



## Loan Payment Recalculation

Loan Payment Recalculation  
PS\_LOANPMTRECALC  
Application 14234  
DNAapp ID: 7226049c-86d9-4c15-8c67-867afe366626

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**Overview:**

This application provides the flexibility for loan accounts to have the contractual payment amounts recalculated either on advance, on rate change, on advance and/or rate change, or on demand. The calculations can vary by product and payment amounts can be calculated using percentages, varying terms, and multiple types of tiered processes. Additionally, minimum payment amounts may also fluctuate. This application supports the use of an alternate payment amount and also considers Non Financed Debit Protection Premiums (SINS) included in the calculated total monthly payment.

**Key Benefits:**

This application enables financial institutions to configure payment recalculations using a variety of methods for simple interest loans based on product/account settings.

**Processing:**

This application will offer a variety of methods to recalculate loan payment amounts where the payment type is Note Due (FDUE) or Fixed Principal and Interest (FBI) and the interest method is not amortizing. This application will inactivate the existing payment amount and insert a new payment amount. This process will support recalculation payments based on:

- Advance activity - Advance transactions will be determined using an RTXN reporting group entitled "Custom Payment Recalculation" (8LNG) to allow flexibility in defining what transactions should cause a payment recalculation to occur. The transactions that will be placed in the RTXN reporting group as the default will be **PDSB, OPA, CKUS, and CWTH**. This reporting group can be maintained by the Financial Institution. The parameters allow a financial institution the flexibility to specify a period of time for advance activity or to run the program daily to recalculate based on advance activity. Financial Institutions should be aware that running this program daily for advance activity could result in an account having the payment amount recalculated multiple times on an account multiple times within a month. Special attention should be paid by the Financial Institution to the billing receivable lead days.
- Rate Change Activity – This method identifies accounts that have had a rate change and recalculates the payment amount. Accounts will be selected based on rate activity between the start and thru date parameters. Accounts should be set up in DNA to NOT recalculate payment on rate changes so DNA processing doesn't affect the accounts if using this program to recalculate payments.
- Always - This method allows a Financial Institution to run this program as often as possible and recalculate all accounts, regardless of transaction and/or rate activity.

NOTE: If an account is selected for a payment recalculation based on the combination of product variables and parameters and there is no current payment for the account, an FDUE payment (Fixed Due Calc Int on Pmt) will be calculated and inserted if the Note Due balance type is on the product. If the Note Due balance is not on the product and an account has no active payment row, the account will be listed as an exception for manual processing.

The activity table will be updated with all changes made by this application.

Below is an example of the calculations that could result on the same account based on the different variables values allowed for Round Principal Balance and a Payment Rounding Method = 1 - Do Not Round.

Example: Loan balance is \$ 10,312.00

Percent of Balance: 3.00%

Round Method 1 – Payment would be 309.40

Round Method 2 – Payment would be 309.00

Round Method 3 – Payment would be 310.00

Additional rounding options are available by using the “8URM” (User-Defined Pmt Rounding Meth) to enter a custom rounding method code. It is important to note that the financial institution needs to be aware that the rounding methods creates in the RNDMETH table will be included in the other function drop downs that utilize the RNDMETH table such as rates, standard payment recalculations and escrow payment recalculations. When creating the rounding methods, Financial Institution should use a unique naming convention that would identify the rounding method for use in loan payment rounding only.

If an account with a receivable generation method of On Cycle is using a payment recalculation method that relies on a term in the calculation, all On Cycle receivable calculations will assume a payment frequency of monthly. A payment type of Note Due (FDUE) is supported with On Cycle receivable generation in this application; a Fixed Principal and Interest (FBI) payment type is NOT supported with On Cycle receivable generation in this program.

### **Rate Changes**

The Start and Thru Date Parameters will also be used to look for account level rate change information within the period that will force a payment recalculation. If an account has had a rate change for the period entered in the parameters and the ‘Reason to Recalc Payment’ variable is set to either ‘Rate Change’ or ‘Advance and Rate Change’, the payment amount will be recalculated.

Additionally, a new optional parameter will be provided to determine if the payment should be change if the interest rate was reviewed but it didn’t actually change.

