations

Depending on your data selection and the number of transactions in the Sales Order Management and Purchase Order Management systems, the time it takes to run the update programs can vary. To minimize the impact that the update programs can have on system performance, do the following:

- Specify your data selection as carefully as possible so that only the necessary records are written to the workfile
- Update the Intrastat workfile as part of your nightly operations

### Intrastat Format Changes for Germany

With the introduction of the euro, some EMU member nations have made or are in the process of making changes to their Intrastat reporting formats.

The German government requires that Intrastat reports include both euro and domestic currency amounts. The German Intrastat program (P0018IG) accommodates this country-specific requirement. It uses the euro (“as if” currency) and domestic currency amounts that are created when you update the Intrastat workfiles.

## Creating Tax Reports in the Euro

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Many European companies use the Use and VAT Tax and VAT Exception reports to help them complete their VAT return forms. During the euro transition period, you can create and print these tax reports in a currency other than the base currency of your company. This is necessary, for example, if your company has converted its base currency to the euro but your government still requires tax reports in the national currency.

The following tax reports use “as if” currency processing, which allows you to create tax reports in a currency other than the base currency of your company:

- Use and VAT Tax (P0018P)
- VAT Exception Report by Tax Area (P0018P7)

“As if” currency processing follows the no inverse method of exchange rate calculation. These tax reports print amounts as they were entered in another currency; they do not write any amounts to a tax file.

The Use and VAT Tax and VAT Exceptions reports are located on the Tax Processing and Reporting menu (G0021). For more information about these reports, see the *Global Solutions Guide* and the *Tax Reference Guide*.

### Processing Options for Tax Reports/ “As If” Currency

To use “as if currency” processing for Use and VAT Tax and VAT Exceptions reports, you must set the following process options:

- As If Currency. The currency code, such as EUR, for “as if” reporting. The report prints amounts in a currency other than the currency in which they were entered. If left blank, amounts print in their original currency.
- As Of Date. The date to use for calculating the exchange rate for the “as if” currency. If left blank, the system date is used.



## Revaluing Assets in the Euro

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During the euro transition period, you can revalue your assets in the euro even if you have not converted your base currency to the euro. Before you revalue your assets in the euro, however, you must set up the following for your new euro balance amounts:

- Ledger type
- Subledger and subledger type

When you revalue your assets in the euro, the Revaluation Journal program stores the restated amounts in one of these ledger or subledger types.

If you set up a new ledger type for the euro, you can depreciate your assets in your base currency and the euro. You do this by setting up user-defined, date-effective depreciation rules. These rules can be different for each asset ledger type. Because these rules are date sensitive, you can easily respond to any new rules that your government may require for fixed asset reporting.

In final mode, the Revaluation Journal program updates the Item Master (F1201), Item Balances (F1202), and Account Ledger (F0911) files with the new euro amounts. This program is located on the Asset Revaluation menu (G1234).

For more information about asset revaluation, see the following in the *Fixed Assets Guide*:

- *Understanding Revaluation*
- *Calculating Revaluation*



# Appendices



# Appendix A– Euro Questions and Answers

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This appendix includes some common questions and answers about the euro as it applies to J.D. Edwards software. The topics in this appendix include the following:

- Releases
- Applications and functionality
- Documentation and classes

The information in this appendix assumes that you understand certain terminology used when describing the euro and euro functionality. Refer to the *Glossary* in this guide, if necessary.

## Releases

<b>Question</b>	<b>Answer</b>
For clients with WorldSoftware and OneWorld coexistence, which releases need to be installed to use the euro functionality?	Clients need to install WorldSoftware release A7.3 CU9 (or above) and OneWorld release B73.3 (or above) in order to coexist and use the euro functionality.  In other words, if a client installs WorldSoftware release A7.3 CU9 and activates the no inverse and triangulation functionality, that client also needs to install OneWorld release B73.3 in order to coexist.

<b>Question</b>	<b>Answer</b>
What are the major differences between A7.3 CU9 and A7.3 CU10?	<p>A7.3 CU10 includes the following additional enhancements:</p> <ul style="list-style-type: none"><li>• Software Action Request (SAR) corrections for euro and non-euro functionality</li><li>• Ability to enter transaction-level spot rates when triangulation is activated</li><li>• Intrastat changes</li><li>• Electronic format additions</li><li>• Online Invoice ( “as if” currency processing)</li></ul>
What are the major differences between A7.3 CU10 and A7.3 CU11?	<p>A7.3 CU11 includes the following additional enhancements:</p> <ul style="list-style-type: none"><li>• Manual payment processing in an alternate currency</li><li>• A/P draft processing in an alternate currency</li><li>• A/R draft processing in a multi-currency</li><li>• Automatic debit processing in a multi-currency</li></ul>
Which release contains the euro conversion programs?	<p>The euro conversion programs are in WorldSoftware E9. These programs convert your company’s base currency to the euro and also include integrity programs to ensure data integrity during the conversion process.</p>

