



Global 3000 Service Pack Note DSO calculation

Author	dcp	
Project	ZD60_000129.doc	
Version	1.0	1 of 10

INTRODUCTION

This service pack clearly documents the algorithm used to calculate Days Sales Outstanding on the Aged Debt Report and allow users to select the maximum days billing to use in its calculation instead of assuming 365.

DOCUMENTATION CHANGES

DSO Calculation

Periods and ageing Global 3000 Debtors Ledger accounting periods are defined by the financial calendar that is set up using the Calendar Details option in the Administration menu of System Parameters. Each accounting period is identified by a four digit year and two digit period number and has its end date defined in the calendar. Year numbering, period numbering and end dates are all sequentially ascending i.e. year 2001 comes before year 2002, period 1 comes before period 2 and the end date of year 2001 period 1 is the day before the start date of year 2001 period 2.

Debtors Ledger operates principally in a “current” accounting period established when the ledger is first set up by the Current Year and Period option in the Debtors Ledger Parameters menu and subsequently only ever updated by the Close Period function in the End of Period Processing menu available from the ledger main menu.

Debtors Ledger also provides a degree of “next period” processing, mainly with regard to entering transaction batches, to assist in maintaining continuity across the administrative activities involved in finalising and closing a “current” accounting period.

Each batch of transactions recorded on the ledger is posted to either the “current” or “next” accounting period.

Each transaction in a batch is stamped with the year and period number of the accounting period to which that batch is being posted as well as capturing the date specific to that transaction.

Transactions cannot be dated later than the end of the accounting period to which they are posted but can be dated prior to the start of the period.

Note Transactions dated prior to the start of the accounting period in which they are posted will cause “aged analysis by period” and “aged analysis by transaction date” to differ.

Aged analysis of transactions can be based on the accounting period to which they are posted or on days from transaction date. Aged balances by period are held on the customer record for the next period, current period and four past financial periods and are updated at close of period.

Note Transaction date means either the recorded date of the transaction e.g. invoice date or the due date for the transaction depending upon selection in the report parameters.

If the ledger is configured for ageing by days, up to four ageing intervals, e.g. 30-60-90-120 days, are specified using the Current Year and Period option in the Debtors Ledger Parameters menu and aged balances, totals and ratios are calculated as required.

Author	dcp	
Project	ZD60_000129.doc	
Version	1.0	2 of 10

Prior to To the right of the columns for the ageing intervals, the Aged Debt report shows a further column titled “Prior to <start of oldest ageing interval>”. This column contains the total outstanding amount from transactions dated prior to the start of the oldest ageing interval.

DSO The aged debt analysis provided by the ledger can include estimated days sales outstanding (DSO) or debtors’ days for open item accounts.

DSO on each account is calculated by counting back the outstanding balance of the account at the effective date for the report by the billing to the account per ageing period prior to the effective date including an appropriate proportion of the days from that period in which the count back goes to zero.

For example In a situation where the outstanding balance on an account at the end of June is £1 million and ageing is by monthly periods:-

Ageing interval	Unbilled portion at end of interval	Billing in interval	Debtors days from interval
June	£1,000,000	£400,000	30
May	£600,000	£500,000	31
April	£100,000	£400,000	7.5
March	£0	£300,000	0

The second column titled “unbilled portion at end of interval” shows the amount of the outstanding debt on the account not accounted for by billing following the end of the interval – e.g. for a report dated end of June, the whole outstanding balance of £1 million is unbilled at end of June, £400,000 of that is covered by billing in June leaving an unbilled portion at the end of May of £600,000.

Billing in each interval is total invoices less credit notes posted to the account in the interval and the debtors days column shows the number of days in the interval across which the unbilled portion would be non-zero.

In the interval in which the unbilled portion goes to zero, i.e. April in our example, the debtors days value is calculated by assuming that the total billing in that interval is spread evenly across the days in the interval and using that average daily billing to reduce the unbilled portion to zero, i.e.

April = 30 days, total billing £400,000, daily average = (400,000 / 30)

Number of debtors days in April = unbilled portion at end of April / daily average in April i.e. 100,000 / (400,000 / 30) = 7.5 days.