### **Fixed Balance (FB) Processing**

In order for this program to calculate the loan payment amounts for “FB” (Fixed Balance) loans, it is strongly recommended that the “8PCN” (Payment Calculation Method) product-level variable be set to “Level Principal Payment”. The calculation will be for the principal portion of the payment only and will require a corresponding Variable Calculated Interest (VINT) payment row on any account with a Fixed Balance (FB) principal payment row in order for the system to bill and collect interest in the payments.

The amount of the Fixed Balance (FB) payment will be recalculated by determining the remaining term of the loan and dividing it into the principal balance minus the outstanding principal balance due. Remaining term is determined by first looking for an amortization term in the account interest history when the balloon indicator is set to Y, then if there is no value, looking at the account for either a value in Anticipated Payoff Date or Maturity Date. The remaining term will be calculated by comparing the system date to the maturity date or anticipated payoff date of the account. Any accounts that will use the remaining term method will require one of the above two dates for purpose of the calculation.

$$50,000.00 / 180 = \$277.78$$

$$49,722.22 / 179 = \$277.78$$

$$49,444.44 / 178 = \$277.78$$

This method will be supported for both calendar period and On Cycle receivable generation method accounts. For On Cycle accounts, the payment frequency in all calculations will always assume monthly (Mnth).

An exception message will be provided on the report for any account that has a FB payment row and the corresponding VINT payment row is not established on the account. Those accounts will need to be fixed manually.

**Biweekly Payment Calculations**

For biweekly accounts, the calculation will use the DNA calculation variable “Use Biwk Actual Pmt Calc” (BKAP) when determining the new payment amount. When determining the amount of a biweekly payment based on the calculation variable “Minimum Monthly Payment” (8MIN), the amount will be calculated into a biweekly equivalent using the following:

Biwk Actual Variable	Calculation
BKAP = No	\$ Minimum Monthly Payment/2
BKAP = Yes	\$ Minimum Monthly Payment * 12/26

Ex: Minimum Monthly Payment \$ 15.00  
 BKAP = No Minimum Monthly Payment = 7.50  
 BKAP = Yes Minimum Monthly Payment = 6.92

If using any of the recalculation methods that require a rate (calculation) schedule, there is a rate schedule purpose entitled “Recalculate Loan Payment” (8RLP) that optionally can be used to distinguish the rate schedule.

**Pre Authorized Transfers (Allotments)**

This process will also support changing the amount of a scheduled pre authorized transfer to the loan account with a transaction type of “Regular Payment”, with support for a borrower elected alternate payment amount. Optionally updating transfer amounts is controlled by two run time parameters and the value in the “Update Scheduled Pre Authorized Transfers” (8UPA) calculation variable. Scheduled pre authorized transfers (allotments) with a transaction type of “Regular Payment” will be updated in the case where the newly calculated payment amount is greater than the current payment amount.

The “Update Scheduled Pre Authorized Transfers” (8UPA) variable, will control whether transfer amounts are updated when the frequency of the transfer is different than the frequency of the loan payment.

