Pitfalls of Value Added Tax in Oracle Applications

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Summary

In consideration of the German VAT regulations some traps concerning corresponding functionality within the accounting modules of Oracle Applications, Release 10, are outlined in detail. In this regard it is a renewal of the *GL Enhancement Request* presented at the 8th meeting of the German Oracle Applications users in Hamburg on April 25/26, 1996. In addition this paper is intended to be a practical guide for avoidance of pitfalls when setting up the required VAT functionality in the accounting modules.

Possible effects of the AX Accounting Engine in its localised version for Germany on cross-product VAT processing are not considered due to the absence of practical experience with this module.

1 Previous VAT enhancement request

In the *GL Enhancement Request* mentioned above the VAT issues were briefly described under two section headings as follows:

- No Manual Postings on Control Accounts[1]

  'Once the VAT posting is automated within GL, the same security is needed for the VAT accounts which should not be debited or credited by manual journal entries.'

- Full VAT Support[2]

  'An automatic Input / Output VAT calculation, validation and automatic creation of VAT journal entries is required for the journal entries generated in all subsystems (including the distribution modules).'

2 VAT requirements

By now it is a well-known fact, that a cross-module VAT functionality is missing in Oracle Applications. Therefore, consultants are usually recommending that all transactions are processed via the subsidiary ledgers (mainly AR and AP) and that the consolidation and preparation of the VAT return will be completed *outside* of the system using a spreadsheet program or something similar.

This approach is *not* feasible provided that the following VAT requirements are to be fulfilled completely:

- A consolidation of all VAT entries is not feasible outside the GL module,
- Standard system features ensure that revenue or expense accounts are linked to specific tax accounts and therefore manual VAT reconciliation is not mandatory,

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[1] See [SIG96], page 4
[2] See [SIG96], page 5

- Discounts, adjustments and prepayments are coping correctly with local VAT regulations,
- Periodic VAT declarations can be produced from the system without any manual intervention.

2.1 VAT consolidation

As mentioned before, cross-module VAT consolidation is not available from the system. Consequently the consolidated VAT declaration must be produced outside of the system. Verification of the base information could be undertaken on standard reports from each module, exported into a spreadsheet program and manipulated into a consolidated report.

Unfortunately most of the standard VAT reports do not comprise sufficient accounting information for off-line VAT consolidation. For example, the *VAT Register Report* of the AR module does *not* show any account codes, neither tax nor revenue accounts[3].

In practice the spreadsheet approach for VAT consolidation will turn out to be a pitfall. At least it is inconvenient, labour-consuming, and error-prone. Hence, from an accounting rigour point of view this approach is not acceptable.

VAT reconciliation

The determination of the correct VAT code for specific transactions is based upon a number of factors. Table 1 is showing the most important criteria:

Determining factors being related to	Some practical examples (not an exhaustive list)
1. Customer	customer being an *organic unity* member
	customer falling under NATO-statute
	customer in non-EU member countries
	customer in EU member countries
2. Place of deliveries and services	Domestic trade
	Foreign trade
	Transit trade (Germany being the transit country)
3. Time of deliveries and services	modification of full and reduced VAT rates (14 percent, 15 percent, 16 percent, etc.)
4. Type of charges	Dissolution of deferred charges due to reconciling of VAT amounts against revenue amounts
	Prepayment invoices
5. Type of payment terms	Re-billing of discount charges when bills are accepted from customers for collection.
6. Type of deliveries and services	Casuistry of place of fulfilment of services. For example, place of fulfilment of software licence fees is the customer's site (wherever that is).
7. Type of contract	For instance being a middlemen between an end-customer and a leasing company (for rentals

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[3] See[ORACLE97], page 2-37

	owned by the leasing company).
Attention: A combination of determining factors is possible and frequently occurs in practice!	

