



Infor ERP 5.2a Financials

Enhancements to Installment Invoicing

Conceptual Design

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1. Introduction

1.1 Purpose of the document

The purpose of this Conceptual Design is to describe the customer requirements regarding tax handling in installments and to propose a software solution.

This document can be used to verify the requirements and the solution with the customer. The document will also be used as input for development.

1.2 Management Summary

In our current released versions of ERP, there exist no explicit relations between the installments of a Sales order and the order lines / shipments. This resulted in the fact that the installment functionality in B52a and also in ERP LN is very restrictive about the way the tax situations are handled. Also it is impossible handle the tax regime change because of these restrictions.

This solution gives an option to steer the correct tax information of an Installment invoice or a Goods invoice by the user, in the ERP version 5.2a (Internally called Reger).

Also some enhancements are done to distinguish the installment invoices better.

2. References

2.1 Baan Requirements Database Reference

References to the Business Requirements		
BR Key	Label	Creator
ERP-00000-11858	SDIS request: French Tax Law; Regime Change; Local Tax -> Reverse Charge Duluth: Not allowed to apply tax on all installments. This requirement also applies for China.	
ERP-00000-12468	SDIS request: German Tax Rate Change; 16% -> 19%	
ERP-00000-07168	SDIS request: Settlement invoices are also printed on ACR reports	

2.2 Definitions, acronyms and abbreviations

Term	Description
Tax information	This includes all information needed for arriving at the tax amount. So Tax rate, Tax date, Tax code, Tax country and BP Tax Country will be part of the tax information.
Summary Invoice	A summary invoice is also called as the settlement in invoice in ERP. This is the goods invoice generated by invoicing the order line belonging to a sales order with installments.

2.3 Document references

Document Number	Title	Author

2.4 Internal and external contacts

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Bart Van Keulen	Review		
Lakshmi Alapakam	Review		

3. Requirement and solution

3.1 Business requirement

The following are the business requirements which were identified by the customers and logged as in request in our defect tracking system.

- The sales order with installments typically have long life cycle. This meant the tax regime could change during the life cycle of the sales order with installments. In Germany and France this is already the case. In Germany there is a change in the tax rate. In France the tax becomes payable by the customer instead of the supplier. These tax changes means some order lines might need to have different tax information because of the legal changes. It is not allowed to have different tax information on different order lines belonging to the same Sales order in our current software. This means it is not possible to implement these changes in Tax regime.
- When the tax regime changes, it should be possible to invoice installments with the correct tax information, known at that time. This is not possible because tax information cannot be specified on the Installment orders.
- In some countries (USA, China) it is not required to specify the tax and pay tax to the government on some of the installment invoices. The Goods invoice (also called the settlement invoice) should finally specify the tax information of those installments for which no tax was recovered or paid to the government at the time of installment invoicing. This is not possible because tax information cannot be specified on the Installment orders. Also the Sales Order Parameter “Apply Tax to Installments” is applicable for all the installment lines, so it is not possible to realize the requirement with this parameter because some of the Installment invoice are required to have tax whereas others not.
- In case the tax date in the Central Invoicing Parameter is specified as the “Delivery date”, this value is ignored for the installment invoice because delivery date is not known for installments. So the invoice date is used as the effective tax date. This results in incorrect determination of tax rate. Instead if it is possible to specify the planned delivery date on the installments, then this can be used as the effective tax date when invoicing the installments.
- It was not possible to differentiate between the different types of installment invoices in the open entry. The requirement is to see from the open entries if it is an “Advance” or “Normal” or “Guarantee” or “Summary” invoice.

Please refer to section [2.1](#) for all the requests which resulted in the above requirements.

3.2 Conceptual Solution

This conceptual solution provides a solution for the business requirements enumerated above. The solution requirements are organized per package / module in the section below. The solution will be based on the actual version of the software at the moment of delivery.