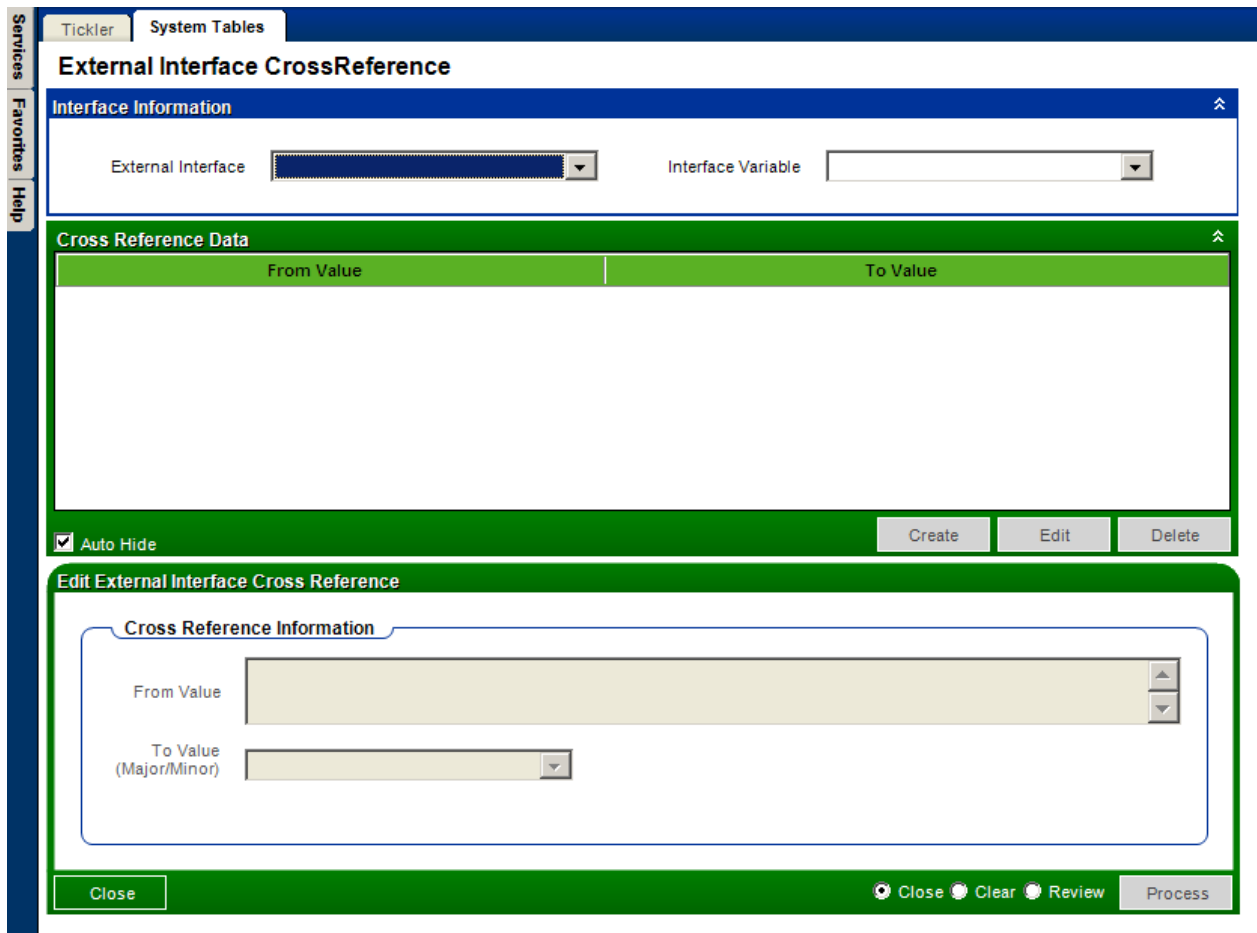
Three scenarios will be supported:

1. Update varying allotment frequencies – if the new payment (calculated, borrower alternate or minimum) with a Payment Frequency Code of “MNTH” and the Allotment Payment Frequency has a different calendar period associated, this application will refer to the External Cross reference tables to determine the factor to multiply the Monthly payment by to update the Pre-Authorized transaction by. In the situation where the receivable generation method is On Cycle (CYCL), a payment frequency of monthly (MNTH) will be assumed when recalculating the transfer amount.

The following values have been set up:

From Value	To Value
BIWK	0.5
BWK4	0.5
MNTH	1.0
SEMM	0.5
SM5E	0.5
SM6E	0.5
SM15	0.5
WEEK	0.25
WEK4	0.25

The values listed above will be included with the delivery. Values can be maintained in DNA™ via Services>System>System Tables>C-G Tables>External Interface CrossReference:



2. Update Same Frequency – Accounts where the frequencies do not match will have the payment amount frequencies recalculated and the account will be updated but the transfer record will not be affected. It will be listed on the report as an exception. This is how the application works currently.
3. In the situation where the receivable generation method is On Cycle (CYCL), a payment frequency of monthly (MNTH) will be assumed when updating the transfer amount.
4. Exclude– this value will allow a product or account to bypass preauthorized transfer processing when this application is run.

Account level calculation variables are supported.

In the case where there is an alternate payment amount stored in a user defined field, the alternate payment amount should be based on the frequency of the loan payment and the scheduled allotment. The newly calculated payment amount will be compared to the existing amount of the user field value and if the payment amount in the user field is greater than the transfer amount, the transfer amount will not be modified. In the case where there is an amount in the Alternate Payment user field and the newly calculated payment amount is greater than the value in the user field, the user field value will be ignored and the higher payment amount will be used to update the pre authorized transfer amount. In this scenario, a borrower who has elected for a higher transfer amount will not be adversely affected during

the recalculation process but if the contractual payment increases higher than the alternate payment amount, the account will not result in only being partially paid and become delinquent.