Table 1: VAT determination factors

Customer, product, place of delivery, time of delivery etc. are all factors to be considered. There does not appear to be a simple link between the various transaction types and the VAT code. Consequently to enable the VAT declarations to be produced the subsidiary ledgers must provide reports showing the value of goods delivered (or services rendered) and the VAT code together with the required tax audit details. The reports must also be capable of identifying where the transaction VAT rate does not equate to the VAT code.

Again, relying on corresponding standard VAT reports will turn out to be a trap.

2.2 Discounts, adjustments and prepayments

2.2.1 Discounts

All transactions, that decrease revenue have to result in appropriate tax adjustments. If a customer takes discount, the functionality has to proportionally correct revenue and the tax amounts.

The pitfall here is, that discounts are not treated correctly in the AR system.

2.2.2 Adjustments

There are two options available:

• use of standard adjustment functionality

• recording of all adjustments via the issuance of credit memos

The use of the adjustment type *'Invoice'* will compute the goods value and the VAT but this can only be used where the full outstanding amount of the invoice is to be adjusted. Any *partial adjustment* will have to be undertaken as two separate adjustments, one for the goods value and a second for the VAT. The standard VAT reports only include invoice adjustment transactions and therefore a bespoke report will need to be specified to include other adjustments.

Raising a credit memo would allow the transaction to be collected via the standard functionality and reports. Furthermore, setting up a separate credit memo type will help to clearly identify the adjustments. The disadvantage of this option is the burden to create a credit memo.

2.2.3 Prepayments

Currently the system is not capable of producing *down-payment* and *final* invoices for sales order, work orders, projects and the like. With respect to German VAT regulations the following requirements must be fulfilled completely:

• VAT on down-payment invoices is payable when cash is received.
• The final invoice must show the details of all previous down-payments.

For example, assume the following invoicing parameters:

• The prepayment clause of the *general business terms* states that 25 percent of the net sales amount is due when placing the order.
• The net sales amount is equal to DEM 100,000.00.
• The appropriate VAT rate is equal to 20 percent.

Therefore, the total lines of the down-payment invoice will appear as follows (see table 2):

Invoice line	Amount (DEM)	Remark
Net amount	25,000.00	($\Rightarrow$ 100,000.00 * 25

		/ 100)
20 percent VAT	<u>5,000.00</u>	($\Rightarrow$ 25,000.00 $*$ 20 / 100)
Total invoice amount	**30,000.00**	

Table 2: Total lines of down-payment invoice

The total lines of the final invoice must be printed in detail as follows (see table 3):

Invoice line	Amount (DEM)	Remark
Net amount of final invoice	100,000.00	
20 percent VAT on net amount	<u>20,000,00</u>	($\Rightarrow$ 100,000.00 * 20 / 100)
Gross amount of final invoice	**120,000.00**	
Net amount of down-payment	-25,000.00	(taken from table 2)
20 percent VAT on down-payment	<u>-5,000.00</u>	(taken from table 2)
Total invoice amount	**90,000.00**	

Table 3: Total lines of final invoice

Rearranging the totals shown in table 2 and 3 is giving the following entries (see table 4):

Invoice type	Gross amount (DEM)	Net amount (DEM)	VAT amount (DEM)
(a)	(b)	(c)	(d) = (b) – (c)
Down-payment invoice	30,000.00	25,000.00	5,000.00
Final invoice	90,000.00	75,000.00	15,000.00
Total	**120,000.00**	**100,000,00**	**20,000.00**

Table 4: General view of invoice totals

It should be noted that a down-payment invoice must be entered initially in the accounts with the *gross* amount (:= 30,000.00 DEM). Consequently, the system must produce the relevant journal entries as follows (see table 5):