3.2.1 Sales Order Management

The “Goods invoice” (also called the “Settlement invoice” or “Summary invoice”) created by releasing the order line for invoicing would have the tax information which is final. This means it should be possible for the user to specify or change the tax code and/or country on the goods invoice till the time it is released to invoicing. The effective date for tax rate purpose would still be based on the shipment date or the invoice date depending on the specification of tax date on the Central invoicing parameter.

Considering the fact that the installment lines have no relation to a specific order line or shipment, and in most cases the tax information is closely tied to the shipment, its best to let the user determine what should be the tax information on each installment before it is released to invoicing. This means it should be possible for the user to specify the tax country, tax code and planned delivery date on each installment line before it is released for invoicing, irrespective of the tax code, country combination on any other installment or sales order lines belonging to the sales order.

Incase of Guarantee installment, the settlement could happen before the guarantee installment could be released to invoicing. As soon as a settlement is present for a guarantee installment it should no longer be allowed to change the tax information.

The above possibility on installments is to let the user to drive what tax information should be specified on the installment invoice, rather than make that tax information on installments final. The goods invoice will continue to have the final tax information. Any difference in tax information’s between the settled installment invoices and goods invoice will result in corresponding adjustment in the goods invoice in central invoicing. Please refer to section [3.2.2](#) and the example worksheet in section [3.2.5](#) for further details.

The possibility that installments and the order lines can have different tax codes should be controlled by a parameter in sales order management. By default the current behavior should be available. This allows customers to work with the current functionality. Incase the customer wants different tax codes for their installment and order lines; they should explicitly switch on this parameter before this takes effect. However, to activate the new parameter, the “Apply Tax to installments” parameter must be switched on. If no Tax is required on one of the Installment, a “No Tax” tax code should be defined for this.

All the tax related information relevant for determining the correct tax information (Tax country, Tax code, planned delivery date) should be passed on from the order management to central invoicing, both for the installment invoice and the goods invoice, at the time of release to invoicing, when the above mentioned parameter is on.

Beside the fact that Tax Country and Tax Code field will be enabled, the BP Tax Country must be added as well. Based on the BP Tax Country, the BP Tax ID can be controlled.

Installment corrections

In case of direct settlement, it is possible a goods invoice cannot be fully settled with installments which are invoiced at the time of release to invoicing of a goods invoice. This means there could result a correction posting at the time of closing of the installment, if all remaining installments are invoiced without manual adjustment. This creates a situation where there is a need to predict the tax information on the correction line which exactly reverses the already invoiced installments tax effects.

A similar situation could exist (Direct Settlement or indirect settlement) when cancelling a sales order line(s) after the installments have been invoiced. Also in this situation, correction lines will need to be created which should have the correct tax information.

Since there could be different tax information for different installments, when a correction is made for direct or indirect settlement, multiple correction lines- one for each installment with an open (not settled) amount, needs to be created with the specific tax code and country of that original installment line. Also, since it is required to know the tax rate (tax date) which was used at the time of originally invoicing the installment, the Original installment number needs to be stored in the "Maintain Installment Schedules (tdsls410)" table for these correction lines. This original installment number needs to be passed on to central invoicing in order to enable central invoicing to fetch the correct tax date based on the original installment invoice. This results in data model change in both Sales order management and Central Invoicing.

Order Balance

The order balance in the business partner balances may include the tax amount depending on the "Include tax in Order Balance" value in the "COM Parameter". If tax needs to be included in the order balance then the tax information attached to the Order line should be used, and any tax information linked to installments will not be considered. Also when the tax codes are changed the order balance needs to be updated with the changes because of new tax rates. Please refer to the details in [section 3.2.2](#) and the attached worksheet on Business partner balances.

3.2.2 Central Invoicing

In central invoicing, the goods invoice, as well as the installment invoice should be invoiced with the tax information which is sent by the Sales order management. All tax related information like tax rate, tax ledger account etc... should be based on the particular tax code country combination. Also at the time of invoicing the goods invoice, if settlements exist, then creating the linked document in the open entries should use the original tax information of the installment invoice.

