

BW RTR Credit BW_Blocked orders Workbook Description

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Context

We have to provide some statistics in BW about the blocked orders for credit reason.

The indicators will be :

- % of blocked orders for credit reasons
 - Total Number of orders blocked during the period divided by the total number of orders
 - Total number of blocked orders for limit reason / total number of blocked orders
 - Total number of blocked orders for overdue reason / total number of blocked orders
 - Total number of blocked orders for old financial information (expired validity date)
 - Total number of blocked orders for mix reason / total number of blocked orders

- Average duration to release a blocked order by blocking reason

Average time in hours to release an order blocked by blocking reason

- Average nbr of orders released in a day

Nbr of orders in average released in a day

- Orders reblocked

Nbr and % of reblocked orders compared to total of orders blocked

Source of the data :

The VBUK-VBUP tables have the last status of credit blocks in the following fields :

Field	Explanation
CMGST	Overall status of credit checks
CMPSA	Status of static credit limit check
CMPSB	Status of dynamix credit limit check in the credit horizon
CMPSC	Status of credit check against maximum document value
CMPSD	Status of credit check against terms of payment
CMPSE	Status of credit check against customer review date
CMPSF	Status of credit check against open items due
CMPSG	Status of credit check against oldest open items
CMPSH	Status of credit check against highest dunning level
CMPSI	Status of credit check against financial document
CMPSJ	Status of credit check against export credit insurance
CMPSK	Status of credit check against payment card authorization
CMPSL	Status of credit check of reserves 4
CMPSM	Credit check data is obsolete
CMPS0	Tolerance (Status of credit check for customer reserve 1)
CMPS1	Advance payment (Status of credit check for reserve 2)
CMPS2	Status of credit check for customer reserve 3

What already exists on the system :

In PF1, some years ago, an specific extractor has been developed for that purpose.

Prg : ZZV_KPI_CREDITBLOCK_ORDERS

This program fills the table zzv_kpi_creditbl (cfr annexe).

The idea is to read the change log tables (CDHDR and CDPOS) to be able to see when an order has been blocked or deblocked during his live.

Because the idea is the same, we will start from that program, and modify the way to prepare the data.

For our needs, some parts should be adapted :

- The date of the blocked order should be a timestamp to be able to extract the average delay to release a blocked order.
- The data were extracted on monthly base, we should be able to extract by week. The jobs takes around 17 hours (a lot of data were read by the program), we would like to work in delta mode to be able to limit the loading time. The old program prepared the data by period, we would like to be able to work with all the past data (it will be possible to slide on every periods).
- Why not improve the presentation of the data and work with blocking segments instead of having one line for each changes.

Several remarks :

- The scope is limited to the orders that :
 - are not in a state "cancelled"
 - are eligible for credit management (AUART in TVAK-KLIMP = "D") (cfr infra)
- If an order is created with a blocking code, we will not be able to find the entry in the change log tables. Then the extractor should start from the current situation, and then deduce the starting state of the order.
- If an order has no item, it's also rejected.
- The active period of an order is not easy to provide : we will use another blocking code (technical) to be able to have this information. This segment will be filled by reading the items of the order : if all items are delivered, the order is considered as inactive.

The new extraction structure (ZZV_KPI_CREDBL_2) :

Field	Explanation
MANDT	Client
VBELN	Sales Document
BLOCKTYPE	Blocking type
STARTIME	UTC Timestamp of the beginning of the blocking segment
ENDTIME	UTC Timestamp of the ending of the blocking segment
LASTCHANGED	UTC Timestamp of the last change of the blocking segment (delta in the ERP)
LASTUPDATED	UTC Timestamp of the last update of the blocking segment (delta in BW)
BLOCKVALUE	Overall status of credit checks
BUKRS_VF	Company code to be billed
KNKLI	Customer's account number with credit limit reference
KKBER	Credit Control Area
KUNRG	Payer
GSBER	Business Area
GRUPP	Customer Credit Group
SBGRP	Credit representative group for credit management

We will keep all the blocking segments presented by starting and ending timestamp to be able to present the different credit blocks.

The extraction program (ZZV_KPI_CREDITBLOCK_ORDERS2) :

- Selection :

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The first parameter of the program permit to limit the scope of the data loading. It will permit to extract the orders that must be considered in the current extraction.

3 ways will be used to select the orders :

- An order created during this period
- An item of an order has been created during this period
- A change of credit block status has occurred during this period

The second parameter will permit to limit the scope to one sales document to be able to make tests if needed.