Journal entry	Debit (DEM)	Credit (DEM)
1. Entry of the down-payment invoice		
Trade receivables	30,000.00	
Sold contracts, billing of advances		30,000.00
2. Entry of down-payment received		
Cash in banks	30,000.00	
Trade receivables		30,000.00
Sold contracts, billing of advances	30,000.00	
VAT payable		5,000.00
Advance collections from customers		25,000.00
3. Payment of VAT to inland revenue		
VAT payable	5,000.00	
Cash in banks		5,000.00
4. Entry of final invoice		
Trade receivables	90,000.00	
VAT payable		15,000.00
Revenue		75,000.00
Advance collections from	25,000,00	

customers		
Revenue		25.000,00
5. Payment of VAT to inland revenue		
VAT payable	15,000.00	
Cash in banks		15,000.00

Table 5: Required journal entries for down-payment and final invoice

Journal entry	Debit (DEM)	Credit (DEM)
6. Entry of payment receipt		
Cash in banks	90,000.00	
Trade receivables		90,000.00

Table 5: Continuation

A *work-around* for the down-payment issue is possible by adding bespoke functionality to the system. The general idea is to process prepayments using the standard invoice and credit memo functionality. A *manual* down payment invoice will be produced via the AR module that will record the goods value and the VAT value separately. The application of the down payment against a specific invoice will be achieved via issuing a credit memo that again will record the goods value and the VAT separately against the appropriate VAT code. These transactions will therefore be included on the VAT reports produced from AR in the manner described previously.

2.3 VAT declaration
2.3.1 VAT declaration for a single company

As stated above the VAT declaration cannot be produced automatically from the system because VAT codes or VAT account codes cannot be assigned to line numbers of the German VAT declaration form.

The German VAT declaration form is demanding a roll-up of periodic VAT amounts by specific line numbers. The meaning of frequently used line numbers may be briefly summarised as follows (see table 6):

Line No.	Line Type	Description
19	**header**	**deliveries, services and self-consumption (sales)**
20	**sub-header**	**non-taxable sales with deduction of prepaid VAT**
21	detail	example: deliveries to registered customers in an EU country (having a VAT registration number)
24	detail	example: deliveries to customers in non-EU countries, for example, Switzerland
25a	**sub-header**	**non-taxable sales without deduction of prepaid VAT**
25b	detail	example: loan interest received from customers in Germany, etc.
26	**sub-header**	**taxable sales**
27	detail	output tax for all domestic sales with a tax rate of 16%
28	detail	output tax for all domestic sales with a tax rate of 15 %
29	detail	output tax for all domestic sales with a tax rate of 7 %
30	detail	output tax for all domestic sales with all other tax rates
34	**header**	**intra-EU purchases**
36	**sub-header**	**taxable intra-EU purchases**

| 37 | detail | goods received from suppliers located in an EU country at a tax rate of 16 % (at the time being) |

Table 6: Frequently used line numbers of the German VAT declaration form for 1998

Line No.	Line Type	Description
46	header	deductible input tax
47	detail	input tax from all supplier invoices having a different tax rates
48	detail	input tax for all goods received from suppliers located in an EU country at different rates
49	detail	it is like an input tax for all imported goods (which are received from suppliers located in a **non-EU country**, for example, Japan, USA, etc.)
53	**sub-total**	**remaining amount, in other words, the balance of output tax payable (detail lines 21 through 37) and the input tax receivable (detail lines 47 through 49)**
56	detail	tax prepayment or surplus
58	**total**	**the total balance of output tax payable and input tax receivable**

Table 6: Continuation

Of course, the subdivision of VAT codes (to be defined during the set-up of the systems) must be compliant with the line numbers of the VAT declaration form. Typical examples for the necessary subdivision of VAT codes are shown in the following order:

- zero-rated VAT transactions ($\Rightarrow$ due to tax exemption), see table 7
- non-taxable VAT transactions, see table 8
- non-domestic VAT transactions, see table 9
- special VAT transactions, see table 10

• deliveries to non-EU countries, for example, Switzerland
• sales to a special customer located in a country belonging to NATO or other foreign military delegations
• deliveries to registered customers in an EU-country having a VAT registration number
• rental of rooms
• loan interest received from customers in Germany