Since the settled installments may have been invoiced with different tax information than the goods invoice (Summary Invoice), the goods invoice would result in adjustment for the difference in tax information between the installment invoice and the goods invoice. Please refer to [section 3.2.5](#) for some example transactions.

Incase the tax date parameter in the Central invoicing parameter is specified as “Delivery Date”, the planned delivery date information sent by order management for the installment lines should be stored as the delivery date (cisli245.ddat).

When invoicing the installment, if the tax date is delivery date and the delivery date is not filled in Sales and Warehouse order invoice lines (cisli245.ddat), then the invoice date should be used for determining the effective tax date. It is expected this behavior is possible only for the historical data where the user sees no need to manually adjust the planned delivery date before releasing the installment to Invoicing.

If the (planned) delivery date is filled then the (planned) delivery date stored should be used as the effective tax date. Incase the tax date parameter in the Central invoicing parameter is specified as “Delivery Date”, it is expected all installments released to invoicing after installation of this new solution will have the delivery date filled in Sales and Warehouse order invoice lines (cisli245.ddat).

When invoicing the correction installment, when the original installment number is filled in cisli245, then the tax information (tax date, tax country, tax code) should be based on the tax information of the original installments invoice.

When an order line is settled with a guarantee installment, if the guarantee installment is not yet invoiced, the tax information should be fetched from Order management to calculate the tax effects on this settlement. Also when the guarantee installment is invoiced, the tax information which comes from order management need to be used to calculate the tax effects.

In addition, in the open entries it should be stored what kind of installment invoice a particular open entry has. This means it is not allowed to compose different kind of installments together. This behavior is already the case for installments because no installments can be combined together. The Installment type (Advance Installment, Normal Installment, Guarantee Installment, Summary Invoice, Advance Correction Installment, Normal Correction Installment, Guarantee Correction Installment, and Not Applicable) has to be determined by central invoicing and sent to accounts receivable when creating the open entry.

If the original Installment number is filled then it can be known it is a “Correction Installment”.

Business Partner Balances

At different moment during invoicing the business partner balances are updated. The following Balances are important.

- Order Balance
- Open Billing Request Amount
- Invoice Balance
- Turnover

The Turnover amounts are excluding the tax amount. The order balance amount may include tax depending on the “COM Parameter” Include Tax in Order balance. The invoice balance and the Open Billing request amount always include tax.

At the time of Functional design, Technical realization, it should be checked if these balances are calculated with the right tax information. The attached sheet shows the current behavior and the proposed behavior with respect to the business partner balance updating.



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3.2.3 Accounts Receivable

In the open entry it should be stored what kind of installment invoice a particular open entry is. The possible values for Installment type are “Advance Installment”, “Normal Installment”, “Guarantee Installment”, “Advance Correction Installment”, “Normal Correction Installment”, “Guarantee Correction Installment” and “Summary Invoice”.

The existing field “ARR Invoice” will be changed to store these values. The label has to change as well and should be called “Installment Type”.

When invoices are created from central invoicing, for Installment related invoices, the additional information about the type of installment need to be fetched and stored in the open entries table. In addition a number of display sessions and print sessions need to be modified.

The following display sessions in open entry need to specify the “Installment Type”. The “Installment Type” should be placed next to the “Document type” column, when available.

Session Code	Session Name
tfacr2100s000	Sales invoice details
tfacr2120m000	BP Credit Notes
tfacr2510m000	Business Partner - Open Entries
tfacr2520m000	Invoice-to Business Partner Open Entries
tfacr2522m000	Sales Invoices
tfacr2525s000	Sales Invoice Details
tfacr2531m000	Sales Invoices by Business Partner
tfacr2535m000	BP Invoices
tfacr2539m000	Sales Invoices by Cash Receipt/Credit Notes
tfacr3130m000	Reminder Diary
tfacr3510m000	Reminder Advice

Additionally the following reports need to show the “Installment Type”, and also to choose which type of installment need to be selected for printing.