## Applications and Functionality

<b>Question</b>	<b>Answer</b>
Some countries will be required to follow the no inverse/triangulation rules for currency conversion, others will not. How should I handle this?	<p>The rules you follow for currency conversions will depend on the country in which you transact business and your company’s interpretation of the rules and regulations that exist due to the the euro and irrevocably fixed exchange rates.</p> <p>As of release A7.3 CU9, J.D. Edwards WorldSoftware is able to handle currency conversions for both EMU member nations and non-EMU member nations that transact business with one another, or independent of one another.</p>

<b>Question</b>	<b>Answer</b>
<p>Can companies outside of the EMU use no inverse and triangulation?</p>	<p>Yes, companies outside of the EMU can use the no inverse and triangulation methods of exchange rate calculations. For example, if a Japanese company does a significant amount of business with a German company, it might choose to set up the JPY and DEM currencies to triangulate through the euro, since the JPY to DEM exchange rate will no longer be officially quoted after 31 December 1998.</p> <p>Companies outside of the EMU might choose to use no inverse, without triangulation. The no inverse method of exchange rate calculation significantly reduces rounding differences that can occur when using the reciprocal rate.</p>
<p>Can I enter spot rates at the transaction level for currencies that I are set up for triangulation?</p>	<p>As of release A7.3 CU10, you can enter spot rates on transactions between an EMU and non-EMU currency. For transactions between two EMU member currencies, spot rates are no longer valid because of the fixed euro exchange rate.</p>
<p>How do I handle partial payments?</p>	<p>If an open voucher needs to be partially paid in an alternate currency, you must split the open voucher before you begin the payment process.</p>
<p>I need to restate amounts in the euro. What if I already use detailed currency restatement for another purpose?</p>	<p>The detailed currency restatement program can only be used to restate one additional currency. If a FRF company already restates in USD, it would not be able to use detail currency restatement to restate in the euro. The company would, however, be able to use the balance restatement program to restate their FRF balances in the euro.</p> <p>A company needs to determine whether it truly needs euro transaction amounts at the detail level. Even companies that do not use the restatement functionality for another purpose will want to carefully consider whether they need detailed information in the euro. That is because detail currency restatement can have a significant sizing impact on your system resources.</p> <p>An uncomplicated workaround exists. If you need transactions in the euro at the detail level and you already use detailed currency restatement for another purpose, you can use the allocations program to restate general ledger transactions using the fixed exchange rate. Alternatively, you can download the detail information to a spreadsheet and restate the transactions in the spreadsheet.</p>

**Question****Answer**

What is the difference between amounts derived from a cross rate and amounts derived using triangulation?

Amounts derived from a cross rate are different from the amounts derived using triangulation.

The differences are illustrated in the examples on the following page.

### Example: Converting German Marks to French Francs

Assume you are converting German marks (DEM) to French francs (FRF) using the following exchange rates:

- 1 EUR = 1.95583 DEM
- 1 EUR = 6.55957 FRF

The following table shows the converted amounts, one based on using triangulation and the other based on a cross rate. The amounts are calculated as if seven decimal places are stored, as is the case with J.D. Edwards software. (If a system permits a cross rate to go out to 12 decimal places, there would be no difference in the results.)

Amount of DEM	Triangulation	Cross Rate to FRF (to 7 decimal places)
	Calculation: DEM / 1.95583 = EUR EUR x 6.55957 = FRF	Calculation: DEM x (6.55957 / 1.95583) = FRF
1,000	3,353.85	3,353.85
10,000	33,538.55	33,538.55
100,000	335,385.49	335,385.49
1,000,000	3,353,854.88	3,353,854.89
10,000,000	33,538,548.84	33,538,548.85
100,000,000	335,385,488.40	335,385,488.50

### Example: Converting French Francs to German Marks

Assume you are converting a payment of 2,500,000 French francs to German marks using the following exchange rates:

- 1 EUR = 1.95583 DEM
- 1 EUR = 6.55957 FRF

Triangulation	Cross Rate
2,500,000 FRF / 6.55957 = 381,122.5430 EUR	2,500,000 FRF x (1.95583 / 6.55957) = DEM
381,122.5430 EUR x 1.95583 = 745,410.90 DEM	2,500,000 FRF x 0.2981643 = 745,410.75 DEM