Table 7: Typical examples of zero-rated VAT transactions

• sales to non-German customers
• sales within a free port area
• sales between *organic unity* member companies
• transitory items
• compensation for damages without any output of sale

Table 8: Typical examples of non-taxable VAT transactions

• goods delivered by a registered supplier located in an EU member country
• domestic input tax in case of imports from a foreign country (supplier is located in a non-EU country)

Table 9: Typical examples of non-domestic VAT transactions

• accruals for future credit notes in case of increase or reduction
• revenues of rentals which are transferred to (paid by) a leasing company
• transfers between different revenue accounts ($\Rightarrow$ revenue reclassification)
• all accounting, which is *not* be noted in the VAT declaration form

Table 10: Typical examples of special VAT transactions

According to German VAT legislation you must be able to report revenue and the corresponding tax amount for each different tax rate (and subdivided by non-taxable reasons, whenever the VAT rate is zero). This can be realised by using different tax accounts for every different tax code and allowing a *many-to-many* relationship between revenue accounts on the one side and tax codes on the other. For clarity these statements are summarised in the following diagram (see figure 1).
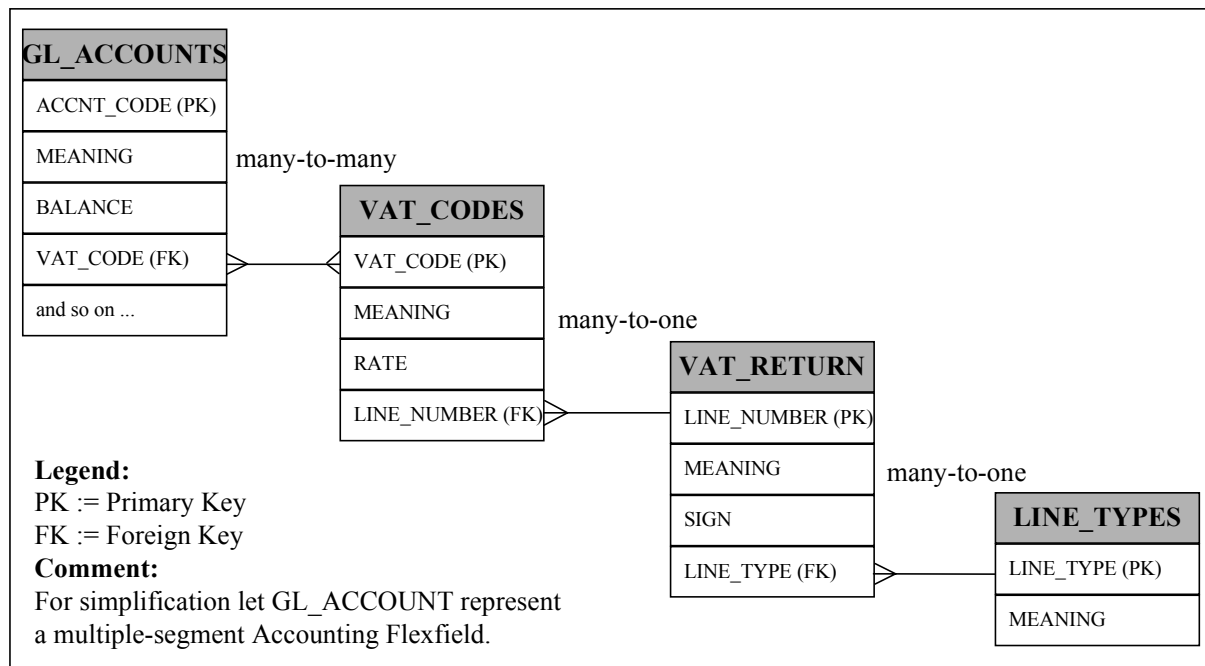

Figure 1: Simplified Entity-Relationship-Model for VAT processing

The simplified ER-model displayed in figure 1 shows the following:
- A single VAT code can be assigned to *many* account code combinations.
- A single account code combination can be assigned to *many* VAT codes.