With the list of orders, we will make the following operations :

1. We will see if a previous data load has already occurred for these orders (based on the LASTCHANGED timestamp).
 - a. If it's the case, we will continue the previous process without having to go through the complete live the order.
 - b. If there is no entry, we begin the data load from the beginning.
2. The flow to extract the orders is :
 - a. Get the last status of the order (VBUK)
 - b. Then select on the change tables the changes of the credit block status (from 'B' or to 'B') to fill the segments (CDHDR-CDPOS)
 - c. Complete the uncomplete segments if needed from the creation time of the order (to manage the case when an order has been created with a credit block not present in the change log tables)

The data load can be loaded by period chosen by the users : for example, it's possible to split the process by week to reduce the loading time.

Output of the program

The program will load the intermediate table ZZV_KPI_CREDBL_2. The data will be presented by segments with a starting/ending dates and time.

Why to work by segment ?

- It permits to avoid to duplicate records. If we take a snapshot each month, we will have several time the same order with all the status attached. By segment, the program will automatically fill the old segments if needed without having to repeat the old status.
- It will help us to perform the delay calculation without having to fix the number of hours, the calculation can be done at the query level.

Different cases : [blocked URL](#)

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- Case 1:

The segment starts before the current period, and finish during the month.

The segment will count 2 times : for the month M-1, and for the month M.

- Case 2:

The segment starts and finish during the period.

The segment will count 1 time : during the period.

- Case 3:

The segment start during the period and finish after the end of the period.

The segment will count several times : during the period M, and M+... until the segment will be ended.

- Case 4:

The segment start before the period, and end after the end of the period.

The segment will count several times : M-..., during the period, and M+...

Only the orders released during the period will be counted to provide the average release time of the credit check.

How to know that an order is active or not ?

To check if an order is active or not, there is a status in the table VBUK, but for a reason that I ignore, this field is changed without having an entry in the change log (probably done in a user-exit).

Then the only way to process is to go through the items, and consider an order with all its items delivered as closed.

To complete this task, we have created a new technical blocking type "CREAT" to store the status active of an order with a start and end time.

The attribution of the GBU

The GBU is attributed in PF1 and RHO by the business area, in WP1, the GBU is attributed by the division and the distribution channel. For the second case, the division is present at the header and item level. The logic is to read first the division at the header level, then replace it by the value found at the item level.

Sales orders eligible for credit management

The sales orders that will be extracted by the program must have a sales document type that are activated for credit management check (TVAK-KLIMP = 'D').

The sales document types are not harmonized, you will find a list by system in the Annexes.

Extra information about particular blocking codes

- CREAT : Life of the order (technical field)

This blocking type is a technical blocking type to be able to recognize the active orders during a period.

- CMGST : Overall status of credit checks

Main status of the order. This order should reflect the status of the sub-blocking types.

In the ERP, the overall status is sometimes close, but not the sub-blocking types. Then, the extractor automatically closes the sub-status if the overall status has been closed to provide correct data in the report.

- CMPSL : Status of credit check of reserves 4

Status of credit check of reserves 4 - I do not know this field and it seems there are no programs/FM using or populating it. I checked VBUK and there are no SO with it populated, so I would say, not used in SOLVAY.

- CMPS0 : Tolerance (Status of credit check for customer reserve 1)

Tolerance (Status of credit check for customer reserve 1) - Used in SOLVAY - this blocking is activated for risk categories that have a bonus of 5% or 10% of its credit limit (please see risk categories info on page 12 - Dynamic Check table, Column Tolerance). But we set a boundary of 100K€ (Risk categories 3X) or 250K€ (Risk categories 1X and 2X), depending on risk category, for the maximum bonus.

- CMPS1 : Advance payment (Status of credit check for reserve 2)

Advance payment (Status of credit check for reserve 2) - Used in SOLVAY - this blocking is activated when you have credit status 003 (Doubtful Customer), 004 (Letter of Credit) or 005 (Payment in Advance) in FD33 transaction.

- CMPS2 : Status of credit check for customer reserve 3

Not used for the moment.

In the report

We have to present the following indicators with the corresponding technical field :

Reason in the report	Technical field
For limit reason	CMPSB
For overdue reason	CMPSF
For old financial information (expired validity date)	CMPSE
For mix reason	One of the blocking type in the list This blocking type will be managed in BW
For payment term reason	CMPSD

How to obtain the different indicators :

- % of blocked orders for credit reasons
 - Total Number of orders blocked during the period divided by the total number of orders

By order, check if a blocking segment exists, if yes count it. At the end divide the total by the total of active orders.

- Total number of blocked orders for limit reason / total number of blocked orders

By order, check if a blocking segment exists (CMPSB), if yes count it. At the end divide the total by the total of active orders.