### **Additional Payment Amount**

A second user field will be supported when calculating the new payment amount. The user field will store an ADDITIONAL amount to be adding to the calculated payment amount, not an alternate payment amount. This amount will be added to the calculated amount with no calculations performed for various payment frequencies. If the value in the account level user field is \$ 50.00, \$ 50.00 will be added to the payment.

No account should have both an active Alternate Payment amount and an active Additional Payment Amount user field. When that condition occurs, an exception will be provided on the report for review:

Acct # XXXX – Multiple User Field values exist, payment amount not updated

This process can utilize start and thru dates for a specific time period if the method is advance or it can be run nightly. Financial Institutions need to consider product level billing receivable lead day settings and varying account level due dates when determining run time frequency. It is recommended that this be placed in the end of the PreCycle batch template when run to make sure any transaction activity for the day has already occurred if recalculating on advance and any rate change activity has occurred if recalculating based on rate change activity.

Changes to accounts will be written to the DNA database using the Activity Type of Custom Payment Calculation (CPMT) in the Activity Category of Account Maintenance (AMNT).

### **Non Financed Debit Protection Premiums (SINS)**

When the calcvar (8NCP- Include Non Cap. Pmt. Calc) indicates that the non capitalized SINS is to be included in the new calculated payment amount, the application looks for any SINS transactions happened on the account after the last receivable generated for subaccounts with Baltypcd equals to 'SINS'. The application then sum the transaction amount of all these transactions and subtract it from the new calculated payment amount.

Example:

SINS Amount = \$12.50

Principal Balance = \$10,000

Initial Payment amount at 1% of balance = \$100.00

Final calculated payment amount \$87.50 (\$100.00 - \$12.50)

Total payment = \$100.00 (Note Due \$87.50 + SINS \$12.50)

#### **Parameters:**

The values required in the parameters will depend on the payment calculation method being used. For example, if the payment recalculation is based on an advance, the "Start Date" and "Thru Date" parameters could be populated to define the range to look for advances.



All loan products will need to have the payment recalculation variables selected in order for accounts to be processed with this program. The purpose of the additional parameters for loan product types is to allow the frequency to be different by loan product if desired and to allow for different allotment processing if necessary.

Parameter	Code	Description (how used)	Required	Default
Include Interest Rate Reviews	8IRV	<p>This optional parameter will determine whether to recalculate the payment amount when the loan account has gone thru an interest rate re-pricing with no impact to the actual account interest rate.</p> <p>Yes – If a new interest rate is identified for an account based on the effective date of the rate, even if the former rate was the same, the payment amount will be recalculated.</p> <p>No – The payment amount will only be recalculated if the rate at the account level has changed during the period defined by the Start and Thru Data parameters.</p> <p>If left blank, then default value will be considered as 'N'.</p>	N	N
Addtl Pmt Amt User Field	8APA	<p>The User Field Code used to specify an Additional Payment amount to add to the recalculated payment amount.</p> <p>If left blank, then Additional Amount will be considered as 0 for the calculation of new payment amount.</p>	N	<Blank>
RptOnly_YN	RPT	<p>If this is set 'N', it will update the DNA database. When set to Y, none of the reported changes will be made.</p> <p>If left blank, then default value will be considered as Y.</p>	N	Y
StartDate	SD	<p>Beginning Date to use when searching for advance transactions and rate change history.</p> <p>If left blank, then default value will be considered as Queue Effective Date.</p>	N	<Blank>
ThruDate	TD	<p>End Date to use when searching for advance transactions and rate change history.</p> <p>If left blank, then default value will be considered as Queue Effective Date.</p>	N	<Blank>