- A line number of the VAT return can be assigned to many VAT codes.
- A VAT code belongs to only 1 line number of the VAT return.

- The meaning of a line type can be assigned to many line types of the VAT return.
- A line type of the VAT return has only 1 meaning.

None of the relationships just explained can be defined when performing the set-up of the accounting modules.

The *many-to-many* relationship between account codes and tax codes is advantageous if (a) many revenue accounts are subdivided by sub-accounts, and if (b) each tax code can be assigned to each combination of account plus sub-account.

Practical Example: Assume that you manage 100 revenue accounts, 5 sub-accounts per revenue account on the average, and 12 tax codes (including all codes for various tax exemptions). Such a situation occurs frequently if the central accounting department of a Group is prescribing common revenue accounts and is permitting sub-accounts for local purposes. In addition assume that an independent segment of the Accounting Flexfield has been defined for the local sub-accounts. Assume further that the desired *many-to-many* relationship between revenue accounts and tax codes really exists. This means that you end up with (100 ∗ 5 =) **500** revenue classifications. Each of these revenue details can be combined and analysed with respect to all 12 tax codes.

Now assume that there is only a *many-to-one* relationship between revenue account and tax codes. Continuing the numerical example, this means that you end up at a maximum of (100 ∗ 5 ∗ 12 =) **6000** revenue classification. Even a slightly lower estimate (some possible combinations do not occur) is likely to be too many from a practical point of view. The theoretical advantage of this solution can be seen in 'relief' that only a single tax code (instead of many) is assigned to a given revenue detail. In reality this it not a relief, it is an impractical burden. In other words, the favourable flexibility offered by defining multiple segments for the Accounting Flexfield is heavily restricted in practice by an inadequate VAT design.

Using separate accounts for revenue, expense and the various tax codes, only eases the VAT reporting problem, but does not enforce the validity of the base data. With respect to VAT the system neither comprises enough functionality for preventing the user from modifying defaulted values wrongly, nor does it enforce valid combinations between revenue, expense, and tax accounts. Therefore, a reconciliation of revenue and expense to the correct tax amounts and the VAT return is very cumbersome.

2.3.2 VAT declaration for companies belonging to an organic unity

Regarding VAT an organic unity (called *'umsatzsteuerliche Organschaft'* in Germany) is dealing with intercompany transactions between companies belonging to a Tax Group. Within an organic unity these intercompany transactions are treated as non-taxable intracompany transactions (see table 8, 3rd row).

Of course, within a VAT system, an organic unity is offering mainly administrative benefits rather than overall tax savings.

The illustration below (see figure 2) demonstrates the manner in which the base data could be converted and consolidated to provide the required information for multiple reporting purposes in a multiple legal entity situation. More specifically, the diagram illustrates,

- `how the relevant prime information is entered into the set of books (SOB) for a single legal entity,`
- `how this information could be used to provide reporting at` *Group, Statutory* `and` *Taxation* `levels.`