### Documentation and Classes

Question	Answer
What documentation is available for the euro?	<p>For release A7.3, the following documentation is available:</p> <ul style="list-style-type: none"><li>• <i>WorldSoftware A7.3 CU10 Euro Implementation Guide</i> and <i>A7.3 CU11 Euro Implementation Guide</i>. Describes the euro enhancements and their use.</li><li>• <i>WorldSoftware Programmers Guide for Euro Enhancements and Euro Pick Lists</i>. Provides a technical overview of the no inverse/triangulation enhancements and the Financials and Manufacturing &amp; Distribution program pick lists.</li><li>• <i>Source Compares</i>. Lists program code changes.</li></ul> <p>For E9, the following documentation is available:</p> <ul style="list-style-type: none"><li>• <i>Euro Installation, Conversion, and Integrity Workbook</i>.</li><li>• <i>Programmer's Guide for Euro Conversion</i>. Provides a technical overview of the conversion process.</li><li>• <i>Conversion and Integrities Program Pick Lists</i>.</li></ul>
In which languages is the euro guide translated?	<p>The <i>A7.3 CU10 Euro Implementation Guide</i> is translated in German, French, Italian, and Spanish.</p> <p>The <i>WorldSoftware Programmer's Guide for Euro Enhancements and Euro Pick Lists</i> is not translated.</p>
In what format is the documentation available?	<p>The euro documentation is available in printed guides as well as on CD-ROM for WorldSoftware A7.3 CU10 and CU11.</p>
Who should I contact about euro training classes?	<p>To inquire about euro training classes, contact the J.D. Edwards Training Center in your area.</p>

## Appendix B – New Proof and Final Mode Integrity Reports

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Many new and existing J.D. Edwards integrity reports can be run in both proof and final (update) mode. Final mode does the following:

- Tests the integrity of data between files with dependent relationships.
- Locates the difference between the files.
- Creates adjusting entries for batches that are out of balance and corrects any integrity issues caused by the conversion. (You can use the data selection to exclude records in which you do not want to create adjusting entries.)

This chapter describes the new proof and final integrity reports for the following systems:

- Accounts Receivable
- Accounts Payable
- Job Cost
- Localization
- Distribution
- Logistics

The J.D. Edwards integrity reports can be accessed from the System Integrity Reports & Updates menu (G0022). This chapter describes only those integrity reports with a new (proof and/or final) mode.

## Accounts Receivable

Before you run this integrity report in final mode, determine whether you want it to automatically create adjusting entries for batches that are out-of-balance. If you do not want adjusting entries created, set the Include Batch on Integrity field to N on the Batch Header Revisions form (P0011).

The following integrity report is located on the Financials Integrity menu (G00222).

<b>Report Name (Program Number)</b>	<b>Description of New Report Mode</b>
A/R to G/L with Adjustments (P03711)	Creates an adjusting amount in F0911 to balance to the F0311 (final).

## Accounts Payable

Before you run these integrity reports in final mode, determine whether you want them to automatically create adjusting entries for batches that are out-of-balance. If you do not want adjusting entries created, set the Include Batch on Integrity field to N on the Batch Header Revisions form (P0011).

The following integrity reports are located on the Financials Integrity menu (G00222).

<b>Report Name (Program Number)</b>	<b>Description of New Report Mode</b>
A/P Original Document to G/L with Adjustments (P04711)	Creates an adjusting amount in F0911 to balance to the F0411 (final).
A/P Matching Doc to G/L with Adjustments (P04712)	Creates an adjusting amount in F0911 to balance to the F0411 (final).

## Accounts Payable (continued)

<b>Report Name (Program Number)</b>	<b>Description of New Report Mode</b>
A/P Matching Document to Voucher with Adjustments (P04713)	Compares F0414 to F0411 (proof); creates an adjusting amount in F0414 to balance to the F0411 (final).
A/P Matching Document to G/L with Adjustments (P04712)	Creates an adjusting amount in F0911 to balance to the F0414 (final).

## Job Cost

The following integrity report is located on the Fixed Assets/Job Cost Integrities menu (G00223).

<b>Report Name (Program Number)</b>	<b>Description of New Report Mode</b>
Job Cost to G/L (P51800)	Compares F5144 and F5145 to the F0902 (proof).

## Localization

The following integrity reports are located on the Localization Integrities menu (G00224).