Parameter	Code	Description (how used)	Required	Default
Major Account Type Code	MJCD	A comma separated list of valid product major types. If left blank, then default value will be considered as all Major products.	N	CNS
Minor Account Type Code	MICD	A comma separated list of valid product minor types. If left blank, then default value will be considered as all Minor products.	N	<Blank>
Current Acct Status Code	CASC	A comma separated list of valid account statuses to process. If left blank, then default value will be considered as ACT and NPFM.	N	ACT,NPFM
Update Active Allotments	8UAA	If Report Only =“N” then the scheduled amount for active pre authorized transfer will be updated. The “Update Scheduled Pre Authorized Transfers” (8UPA) calculation variable will be used to support this parameter. The possible values are: Y - Yes N – No  If left blank, then default value will be considered as Y.	N	Y
User Field Code	8USF	The User Field Code used to specify an Alternate Payment at the account level.  If left blank, then Alternate Payment Amount will not be specified.	N	<Blank>

Parameter	Code	Description (how used)	Required	Default
Report Selection	8RPS	Dictates which report is printed. The choices are: 1 – Original Report 2 – Expanded Report  The “Expanded Report” option replaces the Changed Pmt YN and the Pre-Auth Updated YN data items with the following:  Calc Schedule, Term Used (Specific or Remaining), Alt Pmt Amount, Addtl Pmt Amount, Pre Auth Freq, PreAuth Amount.  If left blank, then default value will be considered as 1.	N	1
Create Account Note	8CAN	This parameter will be used to indicate whether a note is placed on the account when a payment is updated by the application.  Y – Add note to the account and inactivate previous notes N – Do not add note to the account	N	Y

**Variables:**

The calculation variables will be required at the product level and will support account level overrides. These variables, entitled “Recalculate Loan Payment vars” (8HLC) calculation category and “Recalculate Loan Payment Vars” (8LPT) and the specific variables available will be:

Variable	Code	Description (how used)	Data Type	Default
Reason to Recalc Payment	8RPR	This variable will determine the reasons to recalculate the payment of an account. 1. Advance 2. Rate Change 3. Advance and Rate Change 4. Always 5. Never	STR	<Blank>

Variable	Code	Description (how used)	Data Type	Default
Payment Calculation Method	8PCN	<ol style="list-style-type: none"> <li>1. Percentage of Balance</li> <li>2. Tiered Pmt Based on Balance (Note: If the tier value is less than 1.00, the application will assume that this is a rate and not a fixed payment amount – this will allow financial institutions to have a mix of rates and fixed payment amounts based on the balance ranges)</li> <li>3. Term Payment</li> <li>4. Level Principal Payment</li> <li>5. Tiered Pmt Based on Note Rate</li> <li>6. Term Pmt Based on Balance</li> <li>7. Percentage of Current Balance based on Current Credit Limit Amount (this option uses the loan limit amount to determine the tier to use when calculating the payment on the current balance)</li> </ol> <p>NOTE: Methods 1, 2, 5, 6 and 7 require the use of a calculation schedule (For Method 6, enter the term/1000, for example, 60 months would be entered as .06; 120 months would be entered as .12 etc.). Methods 3 and 6 also require the use of the Balance to Use calculation variable.</p>	STR	<Blank>
Minimum Monthly Payment	8MIN	The minimum payment to enforce when recalculating the payment amount. Enter whole dollar amounts only, i.e. 50 is \$ 50.00.	CUR	<Blank>
Minimum Pmt Compare YN	8CPM	<p>This YES/No variable will allow financial institutions to not enforce the minimum payment when that amount would be more than is required to pay the loan down to 0.</p> <p>Yes – if the principal balance of the account is less than the minimum payment amount, the newly calculated payment will be the balance of the loan plus estimated accrued interest through the next payment due date.</p> <p>No – Minimum payment will always be enforced on the account regardless of the balance of the loan.</p>	YN	<Blank>

Variable	Code	Description (how used)	Data Type	Default
Payment Calc Schedule Number	8PCS	This variable holds the calculation schedule number that should be referenced when recalculating the payment amount. A tiered balance schedule must be established to identify the payment percentages or amounts associated with the different balance ranges.  NOTE: This variable is required when the Payment Calculation Method is either 1,2 or 7..	INTG	<Blank>
Annual Payment Recalc Date	8ARD	The date of annual payment recalculation outside of the current variable Reason to Recalc Payment (8RPR). If the annual payment recalculation date falls on a non-processing day, the recalculation will be performed during the preceding processing day.  Enter as MMDD  If this variable is blank, it will not be considered.	STR	<Blank>
Allow Payment Change	8APC	This Yes/No variable will identify whether to allow a payment change if the recalculated payment is less than the current payment amount.  Yes (Y) – Allow payment change. No (N) – Do not allow payment change.	YN	Y