At first, all transactions are entered into each company's Group set of books. Standard Oracle consolidation functionality could be used for intercompany consolidation. Statutory adjustment entries are made in the Statutory set of books.
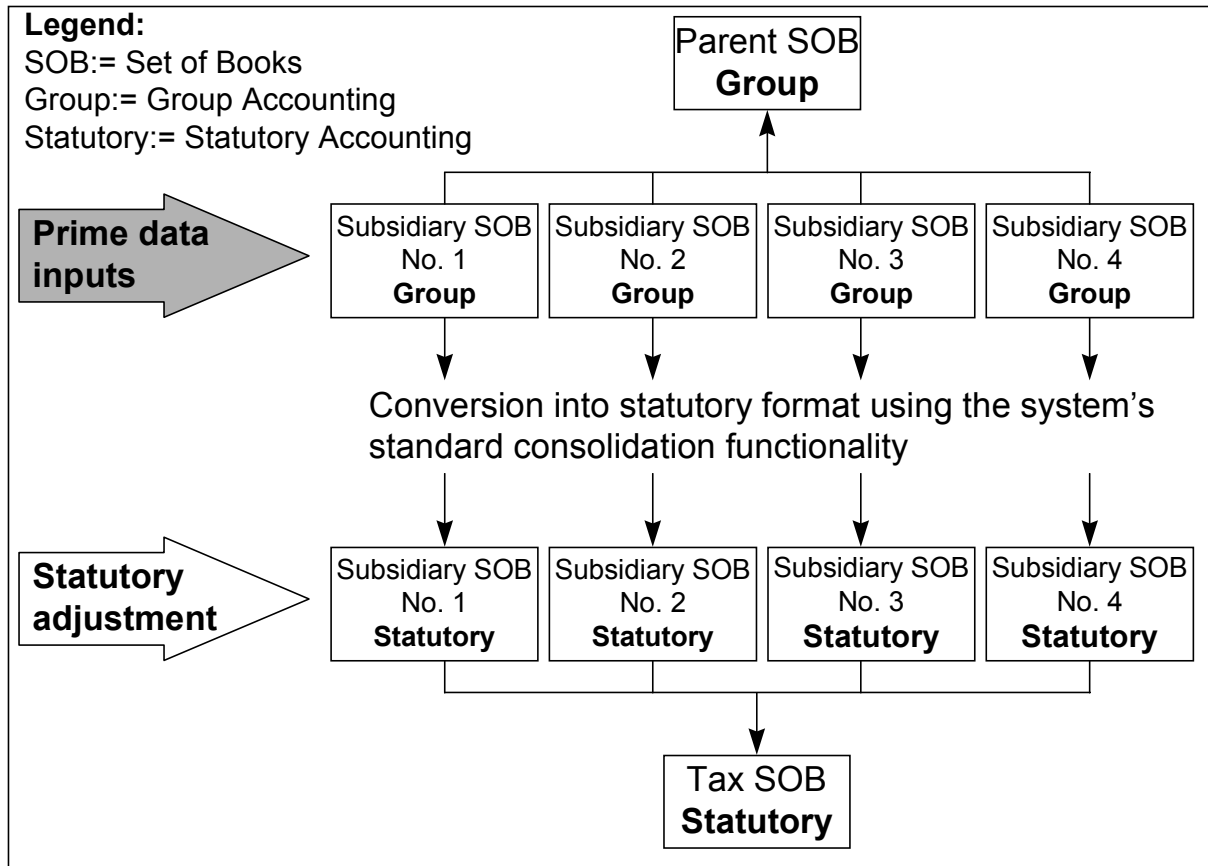
Figure 2: Intercompany consolidation

Above conversions and consolidations can be undertaken at either transaction or balance level. So far so good. Unfortunately the standard system does *not* allow for drill down to prime documents after consolidation. Of course, with regard to tax audits a laborious access to original vouchers is not at all favourable.

In addition, the intercompany consolidation approach does not allow a push-button procedure for the completion of periodic VAT returns. This pitfall has been outlined already in the previous section.