- Total number of blocked orders for overdue reason / total number of blocked orders

By order, check if a blocking segment exists (CMPSF), if yes count it. At the end divide the total by the total of active orders.

- Total number of blocked orders for old financial information (expired validity date)

By order, check if a blocking segment exists (CMPSE), if yes count it. At the end divide the total by the total of active orders.

- Total number of blocked orders for mix reason / total number of blocked orders

Same as the first indicator.

- Average duration to release a blocked order by blocking reason

Average time in hours to release an order blocked by blocking reason

For each order and segment, calculate the average time (end time – start time)

- Average nbr of orders released in a day

Nbr of orders in average released in a day

Count the number of orders with the rule : end time – start time < (3600*24)

- Orders reblocked

Nbr and % of reblocked orders compared to total of orders blocked

Based on the overall status of the order (CMGST)

The queries

2 queries have been developed for this subject :

- BW_QRY_MVFIAR03_0001 : Detailed query
- BW_QRY_MVFIAR03_0002 : Evolution

A workbook has been created to present the both queries.

Selection screen for both reports :

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Key date for blocked orders : the period is deduced from the day indicated in this field.

For example, if you indicate the 01.12.2014, the period deduced will be 01.12.2014 to 31.12.2014.

The blocking types in the queries have sometimes other texts as in the ERP :

Field	Text in the queries	Text in the ERP
CMGST		Overall status of credit checks
CMPSA		Status of static credit limit check
CMPSB	> Credit Limit	Status of dynamix credit limit check in the credit horizon
CMPSC	Maximum Document Value	Status of credit check against maximum document value
CMPSD	Payment Terms Deviation	Status of credit check against terms of payment
CMPSE	Customer Review Date	Status of credit check against customer review date
CMPSF	Overdue	Status of credit check against open items due
CMPSG	Oldest Open Items	Status of credit check against oldest open items
CMPSH		Status of credit check against highest dunning level
CMPSI	Secured Payment	Status of credit check against financial document
CMPSJ		Status of credit check against export credit insurance
CMPSK		Status of credit check against payment card authorization
CMPSL		Status of credit check of reserves 4
CMPSM	Obsolete Check	Credit check data is obsolete
CMPS0	Tolerance	Tolerance (Status of credit check for customer reserve 1)
CMPS1	Customer Credit Status	Advance payment (Status of credit check for reserve 2)
CMPS2		Status of credit check for customer reserve 3

BW_QRY_MVFIAR03_0001 : Detailed query

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Columns	Explanation
Active orders	This column will present the really active orders in the system. It's a macro view. If an order is active from several months, you will see in all the period before it's definitively closed.
Created in the period	Subset of the previous indicator. This view limit only the view to the orders created during the period you want to see.
Orders blocked	Number of orders blocked for each blocking type during the period. This indicator is aggregated by order : if an order has been blocked several times, it will be counted for 1.
Orders blocked during the period	Subset of the previous indicator. The number only keep the activities of the period (ie. the action has begun during the current period)
Credit blocks	Number of credit blocks. If an order is blocked several times, you will have the real number of credit blocks.
Credit blocks during the period	Subset of the previous indicator. The number only keep the activities of the period (ie. the action has begun during the current period)
Orders reblocked	Number of order reblocked. This value is based on the overall status and aggregated by sales order.

Orders reblocked during the period	Subset of the previous indicator, limited to the current period.
Avg hours to release	Average time to release a credit block. It's the time between the beginning of the blocking segment and the end time.
Released in 24 hours	Number of orders released in 24 hours
Released in 48 hours	Number of orders released in 48 hours