Variable	Code	Description (how used)	Data Type	Default
Term Definition	8PTD	<ol style="list-style-type: none"> <li>1. Remaining Term - the application will use the remaining term to recalculate the payment</li> <li>2. Specific Term -a specific term must be input into the Specific Term Variable. This value should be selected for Term Pmt Based on Balance payment calculation method with a blank value for Specific Term (8STV).</li> <li>3. Not applicable</li> <li>4. Remaining Term except Advances - Remaining Term unless an Advance was processed then use the Specific Term</li> <li>5. Remaining Term except Rate Chg - Remaining Term unless Rate Change has occurred then use Specific Term</li> <li>6. Remaining Term except Adv or Rate - Remaining Term unless an Advance was processed or Rate Change has occurred then use Specific Term</li> </ol> <p>NOTE: Remaining term is determined by first looking for an amortization term in the account interest history when the balloon indicator is set to Y, then if there is no value, the Anticipated Payoff Date or Maturity Date will be used to determine the remaining term.</p>	STR	<Blank>
Specific Term	8STV	The value of the term in months to use when calculating the new payment subsequent to a rate change or an advance. The number of months to use for amortizing when calculating a new payment. When the Term Definition variable is set to Remaining Term, this variable should be left blank. It should also be left blank for the payment calculation method of Term Pmt Based on Balance.	NUM	<Blank>

Variable	Code	Description (how used)	Data Type	Default
Round Principal Balance	8RPB	Indicates whether the principal balance should be rounded prior to the payment recalculation.  Valid values are: <ol style="list-style-type: none"> <li>1. Do Not Round</li> <li>2. Round to Nearest Hundred</li> <li>3. Round up to Next Hundred</li> <li>4. Round to Nearest Thousand</li> <li>5. Round up to Next Thousand.</li> </ol>	STR	<Blank>
Payment Rounding Method	8RND	Indicates whether the payment should be rounded after being calculated.  Valid values are: <ol style="list-style-type: none"> <li>1. Do Not Round</li> <li>2. Round to Nearest Dollar</li> <li>3. Round Up to Next Dollar</li> <li>4. Round Up Non-Monthly Pmts</li> </ol> <p>“Round Up Non-Monthly Pmts” works exactly the same as “Round Up to Next Dollar” except it only applies to payments that are not monthly, so monthly payments will not be rounded.</p> <p>Additional rounding options are available by using the “8URM” (User-Defined Pmt Rounding Meth) to enter a custom rounding method code.</p>	STR	<Blank>
Update Pre Authorized Transfer	8UPA	This variable will determine in what situation Scheduled Pre Authorized Transfer amounts should be updated.  Three options will be offered: <ol style="list-style-type: none"> <li>1. Update Same Frequency Only.</li> <li>2. Update Mismatch Frequencies - Update all transfer amounts, regardless of mismatched frequencies where the Monthly Payment Amount will be divided to match the Pre Authorized Transfer schedule. Only Monthly Payments are eligible for this process.</li> <li>3. Exclude Transfer from Update - Exclude transfer records from being updated</li> </ol>	STR	<Blank>

Variable	Code	Description (how used)	Data Type	Default
Balance to Use	8BTU	<p>This variable will determine what balance to use when calculating the Term Payment Based on Balance (Payment Calculation Method 6).</p> <p>Two options will be offered:</p> <ol style="list-style-type: none"> <li>1. Current Balance</li> <li>2. Balance as of Last Advance</li> </ol>	STR	<Blank>