3 Direct VAT entries to General Ledger

Without doubt, the majority of VAT-related work can be performed and substantiated in the AR and AP module. But treatment of VAT solely based on the subsidiary ledgers is not feasible. In specific cases German VAT regulations are enforcing *direct* VAT entries to GL which are usually *not* visible in the subsidiary ledgers. For example (see table 11):

Case	Comments
Unbilled revenue	German VAT rules state that VAT is due based upon delivery and therefore even if the invoice has not been raised the VAT is still due.
Revenue accruals when late invoicing occurs	Timing differences between the closure dates of AR and GL can happen. Cut-off date for VAT purposes is always the GL date.
Moneyworth benefits	These transactions are processed via the payroll and relate to such items as the provision of company cars etc.
Rental of rooms	Usually no invoice is raised for these type of transactions.
Down-payment invoices	The VAT rules are different on this category of invoices in that the VAT is not due until the payment has been received.
Reclassification of revenue	There are instances where the coding of an invoice is different to that required internally.
Rental revenues for sale and lease back transactions	Rental revenue where the equipment is sold to a leasing company can create a VAT reconciliation problem.
Petty cash payments	These could be processed alternatively via manual payments in AP or XpenseXpress.
Provision for future credit notes	Required for periodic VAT reconciliation because the accrual is debited to sales revenue (see table 10, 1st line and figure 3 further below).

Table 11: Direct VAT entries to GL

With respect to VAT reconciliation the last case enumerated in table 11 can be illustrated as follows (see figure 3). VAT rate is assumed to be 20 percent.
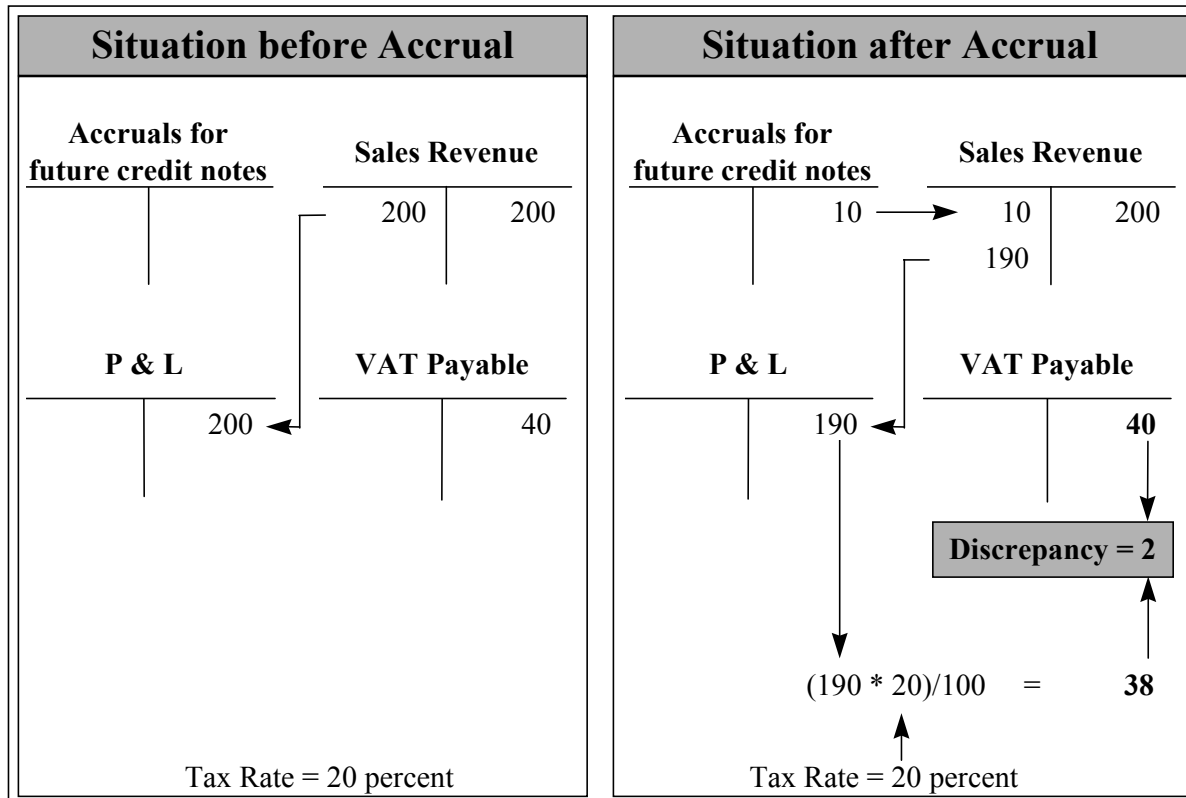
Situation before Accrual			Situation after Accrual		
Accruals for future credit notes	**Sales Revenue**		**Accruals for future credit notes**	**Sales Revenue**	
	200	200	10 →	10	200
				190	
P & L	**VAT Payable**		**P & L**	**VAT Payable**	
200 ←		40	190 ←		**40**
					↓
					Discrepancy = 2
					↑
			(190 * 20)/100 =		**38**
Tax Rate = 20 percent			Tax Rate = 20 percent		

