Tolerance

Purpose
The purpose of this page is to give an overview of Tolerance functionality, main configurations, SAP Notes and SAP Documents related.

Overview
The following sections will explain about the Tolerance check functionality, showing configurations and some tips that may help during invoices creation and issue resolution.

Vendor-specific tolerance checks
With this tolerance you need to define tolerance groups for each company code. You can assign these tolerance groups to each vendor in the vendor master record. You can define the following tolerances:

**Total-based acceptance**
If the difference is within the tolerance range, the system automatically generates a difference line on a neutral income/expense account for small differences for invoices with debit/credit differences when posting the invoice.

**Total-based invoice reduction**
If the difference is within the tolerance range, the system posts the difference to a clearing account and generates a credit memo in a second document to clear this.

The system uses the following logic:
1. The system determines the difference between the net invoice amount (= gross invoice amount less taxes and unplanned delivery costs) and the net total of the items. If the net invoice amount is the greater, the difference is positive; if the net invoice amount is the smaller, the difference is negative.

2. Negative differences:
   a) If the negative difference is smaller than the absolute negative small difference limit defined, the system generates a posting to a small differences account for this difference.
   b) If the negative difference is greater than the absolute small difference limit defined, the system checks if the absolute difference is smaller than the lower of the absolute and percentage lower limits.
      If this is the case, the system creates a posting to a small differences account.
      If this is not the case, the system cannot post the invoice.

3. Positive differences:
   a) If the positive difference is smaller than the positive small difference limit defined, the system generates a posting to a small differences account for this difference.
   b) If the positive difference is greater than the positive small difference limit defined and the "Check limit" field is not selected for total-based invoice reduction, the system checks whether the positive difference is smaller than the lower of the absolute and percentage upper limits.
      If this is the case, the system creates a posting to a small differences account.
      If this is not the case, the system cannot post the invoice.
   c) If the positive difference is greater than the positive small difference limit defined and the Check limit field is selected for total-based invoice reduction, the system checks if the difference is smaller than the lower of the absolute and percentage upper limits for total-based invoice reduction.
      If this is the case, the system generates a posting to a clearing account for invoice reduction and creates a credit memo document.
      If this is not the case, the system cannot post the invoice.

The system does not try to reduce the invoice based on the total in the following cases:
- If you manually reduced an invoice item.
- If you manually accepted a difference in the document header.
- If you entered a credit memo.

In these cases, the system checks directly whether it can accept the positive difference.

**Note:** If the system can create a small difference, it posts this difference to the account specified in account determination for transaction DIF. If no tolerance group is assigned to a vendor or if no tolerances have been specified for the assigned tolerance group, the system creates a difference line if the difference is smaller than the tolerance defined for tolerance key BD.

General tolerance limits
With this tolerance you can specify the tolerance limits for each tolerance key for each company code.
When processing an invoice, the system checks each item for variances between the invoice and the purchase order or goods receipt. The different types of variances are defined in tolerance keys.

The system uses the following tolerance keys to check for variances:

**AN: Amount for item without order reference**
If you activate the item amount check, the system checks every line item in an invoice with no order reference against the absolute upper limit defined.

**AP: Amount for item with order reference**
If you activate the item amount check, the system checks specific line items in an invoice with order reference against the absolute upper limit defined. Which invoice items are checked depends on how you configure the item amount check.

**BD: Form small differences automatically**
The system checks the balance of the invoice against the absolute upper limit defined. If the upper limit is not exceeded, the system automatically creates a posting line called Expense/Income from Small Differences, making the balance zero and allowing the system to post the document.

**BR: Percentage OPUn variance (IR before GR)**
The system calculates the percentage variance between the following ratios: quantity invoiced in order price quantity units : quantity invoiced in order units and quantity ordered in order price quantity units : quantity ordered in order units. The system compares the variance with the upper and lower percentage tolerance limits.

**BW: Percentage OPUn variance (GR before IR)**
The system calculates the percentage variance between the following ratios: quantity invoiced in order price quantity units : quantity invoiced in order units and goods receipt quantity in order price quantity units : goods receipt quantity in order units. The system compares the variance with the upper and lower percentage limits defined.

**DQ: Exceed amount: quantity variance**
If a goods receipt has been defined for an order item and a goods receipt has already been posted, the system multiplies the net order price by (quantity invoiced - (total quantity delivered - total quantity invoiced)).
If no goods receipt has been defined, the system multiplies the net order price by (quantity invoiced - (quantity ordered - total quantity invoiced)). The system compares the outcome with the absolute upper and lower limits defined.
This allows relatively high quantity variances for invoice items for small amounts, but only small quantity variances for invoice items for larger amounts.
You can also configure percentage limits for the quantity variance check. In this case, the system calculates the percentage variance from the expected quantity, irrespective of the order price, and compares the outcome with the percentage limits configured.
The system also carries out a quantity variance check for planned delivery costs.

**DW: Quantity variance when GR quantity = zero**
If a goods receipt is defined for an order item but none has as yet been posted, the system multiplies the net order price by (quantity invoiced + total quantity invoiced so far).
The system then compares the outcome with the absolute upper tolerance limit defined.
If you have not maintained tolerance key DW for your company code, the system blocks an invoice for which no goods receipt has been posted yet. If you want to prevent this block, then set the tolerance limits for your company code for tolerance key DW to Do not check.

**KW: Variance from condition value**
The system calculates the amount by which each delivery costs item varies from the product of quantity invoiced * planned delivery costs/ planned quantity. It compares the variance with the upper and lower limits defined (absolute limits and percentage limits).