In programming terms, the Debtors Ledger algorithm for calculating DSO for an account at an effective date operates as follows:-

1. Set the unbilled portion of the outstanding balance to the outstanding balance on the account at the effective date by reversing all postings to the account dated after the effective date out of the current outstanding balance of the account.
2. Identify the start and end dates of the ageing intervals prior to the effective date using the period or days information provided in the Current Year and Period option of the Debtors Ledger Parameters menu.
3. For each ageing interval in turn prior to the effective date

Author	dcp
Project	ZD60_000129.doc
Version	1.0
	3 of 10

Calculate billing on the account in the ageing interval as gross from invoices dated in the ageing interval less gross from credit notes dated in the ageing interval,

If unbilled portion of outstanding balance at end of interval not less than billing in ageing interval

Set debtors days from interval to the number of days in that ageing interval,

Subtract billing in interval from unbilled portion of outstanding balance.

Else

Set debtors days from interval to the number of days in ageing interval times unbilled portion of outstanding balance at end of interval divided by billing in interval,

Set unbilled portion of outstanding balance to zero.

End

Add debtors days from interval to DSO for account.

Repeat until unbilled portion of outstanding balance not greater than zero.

DSO for the whole report is calculated using the same algorithm by counting back the unbilled portion of the outstanding balance on the report at the effective date by the billing per ageing period on the report as a whole, including an appropriate proportion of the days from the period in which the count back goes to zero.

Please note Successful DSO determination requires transaction and allocation history following the effective date of the report to be intact in order to determine the outstanding balance at the effective date.

It also requires complete billing history in each of the ageing intervals in which the unbilled portion of the outstanding balance is non-zero in order to calculate the debtors days from the interval and the unbilled portion of the outstanding balance at the end of the next ageing interval.

FAQ's

Q1 What if the outstanding balance on an account exceeds available billing history?

Though unlikely, this situation can arise when the balance of an account undergoes significant journal correction or the billing history on the ledger has been purged. In such cases, the DSO appears as "> nnn" where nnn is set to the number of days of available billing history.

Q2 What if the Days Sales Outstanding on an account exceeds the total number of days in the ageing intervals I am using?

This situation can arise when, for example, an account with an outstanding balance falls dormant for a long period of time and the total billing across the ageing intervals used for the report is too low to reduce the outstanding balance to zero within the four specified ageing intervals.

In such cases, DSO calculation uses billing up to the maximum number of days specified when DSO is selected for the report which is in turn limited by the start of the first complete period of transaction history.

Author	dcp	
Project	ZD60_000129.doc	
Version	1.0	4 of 10

Q3 What if the Days Sales Outstanding on an account exceeds the maximum number of days specified when the report is run?

In such cases, if the outstanding balance on the account exceeds the available complete billing, the DSO is reported as "> nnn" where nnn is set to the maximum number of days specified for the report.

Q4 What happens if an account is in credit?

Days Sales Outstanding on accounts that are in credit at the effective date of the report are reported as zero.

The edge criteria mentioned in the above FAQ's should only rarely impact on DSO information provided in your aged debt report and in the normal course of operations, the DSO values on the report offer a simple but valuable ratio of outstanding debt to billing activity.

Please remember DSO is calculated by subtracting *total billing* in each ageing interval from the outstanding amount at the effective date while the aged debt presented on the report is calculated from the *outstanding billing* on transactions in the ageing intervals.

Consequently calculation of DSO can only be readily matched with the reported aged debt on an account if the open transactions on the account are wholly unallocated.

Example The open transactions on account ANDR001 in sample data are all unallocated. So, printing the single line aged debt report in sample data with an effective date of 31 March 2005 gives:-