Variable	Code	Description (how used)	Data Type	Default
User-Defined Pmt Rounding Meth	8URM	<p>Indicates whether the payment should be rounded after being calculated using the financial institution defined rounding methods created in the system RNDMETH table.</p> <p><u>If there is a value in this variable it will override the existing payment rounding variable (8RND).</u></p> <p>For example, an Financial Institution creates a new rounding method in the System Table RNDMETH called 'Custom Round 10' (RN10). The RndMethAmt in the table is 10. If the application calculates the payment amount to be \$75.84 without any rounding and the Financial Institution uses this variable with a value of 'RN10', the following calculation will be performed (based on the different Up/Down checkboxes):</p> <p>If the Round Up = Round Down checkbox (meaning they're both checked or they're both unchecked) the calculation would be:</p> $\text{TRUNC}(75.84 / 10) * 10 + (\text{ROUND}((75.84 - \text{TRUNC}(75.84 / 10) * 10) / 10) * 10)$ <p>If Round Up is only checked, the calculation would be:</p> $\text{TRUNC}(75.84 / 10) * 10 + 10$ <p>If Round Down is only checked, the calculation would be:</p> $\text{TRUNC}(75.84 / 10) * 10$ <p>Note: The Financial Institution defined RNDMETH must have a value in the RoundMethAmt</p>	STR	<Blank>
Include Non Cap. Pmt. Calc	8NCP	<p>This variable determines whether the SINS is considered when calculating the new payment</p> <ol style="list-style-type: none"> <li>SINS</li> </ol>	STR	<Blank>

**External Interface Variables:**

External Interface Category

External Interface Category	Code	Description (how used)
Period Multiplier for PreAuth	8PMP	The external interface category is used to determine the factor to multiply the Monthly payment by to update the Pre-Authorized transaction by.

External Interface

External Interface	Code	Description (how used)
Period Multiplier for PreAuth	8PMP	The external interface category is used to determine the factor to multiply the Monthly payment by to update the Pre-Authorized transaction by.

External Interface Variable

External Interface Variable	Code	Description (how used)
Period Multiplier for PreAuth	8PMP	The external interface category is used to determine the factor to multiply the Monthly payment by to update the Pre-Authorized transaction by.

**Scheduling and re-run information:**

This is an updating application that cannot be run back in time.

Report (s):

With Report Selection parameter as 'Original Report'

Bank: Test Institution	Loan Payment Recalculation	Run Date: 04-05-2016
Report: PS_LOANPMTRECALC		Post Date: 04-01-2016
Queue Number : 40527		Run Time: 09:46:39
Application Number: 14234		Cash Box:
Queue Sub Number : 2		
SCHEMA OSIBANK		
DATABASE NAME CS13.WORLD		
RELEASE DNA 4.1.0.0		
03-31-2016 11:13:56 AM 440648 G:\OSI\BANK\SQT\4100\BAT_EXE\PS\		
REPORT PARAMETERS		
Addtl Pmt Amt User Field:		
Create Account Note: N		
Current Acct Status Code: ACT,NPFM		
Include Interest Rate Reviews: N		
Major Account Type Code: CNS		
Minor Account Type Code:		
Report Selection: 1		
RptOnly_YN: Y		
StartDate:		
ThruDate:		
Update Active Allotments: Y		
User Field Code-SUSP:		