Session Code	Session Name
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tfacr2400m000	Print Documents by BP Payment Number
tfacr2411m000	Print Invoice-to Business Partner Aging Summary
tfacr2416m000	Print Invoice-to Business Partner Transactions
tfacr2420m000	Print Invoice-to Business Partner Aging Analysis
tfacr2421m000	Print Invoice-to Business Partner Open Entries
tfacr2424m000	Print Invoice-to Business Partner Balances
tfacr3420m000	Print Reminder Letters
tfacr3430m000	Print Reminder Diary
tfacr3440m000	Print Statements

3.2.4 General Ledger

In General Ledger when calculating the tax amount for central invoicing the tax date specified from central invoicing should be used.

The function `tfgld.dll6017.calc.def.vat.amt.for.cent.inv` should be extended with two new arguments:

- Determine Tax date (Boolean)
- Tax date

If the argument Determine tax date is true, then the existing functionality stay as it is, and the tax date is determined based on the Tax code by countries.

If the argument Determine tax date is false, then the tax date sent along should be used as the effective date for tax purpose.

3.2.5 Example Postings

The following excel sheet describes two possible scenarios and how the tax and settlements are handled after this solution.

The following excel sheet describes how settlements will be handled and tax adjustments will take place when there is a difference in tax information between order line and installment line. Also Positive and negative order lines and installments are taken into account for this example.



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It has to be checked at the time of Functional design or Technical realization if central



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Projects\WIP\Project

invoicing can handle all the postings when using multiple tax codes with different tax rates.

Also special attention need to be paid for the Guarantee invoice posting to make sure the reversals are good.

3.2.6 Summary

With the above solution the following requirements are solved:

1. It's possible to specify a tax code for "No Tax" in the advance installment lines, in order to create an Advance Installment invoice without any tax specification. In the order line the correct tax code and country combination can be specified for the right tax information, which will then create additional tax specification taking into account no tax was specified in the advance installment invoice.
2. In case tax regime changes during the life cycle of a sales order, then for all those installments and order line which are not released for invoicing yet, the tax code and country can be changed to make the changed tax regime in effect immediately.
3. It is possible to see from Open entries the "Installment Type".
4. To activate this new Installments functionality, it is required to have the "Apply Tax to Installments" parameter set to yes. Otherwise the parameter for the new functionality may not be activated. If no Tax is required on the Installment, a "No Tax" tax code should be used.

3.3 User Interface

Sales Order Line (tdsls4101s000)

It should be possible to change the tax country and tax code of a Sales order line with installment till the order line is released for invoicing. The Tax country, Tax code fields should be enabled. Also no check need to be done to make sure the tax country and tax code is the same for all the sales order lines.

The screenshot shows the 'Sales Order Lines' application window. The 'Invoicing' tab is selected. The form displays the following information:

- Order Number: MAH000015, Position Number: 10, 0
- Item: CLOTH
- Effectivity Unit: 0
- Price: 2.5000 EUR, pcs
- Invoice Number: 00000000
- Amount: 7.5000 EUR
- Tax:
 - ☐ Exempt
 - Tax Country: BEL (Belgium)
 - Tax ID: BE0473191041
 - Tax Code: VAT (Value Added Tax)
 - BP Tax Country: BEL (Belgium)
 - BP Tax ID:
 - Exempt Reason Code:
 - Tax Exemption Certificate:
 - ☐ Text
- Freight:
 - ☐ Invoice for Freight
 - Freight Amount: 0.0000 EUR
 - ☐ Freight Amount Binding

The bottom status bar shows 'Modify', 'tdsls4101s000', and '611'.

Sales Installment orders (tdsls4106s000)

In the Sales Installment orders (tdsls4106s000), the Tax country, Tax code should be enabled. The user can enter any tax country, tax code which best represents the tax information which should be specified in the installment invoice. Also a new field called “Planned delivery date” should be added to the table “Maintain Installment Schedules (tdsls410)”. This should be defaulted with the planned delivery date on the sales order Header and user should have possibility to change it in the session Sales Installment orders (tdsls4106s000). This field

becomes enabled only when the Tax date in Central invoicing parameter reads as “Delivery date”.