<b>Report Name (Program Number)</b>	<b>Description of New Report Mode</b>
G/L to Legal Register Number (P74701)	For Italian Clients only. Compares F0911 to F70404 (proof); creates an adjusting amount in the G/L Registration Balance file (F70404) to balance to the F0911 (final).
A/P to Voucher Receipt (P74702)	Compares F0413 to F74041 (proof); creates an adjusting amount in the F74041 to balance to the F0413 (final).
A/P to Withholding Tax Detail (P74703)	For Italian clients only. Compares F0411 to F74411 (proof); creates an adjusting amount in the Withholding Tax Detail file (F74411) to balance to the F0411 (final).

## Distribution

The following integrity reports are located on the Distribution Integrities menu (G00225).

<b>Report Name (Program Number)</b>	<b>Description of New Report Mode</b>
Commitment Integrity Report (P40910)	Creates an adjusting amount in the F43199, if there is a difference between the amounts in the F4311 and F43199; creates an adjusting amount in the F0902 if there is a difference between the amounts in the F43199 and F0902 (final).
Multiple Account/Purchase Order Integrity (P40910)	Available as of release A8.1 CU2 only.  Compares F4316 TO F4311 (proof); creates an adjusting amount in the F4316 if there is a difference between the amounts in the F4316 and F4311 (final).

## Logistics

The following integrity report is located on the Logistics Integrities menu (G00226).

<b>Report Name (Program Number)</b>	<b>Description of New Report Mode</b>
Item/As Of File Integrity (P41760)	Compares F4111 to F41112 (proof); creates adjusting amounts in the As of file (F41112) to balance to the F4111 (final).



# Glossary



## Glossary

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**“as if” currency processing.** A software enhancement that allows you to view and print transactions as if they were entered in a currency other than the domestic or foreign currency. For example, you can view or print amounts in the euro, even though the amounts were entered in German marks.

**base currency conversion programs.** Programs that convert a company’s base currency to the euro and ensure data integrity between tables. These programs are available in WorldSoftware E9.

**convergence criteria.** Economic conditions that are defined in the Maastricht Treaty. To join the European Monetary Union (EMU) as of spring 1998, a European Union (EU) member nation has met the economic conditions set forth in the four convergence criteria. These criteria relate to inflation, interest rates, exchange rates, and fiscal positions.

**conversion programs.** See *customer master conversion program*, *supplier master conversion program*, and *base currency conversion programs*.

**conversion rates.** In relation to the euro, this is an exchange rate used for currency conversions to or from the euro and an EMU member currency. Inverse rates derived from the exchange rates are not allowed, according to European Union (EU) regulations.

**cross rates.** Two exchange rates that are divided to calculate a new rate. According to European Union (EU) regulations, a cross rate is allowed on transactions between EMU member companies only if it provides the same result as triangulation.

**CU.** Cumulative Updates. Includes software fixes and enhancements to a base software release. The euro enhancements and functionality are available in A7.3 CU9 and subsequent cumulative updates.

**customer master conversion program.** Program that automatically converts customer address book currency code and amounts, default currencies, or both to the euro.

**currency relationships.** When converting amounts from one currency to another, the currency relationship defines the from currency and the to currency in J.D. Edwards software. For example, to convert amounts from German marks to the euro, you define a currency relationship between the two currencies.

**dual pricing.** To provide prices for goods and services in two currencies. During the euro transition period, dual pricing between the euro and Economic and Monetary Union (EMU) member currencies is encouraged.

**E9.** Includes the conversion programs required to convert a company’s base currency to the euro and the integrity programs that ensure data integrity between tables.

**ECB.** European Central Bank. The executive body of the European System of Central Banks (ESCB) that monitors monetary policy and the introduction of the euro banknotes and coins in the EMU. The primary objective of the ECB is to maintain price stability. Established in 1998, the ECB became fully operational on 1 January 1999. The ECB is part of the ESCB.

**ECU.** European Currency Unit. A unit of account used by European Union (EU) banks and institutions. This currency unit is a composite of the currencies of some EU member nations. The ECU has been replaced by the euro at a one-to-one ratio.

**EMU.** Economic and Monetary Union. A single monetary policy within a single economic market. A monetary union is achieved by locking exchange rates between countries and merging national policies. In relation to the euro, the EMU consists of 11 member nations as of the spring of 1998.

**EMU member nations.** As of spring 1998, 11 European Union (EU) countries have met the convergence criteria necessary to become members of the Economic and Monetary Union (EMU). These countries are: Austria, Belgium, Finland, France, Germany, Ireland, Italy, Luxemburg, the Netherlands, Portugal, and Spain. These countries share the same monetary policy and currency – the euro.

**EMU timetable.** The transition phase to the single currency:

Phase A: The implementation of the EMU. This phase lasts through 31 December, 1998.