Global 3000 Debtors Ledger		AGED DEBT AT 31/03/2005					Operator	PJJ	Page	2
Company Al Standext Systems Ltd		SINGLE LINE REPORT AGED BY INVOICE DATE					Date	7 Jul 2008	Time	15.58.34
		VALUES IN ACCOUNT CURRENCY								
Account Name	Terms	02/03/05 to 31/03/05	31/01/05 to 01/03/05	01/01/05 to 30/01/05	02/12/04 to 31/12/04	Prior to 02/12/04	Currency Amount Due	Credit Limit	Last Paid	DSO
ANDE001 Anderton Ltd	B						GBP	89.2		
ANDR001 Andrew Leonard Ltd	2M	6100327.99	56065.90	44289.97	0.00	0.00	6200683.86	250000	30/04/05	108.3
ANDR010 Andrews Estate Agents	A	0.00	40459.35	6486.00	22230.92	0.00	69176.27	200000	18/01/05	92.8
BLAK001 Blakelock Insurance Brokers	A	0.00	0.00	2467.50	4756.91	0.00	7224.41	100000	18/01/05	96.5
BROW001 Brownhouse of Preston	C	0.00	29759.22	21792.72	4978.98	0.00	56530.92	100000	18/01/05	70.0
CREDBAL CUSTOMER WITH A CREDIT BAL	A	-210.00	21139.94	14877.15	0.00	0.00	35807.09	150000	31/03/05	0.0
CUPI001 C.U.P. International	A	-2800.00	0.00	0.00	0.00	0.00	-2800.00	0	28/03/05	
DAVI001 Davies & Brown	C	2076.22	35062.00	4215.90	30041.77	0.00	71395.89	200000	26/02/05	102.1
DESI010 Design Graphics Ltd	B	0.00	35185.14	30523.80	0.00	0.00	65708.94	500000	18/02/05	90.0
FUTU005 Future Design Ltd	A	0.00	20435.60	15284.98	16595.04	0.00	52315.62	90000	26/02/05	105.8
NEAL015 A Neal & Sons	B	0.00	17378.25	15933.00	34743.11	0.00	68054.36	500000	18/01/05	120.0
PEAK001 Peak (Ins & Investment) Agents	A	0.00	19716.10	9118.00	0.00	0.00	28834.10	800000	26/02/05	71.8
PRIC010 Price & Partners	C	0.00	29726.90	21298.99	17181.75	0.00	68207.64	100000	28/02/05	120.0
READ001 Reading Stationery	B	997.92	26303.31	18291.42	7383.51	0.00	52976.16	350000	25/02/05	95.6
REPS001 Repsol Marine UK	A	0.00	18106.60	12304.01	18100.14	13211.14	61721.89	60000	11/02/00	> 365
SAFC001 Safco Stationery Supplies	C	0.00	12972.00	10097.95	21889.06	0.00	44959.01	50000	19/01/05	120.0
TUVE001 TUV Engineering Ltd	A	0.00	24032.85	20405.05	27216.15	0.00	71654.05	500000	25/02/05	98.6
UNIT001 United Office Supplies	B	0.00	0.00	0.00	9677.55	0.00	9677.55	20000	28/02/05	104.7
WATK005 Geo Watkins	B	0.00	9960.47	27354.00	3544.80	0.00	40859.27	80000	28/02/05	93.2
WATS010 Watsons Plc	C	-2300.00	2775.93	0.00	0.00	0.00	475.93	3000	30/03/05	35.1
		8974550.15	26583.55	0.00	0.00	0.00	9001133.70	150000	31/03/05	58.3
REPORT TOTAL GBP		15072642.28	425663.11	274740.44	218339.69	13211.14	16004596.66			DSO = 96.9

Looking in enquiries at transactions on account ANDR001 shows:-

Author	dcp
Project	ZD60_000129.doc
Version	1.0
	5 of 10

Account ANDR001 Andrew Leonard Ltd

Type	No.	Date	Batch/Item	Status	Narrative	Debit	Credit	O/S amount	Currency
INV	INV00029	21/11/04	45/ 10	Archived		4961.08		0.00	GBP
INV	INV00039	15/12/04	46/ 10	Archived		3189.22		0.00	GBP
INV	INV00047	16/12/04	46/ 18	Archived		10982.87		0.00	GBP
INV	INV00061	19/12/04	47/ 12	Current		9830.53		9830.53	GBP
INV	INV00072	21/12/04	48/ 3	Current		8536.76		8536.76	GBP
INV	INV00091	29/12/04	49/ 2	Current		3863.63		3863.63	GBP
PAY	14281	18/01/05	65/ 2	Archived			19133.17	0.00	GBP
INV	INV00123	19/01/05	61/ 3	Current	ANDR9812	6486.00		6486.00	GBP
INV	INV00136	11/02/05	67/ 1	Current	ANDR10-8	9571.55		9571.55	GBP
INV	INV00145	16/02/05	69/ 3	Current	ANDR/1239	7367.25		7367.25	GBP
INV	INV00165	18/02/05	73/ 2	Current	andr/2398	11610.17		11610.17	GBP
INV	INV00153	20/02/05	70/ 3	Current	ANDR083	11910.38		11910.38	GBP

From which (because none of the open transactions are allocated) it can be seen that the DSO of 108.3 calculated for the account arises from:-