**LA: Amount of blanket purchase order**
The system calculates the sum of the value invoiced so far for the order item and the value of the current invoice and compares it with the value limit of the purchase order. It then compares the difference with the upper percentage and absolute tolerances defined.

**LD: Blanket purchase order time limit exceeded**
The system determines the number of days by which the invoice is outside the planned time interval. If the posting date of the invoice is before the validity period, the system calculates the number of days between the posting date and the start of the validity period. If the posting date of the invoice is after the validity period, the system calculates the number of days between the posting date and the end of the validity period. The system compares the number of days with the with the absolute upper limit defined.

**PC: Price variance for contract**
You can use the tolerance key PC to define price variances when entering an invoice with reference to a contract. For tolerance key PC, tolerance limits are defined per company code.

**PP: Price variance**
The system determines by how much each invoice item varies from the product of quantity invoiced * order price. It then compares the variance with the upper and lower limits defined (absolute limits and percentage limits).
When posting a subsequent debit/credit, the system first checks if a price check has been defined for subsequent debits/credits. If so, the system calculates the difference between (value of subsequent debit/credit + value invoiced so far) / quantity invoiced so far * quantity to be
debited/credited and the product of the quantity to be debited/credited * order price and compares this with the upper and lower tolerance limits (absolute limits and percentage limits).

**PS: Price variance: estimated price**

If the price in an order item is marked as an estimated price, for this item, the system calculates the difference between the invoice value and the product of quantity invoiced * order price and compares the variance with the upper and lower tolerance limits defined (absolute limits and percentage limits).

When posting a subsequent debit/credit, the system first checks whether a price check has been defined for subsequent debits/credits. If so, the system calculates the difference between (value of subsequent debit/credit + value invoiced so far) / quantity invoiced so far * quantity to be debited/credited and the product quantity to be debited/credited * order price. It then compares the variance with the upper and lower tolerance limits defined (absolute limits and percentage limits).

**ST: Date variance (value x days)**

The system calculates for each item the product of amount * (scheduled delivery date - date invoice entered) and compares this product with the absolute upper limit defined. This allows relatively high schedule variances for invoice items for small amounts, but only small schedule variances for invoice items for large amounts.

**VP: Moving average price variance**

When a stock posting line is created as a result of an invoice item, the system calculates the new moving average price that results from the posting. It compares the percentage variance of the new moving average price to the old price using the percentage tolerance limits defined. Variances are allowed within predefined tolerance limits. If a variance exceeds a tolerance limit, however, the system issues a message informing the user. If an upper limit (except with BD and VP) is exceeded, the invoice is blocked for payment when you post it. You must then release the invoice in a separate step. If the tolerance limit for BD is breached, the system cannot post the invoice.

**Note:** Note that if you set all limits for a tolerance key to Do not check, the system does not check that tolerance limit. Therefore any variance would be accepted. This does not make sense particularly in the case of the tolerance key Form small differences automatically.

**Item amount check**

In this step, you determine whether the system blocks invoice items when their value exceeds a certain amount.

You set the limit above which items are blocked as the "absolute upper limit" for the following tolerance limits:
- **AN** for invoice items without order reference
- **AP** for invoices with order reference

This depends on two criteria:
- **Item category**
- **Goods receipt indicator**

The system checks the amount for all possible combinations of item category and goods receipt indicator in all the company codes in which the check is active.

**Stochastic block**

A stochastic block is not set at item level, but for the whole invoice. If a stochastic block is set when you post the invoice, the system automatically sets an R in the field Payment block in the document header data; there is no blocking indicator in the individual items. Invoices with stochastic blocks can only be released manually.

You can determine for each company code the degree of probability that an invoice will be stochastically blocked. The degree of probability depends on the invoice value; if it is the same or larger than the threshold value, the degree of probability is the same as the percentage. If the invoice value is smaller, the degree of probability is calculated in proportion to the threshold value.

**Example: Threshold value: 3000 percentage: 60**

<table>
<thead>
<tr>
<th>Invoice value</th>
<th>Degree of probability of a block</th>
</tr>
</thead>
<tbody>
<tr>
<td>3000</td>
<td>60%</td>
</tr>
<tr>
<td>5000</td>
<td>60%</td>
</tr>
<tr>
<td>1500</td>
<td>30% (= 60 * 1500/3000)</td>
</tr>
<tr>
<td>100</td>
<td>2% (= 60 * 100/3000)</td>
</tr>
</tbody>
</table>

**Technical details**

Function modules:
Important tables:
RBKP
RBKP_BLOCKED -> this is read by MRBR transaction
RSEG
BSEG

Important fields:
RBKP-ZLSPR: Payment Block Key - only filled in case of manual or stochastic block.
RBKP_BLOCKED-MRM_ZLSPR: Logistics payment block filled with A, S, M, W.
RSEG-SPGRM: Blocking Reason: Quantity
RSEG-SPGRM: Blocking Reason: Price
RSEG-SPGRP: Blocking Reason: Date
RSEG-SPGRG: Blocking Reason: Order Price Quantity
RSEG-SPGRQ: Manual Blocking Reason
RSEG-SPGRQ: Manual Blocking Reason
RSEG-SPGRS: Blocking Reason: Item Amount
RSEG-SPGRC: Blocking Reason: Quality
BSEG-ZLSPR: Payment Block Key from the vendor line item

Related Content

Related Documents
Blocking Invoices
Invoice Release

Related SAP Notes/KBAs
Note 165589 - Documentation: Enhancement MM08R002 (MM-IV)
Note 963185 - MM IV: Tolerance check for entering and releasing invoices
Note 786810 - MM IV: Tolerance check when you enter invoices