Phase B: The effective start of the euro. This phase is from 1 January 1999 through 31 December 2001.

Phase C: The definitive changeover to the euro. This phase is from 1 January 2002 through, at the latest, 30 June 2002.

**ESCB.** European System of Central Banks. Effective 1 January 1999, this bank system includes the European Central Bank (ECB) and Economic and Monetary (EMU) member national banks. Their primary responsibility is to ensure price stability by defining and implementing monetary and exchange rate policy for the euro.

**EU.** European Union. A union of 15 European nations, established by the Maastricht Treaty in 1992. As of spring 1998, 11 of the EU nations are members of the Economic and Monetary Union (EMU).

**EU member nations.** The 15 countries that comprise the European Union (EU). These countries are: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxemburg, the Netherlands, Portugal, Spain, Sweden and the United Kingdom. As of spring 1998, 11 of the EU member nations are members of the Economic and Monetary Union (EMU).

**EUR.** The ISO (International Organization for Standardization) currency code for the euro.

**euro.** The official and single currency of Economic and Monetary Union (EMU) member nations. Euro denominations range from 0.01 to 2 euro (coins) and from 5 to 500 euro (banknotes). The euro is divided into 100 subunits called cents.

**euro transition period.** The time frame in which Economic and Monetary Union (EMU) member nations can transact business in either their national currency or the euro, as they prepare for the definitive changeover to the euro. The transition period is from 1 January 1999 through 31 December 2001.

**European Commission.** Part of the European Union (EU), the members of the European Commission have executive, administrative, and legislative responsibilities and recommend exchange rate policy for the euro.

**euro gain and loss realization.** The way that gains and losses are recognized due to the irrevocably fixed euro exchange rates. According to EU regulations, all EMU companies must recognize losses on any open EMU transactions by 31 December 1998. Each EMU member nation determines

when companies must recognize gains on open EMU transactions, as long as it is no later than 31 December 1999.

**FEE.** Fédération des Experts Comptables Européens. An organization that represents the accountancy profession in Europe in relation to the institutions of the European Union (EU).

**generation programs.** See *price generation programs*.

**IASC.** International Accounting Standards Committee. An independent organization that works to achieve uniformity in the accounting principles that are used by companies.

**IOSCO.** International Organization of Securities Commissions. Member agencies that work together to establish standards and an effective surveillance of international securities transactions.

**irrevocably fixed.** A phrase used to describe any national currency that is locked to a fixed exchange rate. The exchange rates between Economic and Monetary Union (EMU) member currencies and the euro were locked on 31 December 1998.

**Maastricht Treaty.** Sets forth the four convergence criteria that European Union (EU) member nations are required to meet in order to become Economic and Monetary Union (EMU) member nations and take part in the euro. This treaty was signed in 1991 and is also referred to as the “Treaty on European Union.”

**member nations.** See *EU member nations* and *EMU member nations*.

**no compulsion, no prohibition.** A principle that states that a creditor cannot require a debtor to transact business in a specific currency during the euro transition period, and vice versa, unless agreed upon in a contract.

**no inverse.** A legal requirement that states that Economic and Monetary Union (EMU) member nations cannot use the inverse of

the officially published exchange rates when converting amounts to other EMU member currencies.

**non-EMU.** Used to describe any currency or country that is outside of the Economic and Monetary Union (EMU).

**override conversion method.** A method of calculating exchange rates that is set up between two specific currencies. For those specific currencies, this method overrides the conversion method in General Accounting Constants and does not allow inverse rates to be used when calculating currency amounts.

**phases of implementation.** See *EMU timetable*.

**price generation programs.** Programs that copy existing base prices, advanced price adjustments, and supplier (purchase) prices, calculate new amounts in the euro, and create new euro prices.

**prudence principle.** An accounting principle that states that exchange losses should be recognized immediately, whereas exchange gains should be recognized at the time they are realized.

**realization.** See *euro gain and loss realization*.

**rounding.** European Union (EU) regulations state that amounts less than three decimal places are not allowed when calculating amounts through the euro (triangulation).

**spot rates.** An exchange rate entered at the transaction level. Spot rates are not used on transactions between two EMU member currencies because exchange rates are irrevocably fixed to the euro.

**supplier master conversion program.** Program that automatically converts supplier address book currency code and amounts, default currencies, or both to the euro.

**Treaty on European Union.** See *Maastricht Treaty*.

**triangulation.** To convert amounts from one Economic and Monetary Union (EMU) member currency to another, calculating through the euro. Triangulation combines the use of the multiplier and divisor exchange rate by dividing a foreign currency amount when converting to the euro and multiplying the euro amount when converting to the domestic currency.

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