Figure 3: Provision for future credit notes

If such or similar business cases are occurring frequently, the so-called *subledger-approach* for VAT processing is indeed a trap with respect to VAT analysis and reconciliation.

Therefore, a work-around must be developed. Either a specific segment of the Accounting Flexfield is used for VAT analysis or specific VAT values are used within an existing segment, for example, the sub-account segment, if not conflicting with its main purpose. Alternatively a bespoke overall VAT control report could be developed combining both,

- direct VAT entries in GL and
- VAT code identified entries in the subsidiary ledgers.

Pros and cons of these alternative solutions must be checked against each other. Consequently, a *best practice* for *consistent* VAT reporting out of GL cannot be recommended. In any case pitfalls may be caused by the following:

- heavy manual population process for the segments of the Accounting Flexfield,
- complex set-up of cross-validation and security rules for data entry.

4 Tax Engine

It is a collection of programs, parameters, and hierarchical flows used by the AR module to calculate VAT. Performance of the Tax Engine is mainly controlled by 5 factors in the following order[4]

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1.Customer site
2.Customer
3.Product
4.Customer tax exemptions (at either customer or customer site
  level)
5.Product tax exemptions
```

Furthermore, a time limit can be applied to tax rates. Calculation of VAT on freight amounts can be enabled. Using the approach outlined above, the following invoice types can be taxed automatically:

- `Domestic invoices for different products, with each product having its own code assigned to it.`
- `Non-domestic invoices for customers inside and outside the EU.`
- `Invoices for EU-customers with VAT registration numbers.`

The Tax Engine is not a cross-module feature. Periodic completion of VAT returns remains a manual process based on standard VAT reports. But as mentioned before, the standard VAT reports are not tailor-made for VAT returns.

5 Concluding remarks

Major pitfalls of VAT processing in Oracle Applications are the following:

- `Cross-module VAT functionality is not available.`
- `The Tax Engine is` *limited* `to the AR module.`
- `VAT returns cannot be produced automatically from the system, neither for a single company nor for the members of an` *organic unity.*
- `Standard VAT reports are lacking essential information needed for verification of base data from subsidiary ledgers.`
- `Regarding VAT adjustments, discounts and prepayments, they are not treated satisfactorily in the AR module.`
- `Down-payment invoices are not adequately supported by the system.`
- `Special business cases are necessitating` *direct* `VAT entries to General Ledger.`
- `There is no standard functionality to handle VAT in General Ledger, except the VAT Descriptive Flexfield.`
- `After posting transactions from subsidiary ledgers to GL, it is not at all transparent to the user what the underlying tax has been. Therefore, VAT analysis and reconciliation is a labour-intensive task.`

The reverse of pitfalls and malfunctions are enhancement opportunities. Improvements of the VAT functionality with respect to local VAT legislation are over-due.

Lacking practical experience with the localised AX Accounting Engine possible relief with respect to the treatment of VAT cannot be rated.

No claim concerning the completeness and correctness of the statements in this study can be made. They represent purely the author's understanding of the matter.

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[4] `See [ORACLE97], page 2-9`

Literature

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