Also the BP Tax country need to be added, and it should be possible for the user to maintain this.

Incase all the order lines of the sales order have the same tax information, then that tax information can be defaulted on the installment. Incase the order lines have differing tax information then no defaulting is done and the tax code and country is left empty. It is not allowed to save an installment line without a tax country.

Incase the tax information on installment is changed after an order line (at least one) is shipped then a warning has to be given.

Print Invoice-to Business Partner Open Entries (tfacr2421m000)

In this report, it should be possible for the user to choose to print a specific type(s) of installment invoice. Enumerates of Installment types must be listed which could be chosen by the user.

3.4 Out of scope

- It is not possible to link an installment to an order line or shipment with this solution.
- Also the “Tax calculation date” in tax codes by country is ignored when creating the invoice from central invoicing. This is because in the central invoicing parameter there is already present “Date for Sales Invoice Tax” which determine the Tax calculation date.
- Project and Service Installments will not be covered.

3.5 Future Development

- The change in tax information after a invoice has been created can be handled in an alternate generic way than making the goods invoice have the adjustment tax on installments already invoiced with incorrect tax information. The generic way is to have a separate process where the invoices specified by the user are checked to see if the tax information is as expected by the user, and if not make a correction document (Invoice)for the difference. The advantage with this approach is it could work with any type of Sales Invoice (Installment, normal sales invoice, service invoice etc...).
- Currently some tax related parameters are present in Sales Order Parameter (Example: “Apply Tax to Installments”). It is not ideal to have this parameter in logistics when working in multi-company setup. It is preferable to group then Under Taxation Parameter.
- It has to be investigated if the Order balance needs to be updated during installment invoicing. Also if the turnover needs to be updated for the Advance Installment invoice.
- The “Tax calculation date” field in the tax codes by country is duplicated also in the Central invoicing parameter. In future, the parameter in central invoicing should be removed and the tax calculation date need to be centralized in Tax codes by country.

4. Impact

4.1 Table changes

The following fields need to be created. It is possible some more data model changes are needed which might become evident during the FD or TR phase.

Table	Field	Description	Domain	Changed / New	Default
tdsls410	ddat	Planned Delivery Date	Tcdate	New	tdsls400.ddat
tdsls410	oinl	Original Installment	Tcsrnb	New	
tdsls410	bptc	BP Tax Country	tcccty	New	
cisli245	oinl	Original Installment	tcpono	New	
tfacr200	Arrq	Installment Type	tfacr.inty	Changed	Not Applicable
tdsls000	mtin.4	Allow multiple tax codes on installment orders.	tctyesno	New	tctyesno.no

The following new domain needs to be created:

Domain	Description	Data Type	Values	Changed / New
tfacr.inty	Installment Type	Enumerate	Advance Installment, Not Applicable, Normal Installment, Guarantee Installment, Advance Correction Installment, Normal Correction Installment, Guarantee Correction Installment, Summary Invoice	New

Note: The Advance Installment and Not Applicable should be defined as Constant 1 and 2 in line with the previous domain and previous meaning of this field.

4.2 Impact on BDE's

<Clarify which BDE's should be changed as a result of data model changes. Describe which attributes should be added>

4.3 DEM models

< Describe if and where the DEM models (Enterprise Business Model, Implementation Master Data) are impacted >

4.4 Performance

There is no noticeable performance degradation expected because of this solution.

4.5 Migration

The “Installment Type” will be updated in Open Entries. For all invoices in the Open Entries session, the corresponding Invoice needs to be found in tdsls410 and otherwise in cisli245..

The “Planned delivery date” in Sales order Installments will remain 0. This means at the time of invoicing, the invoice date will be used for determining the effective tax date. In case this will not result in the desired tax information on the installment invoice; the user has to manually change this date in the Installment orders.

4.6 Backwards compatibility

Not Applicable.

4.7 Integration

Not Applicable.

4.8 Installability & Deployment

Not Applicable.

4.9 Escrow impact

No Impact.

4.10 Impacted domains

Domain
Tfacr, cisli, tdsls, tfgld.