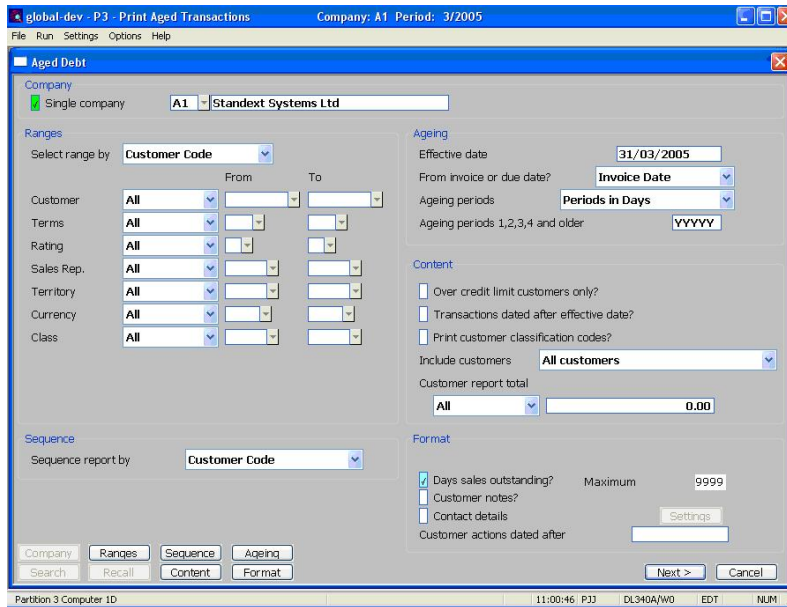
Ageing interval	Unbilled portion at end of interval	Billing in interval	Debtors days from interval
02/03/05			
to	£69,176.27	£0.00	30
31/03/05			
31/01/05			
to	£69,176.27	£40,459.35	30
01/03/05			
01/01/05			
to	£28,716.92	£6,486.00	30
30/01/05			
02/12/04			
to	£22,230.92	£36,403.01	18.3
31/12/04			

Where debtors days in the period 02/12/04 to 31/12/04 is determined from unbilled portion (£22,230.92) divided by daily average billing for the interval of (£36,403.01/30) = (£1213.43 per day) to give 18.3 days.

Author	dcp
Project	ZD60_000129.doc
Version	1.0
	6 of 10

Selection Criteria Window

Fig 1: Aged Debt selection criteria window



Purpose This window enables you to enter selection criteria for the Aged Debt report.

The prompts are:

Single company *(Only for multi-company systems)* Tick to choose a company for the report, leave blank to print the report for each company in turn.

Company *(Only if Single Company has been selected in a multi-company system)* Enter the code of the company required. A lookup is available.

Ranges

Search By Customer Choose “Code” or “Name”.

Range Entry For each item the dialogue is as follows:-

Select All, Single or Range.

- If you select All the From and To prompts are skipped.
- If you select Single you are prompted to enter a value in the From prompt. A lookup is available.
- If you select Range, you are prompted for both From and To codes. Lookups are available

You are prompted for:-

- Customer code or name
- Trading terms
- Credit rating
- Currency code for account currency (on multi-currency systems only).
- Sales representative
- Territory
- Four user-defined classification codes. The text which appears in the window is that entered as the code

Author	dcp
Project	ZD60_000129.doc
Version	1.0

descriptions in Debtors System Parameters.

Sequence

Sequence report by Select the sequence in which customers are to be printed or exported. The choice is by:-

- Customer (code or name according to the range selection)
- Credit rating
- Sales rep.
- Customer account currency (on multi-currency systems only).
- Territory
- Four user-defined classification codes. The text which appears in the window is that entered as the code descriptions in Debtors System Parameters.

Ageing

Effective date Enter the effective date. This defaults to the last day of the current period. All transactions dated later than the effective date are grouped into a single column titled "After dd/mm/yy". If transaction and allocation history is available, the effective date can be before the end of the last closed period so long as it is later than the last purge date. If history is being kept for key customers only, reports with an effective date earlier than the start of the current period are automatically limited to key customers' accounts only.

From invoice or due date? The program uses either transaction invoice dates or due dates to age transactions and determine the period transactions contribute to. Select Invoice Date or Due Date from the drop-down box.

Ageing Periods Select either Calendar Month or the standard ageing period type set for your system (i.e. Financial Periods or Periods in Days).