Axes	Technical field	Explanation
BFC Activity 1	0G_CWWE01__C_MAGNITU	Based on the sub-activity, the BFC activity 1
BFC Activity 2	0G_CWWE01__CPFCTR3_2	Based on the sub-activity, the BFC activity 2
BFC GBU	0G_CWWE01__CPFCTR1_2	Based on the sub-activity, the BFC GBU
BFC Group of activ	0G_CWWE01__CPFCTR2_2	Based on the sub-activity, the group of activities
Closed (Time Stamp)	0CSM_CLTI	Closed time for the current segment
Country key	C_COMPPRS__0COUNTRY	Country of the company code
Country of the payer	0PAYER__0COUNTRY	Country of the payer
Created (Time Stamp)	0CSM_CRTI	Create time for the current segment
Cust.Cred.Grp	0CRED_GROUP	Credit group
Customer Group	C_CST_CA2__0CUST_GR_CM	Customer group from Credit account
Flag Intercompany	C_COMPPRS__C_FLGINT	Status of the company code
Geography / Zone	C_COMPPRS__C_ZONE	Zone of the company code
Nb hours to release	C_NBHOURS	Number of hours between the open and close status of the segment
PRS Company code	C_COMPPRS	Company code
PRS Customer	C_CUSTPRS	Customer code
PRS Customer Credit Control Area	C_CST_CA2	Credit account
PRS Payer	C_CUSTPR	Payer
Rating	C_CST_CA2__0RATING	Rating from Credit account
Rep. group	0REPR_GROUP	Representative group
Risk category	C_CST_CA2__0RISK_CATEG	Risk category from Credit account
Sales document	0DOC_NUMBER	Sales document number
Source System	0LOGSYS	Source system of the data
Sub-activity	0G_VWWE01	Sub-activity retrieved from BA in PF1 world, and Division and Distribution channel in RCS
Valid from	0DATEFROM	Start date of the segment
Valid to	0DATETO	End date of the segment

BW_QRY_MVFIAR03_0002 : Evolution

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This report presents data by period calculated from the calendar day chosen in the selection screen.

The blocking types are represented by columns instead of lines in the previous report.

Annexes

- Sales document types

PF1 :

Sales document type	Text
BV	BV Cash Sale
CRMC	CRM Complaints
CRMR	CRM Returns
KBCC	KBCC CC Consign Sto
SB	SB Third-p dir order
SO	SO Rush Order
T1	T1 T1 Fictiv DebitRequ
TD	TD Standard Order
TDIV	TDIV Misc Op
TSC	CRM Sales/Complaints
ZIND	Industr. Façon BR
ZITI	Sales Order ITI BR
ZORB	Standard Order BR
ZPVA	ZPVA Ord.immed.ship
ZPVK	ZPVK On contract
ZRCM	Sales Acct/Order BR
ZTD	ZTD Std Order Val=0
ZTDL	ZTDL Std Order w/o GI
ZTDR	ZTDR TDR w. value 0
ZVEX	Fut. Dely Invoice BR
ZVNP	Non Product Order BR

WP1 :

Sales document type	Text
COB	Schedule agreementBR
KB	Consignment Fill-up
KBB	BR Consig&Loan Deliv
LP	Scheduling Agreement
NL	Replenishment Div.
ORB	BR Standard order
RCM	BR Cta.&Ord. Sales
TA	Standard Order
TAM	Delivery Order
VDOR	Venda à Ordem BR
VEF	BR Anticip. Sales
ZCSB	Service/Qty Contract
ZEXP	BR Export
ZFAC	BR Standard order
ZFEF	fut del tolling
ZLMB	Deb.MemoReq. f.Ctrct
ZLS	Deb.MemoReq. service
ZOR	Immediate delivery

ZPF	Std Ord. Bill.Price
ZPRS	
ZRG	Scheduling Agreement
ZSO	
ZSUC	Service/Scr.Contract
ZVAO	Venda à Ordem BR

- Structure of the table zzv_kpi_creditbl (old structure)

Field	Type	Length	Explanation
MANDT	CLNT	3	Client
PERIO	NUMC	6	Calendar year / month
KKBER	CHAR	4	Credit Control Area
GSBER	CHAR	4	Business Area
BUKRS_VF	CHAR	4	Company code to be billed
KNKLI	CHAR	10	Customer's account number with credit limit reference
CESSION_KZ	CHAR	2	Accounts Receivable Pledging Indicator
KUNRG	CHAR	10	Payer
SBGRP	CHAR	3	Credit representative group for credit management
VBELN	CHAR	10	Sales Document
CMGST	CHAR	1	Overall status of credit checks
CMPSB	CHAR	1	Status of dynamic credit limit check in the credit horizon
CMPSF	CHAR	1	Status of credit check against open items due
CMPSI	CHAR	1	Status of credit check against financial document
CMPSM	CHAR	1	Credit check data is obsolete
CMPSX	CHAR	12	Character Field of Length 12
NBLOC	INT4	10	Number of such block or unblock configuration
CMGS1	CHAR	1	Overall status of credit checks
NDLM1	INT4	10	Not delivered at end of M-1
NDL_M	INT4	10	Not delivered (at end of M)
DEL_M	CLNT	10	Delivered
CRNDL	INT4	10	Created and not delivered (during the preiod M)
CRDEL	INT4	10	Created and delivered
TOTAL	INT4	10	Total of credit relevant orders
PERVE	NUMC	8	Personnel Number
PERVW	NUMC	8	Personnel Number
ERDAT	DATS	8	Date on Which Record Was Created