Note In system parameters the ageing periods are set as either the financial periods or a fixed number of days, 1-30 for period 1, 31-60 for period 2 etc. For purposes of this report you can select either the type of ageing specified in System Parameters or ageing by calendar month.

Ageing periods 1, 2, 3, 4 and older This prompt lets you restrict the report to accounts that have outstanding transactions within specific ageing periods. You can either do this by entering a pattern of Y's and N's or a range of numbers. You must enter a continuous range of periods; i.e. you can enter YYN to select periods 1, 2 and 3 but you cannot enter YNY to select periods 1, 3 and 5.

Examples Enter YYYYY or 1-5 to include all periods.

If ageing by accounting period, set to NYNN or 2 to select accounts with outstanding transactions in the second past period and no outstanding transactions in earlier periods.

If ageing is by elapsed days from invoice date, such as 0-30, 31-60, 61-90, 91-120 and over 120, set to NNYYY or 3-5 to select accounts with transactions over 60 days old.

Content

Over credit limit customers only? Tick if you want to restrict the selection to customers who are over their credit limit. Otherwise leave blank.

Note Debtors Ledger checks the customers current balance against the credit

Author	dcp	
Project	ZD60_000129.doc	
Version	1.0	8 of 10

limit.

On accounts trading in more than one currency, the current balance is calculated by converting the balance in each currency to account currency at the exchange rates in force for today and summing the results.

Transactions dated after the effective date

Tick to include transactions dated after the effective date of the report. These are shown in a column to the left of the first aged period, and their values are included in the account total. Leave blank to exclude these transactions.

Customer report total

If you want to restrict the selection of customers based on the total value shown for them on the report, select "Greater than" or "Less than" and enter the required value. Select "All" to print all customers.

Debtors Ledger calculates the customer total by:-

- Removing any allocations to transactions dated after the effective date
- Working out the aged balances by adding up the open transaction amounts for each ageing period
- Adding the aged balances for the ageing periods you have selected for inclusion in the report.

Format

Days Sales Outstanding?

Tick if you want to print the days sales outstanding at the effective date of the report for each account on the report and for the report as a whole. Leave blank to omit this information from the report.

Days Sales Outstanding (DSO) on each account is calculated by counting back the outstanding balance of the account at the effective date for the report by the billing to the account per ageing period including an appropriate proportion of the days from that period in which the count back goes to zero.

DSO for the whole report is calculated by counting back the outstanding balance on the report at the effective date by the billing per ageing period on the report as a whole, including an appropriate proportion of the days from the period in which the count back goes to zero.

Total billing for an ageing period is taken as the sum of all invoices and credit notes dated in the period in question. Transactions dated after the effective date are ignored.

DSO is not shown for balance forward accounts but is shown for open item accounts presented as balance forward.

DSO on an account that is in credit at the effective date of the report is zero.

Maximum

(Only if Days Sales Outstanding is selected) Enter the maximum number of days billing to be used in the calculation of DSO when DSO exceeds the total ageing interval specified for the report. This cannot be less than the number of days in the total ageing interval specified for the report and cannot be greater than the number of days between the effective date and the start of the 1st period for which all transaction history is to be kept as specified in the History Options in Debtors Ledger System Parameters or the first period on the system calendar whichever is later. The maximum usually defaults to 365.

Please note

DSO in excess of the maximum number of days appears on the report as ">nnnn" where nnnn is the maximum number of days.

Author	dcp	
Project	ZD60_000129.doc	
Version	1.0	9 of 10

Customer Notes Tick if you want to print or export customer notes, otherwise leave blank.

Contact Details Tick if you want the contact details for the customer printed on the report. Otherwise leave blank. Use the “Settings...” button to select the contact information you require.

Customer actions dated after If you want to print or export actions, enter a date here. Any actions for the selected customers dated later than this date will be included. Leave blank to exclude all actions.

On completion ⇒ Print Options Window

Buttons:-

The buttons at the bottom left of the screen enable you to amend areas of the screen. There are two exceptions:-

Search Invokes a search of the appropriate items whenever a search is available.

Recall Recalls a list of customers which has previously been saved using the Review function. The customer range and sequence are fixed by the list and the remaining selection prompts are skipped, but may be amended using <BackTab>.

Author	dcp	
Project	ZD60_000129.doc	
Version	1.0	10 of 10