Bank: Test Institution	Loan Payment Recalculation	Run Date: 04-05-2016						
Report: PS_LOANPMTRECALC		Post Date: 04-01-2016						
		Page: 1 of 6						
Account Number	Name	Minor	Balance Used to Calc	Current Rate	Current Payment	New Payment	Changed Pmt Y/N	Pre-Auth Updated YN
7216075132	Bd, Heavuy	CNS/SIGN	4,178.63	5.5000	42.00	42.00	N	N
7216092425	Lbjbvq, Munish	CNS/SIGN	4,764.89	7.5000	48.00	48.00	N	N
7216077906	Jflvusf, Vpejwc E	CNS/DLAC	7,831.37	9.5000	172.00	172.00	N	N
7216077344	Miaheelsm, Hukstf F	CNS/DLAC	10,283.43	9.5000	491.00	491.00	N	N
7216077378	Mivoxif, Zbeios A	CNS/DLAC	6,881.56	9.5000	329.00	329.00	N	N
7216077899	Roakmk, Dykrs L	CNS/DLAC	5,245.22	9.5000	251.00	251.00	N	N
7216077617	Lbkts, Elmey L	CNS/DLAC	11,162.40	9.5000	533.00	533.00	N	N
7216077592	Brah, Biawck	CNS/DLAC	14,572.44	9.5000	696.00	696.00	N	N
7216077609	Crcrkrs, Gsqjam J	CNS/DLAC	7,479.18	9.5000	357.00	357.00	N	N
7216077360	Mickk, Jigbt L	CNS/DLAC	9,965.03	9.5000	441.00	441.00	N	N
5547700202	Gspyrvkxg, Ywdk L	CNS/NHEL	15,251.36	5.0000	578.20	578.20	N	N
5456300201	Dvgsiw, Gmwno E JR	CNS/NHEL	14,667.03	5.0000	537.97	537.97	N	N
7200071680	Ihsyyc, Vbnyc M	CNS/NHEL	8,496.03	2.9900	304.04	304.04	N	N
7216080818	Yuadi, Nrmun J	CNS/DLAC	11,822.71	9.5000	445.00	445.00	N	N
7216080800	Yiculhpmuun, Rnqptds P	CNS/DLAC	23,641.02	9.5000	889.00	889.00	N	N
7216080793	Yebawniy, Vybiujb D	CNS/DLAC	20,097.87	9.5000	756.00	756.00	N	N
9976603367	Wiqim, Wdvzpon	CNS/NHEL	10,146.60	12.5000	409.16	395.53	N	N
5666300201	Gsscfjp, Jmhljme W	CNS/NHEL	13,915.14	5.0000	494.38	494.38	N	N
9976603379	Sfkso, Outacu M	CNS/NHEL	2,666.85	9.5000	97.35	100.22	N	N
7200073589	Kikvh, Rowqi	CNS/NHEL	14,260.42	14.7500	571.20	571.20	N	N
1104100201	Iwrxrp, Ucfwcfv	CNS/NHEL	9,723.64	5.0000	345.47	345.47	N	N
1108300201	Lmwb, Ufqlpvf J	CNS/NHEL	15,657.52	5.0000	556.29	556.29	N	N
6712500201	Posdxb, Zirwdxf J	CNS/NHEL	12,398.35	5.0000	440.50	440.50	N	N
7200071169	Ovlllo, Vwsyhsj J	CNS/NHEL	11,702.35	8.0000	431.66	431.66	N	N
7200078639	ENBMSIO, SYFZBL M	CNS/NHEL	1,384.09	18.0000	56.16	56.16	N	N

**Field Listing:**

Field	Description
<b>Loan Payment Recalculation</b>	
Account Number	The account number on which payment amount recalculated.
Name	The name of the owner of account.
Minor	The minor product type of account.
Balance Used to Calc	The account balance used for payment recalculation.
Current Rate	The current interest rate on account.
Current Payment	The current payment amount of account.
New Payment	The new payment amount of account.
Changed Pmt Y/N	The payment amount changed or not indicator.
Pre-Auth Updated YN	The allotment updated or not indicator.
<b>Summary</b>	
Grand Total # of Accounts processed	Total number of accounts processed for payment amount recalculation.

With Report Selection parameter as 'Expanded Report'

```

Bank: Test Institution                               Loan Payment Recalculation                               Run Date: 04-05-2016
Report: PS_LOANPMTRECALC                           Post Date: 04-01-2016

Queue Number      : 40526                               Run Time: 09:21:08
Application Number: 14234                               Cash Box:
Queue Sub Number  : 2

                                SCHEMA
                                OSIBANK

                                DATABASE NAME
                                CS13.WORLD

                                RELEASE
                                DNA 4.1.0.0

                                03-31-2016 11:13:56 AM 440648 G:\OSI\BANK\SQT\4100\BAT_EXE\PS\

                                REPORT PARAMETERS

                                Addtl Pmt Amt User Field:
                                Create Account Note: N
                                Current Acct Status Code: ACT,NPFM
                                Include Interest Rate Reviews: N
                                Major Account Type Code: CNS
                                Minor Account Type Code:
                                Report Selection: 2
                                RptOnly_YN: Y
                                StartDate:
                                ThruDate:
                                Update Active Allotments: Y
                                User Field Code-BUSF:
    
```

```

Bank: Test Institution                               Loan Payment Recalculation                               Run Date: 04-05-2016
Report: PS_LOANPMTRECALC                           Post Date: 04-01-2016
                                                    Page: 1 of 6
    
```

Account Number	Name	Minor	Balance Used to Calc	Curr Rate	Current Payment	New Payment	Calc Term Sched Used	Alt Payment Amount	Addtl Payment Amount	Pre Auth Freq	PreAuth Amount
7216075132	Ed, Heavuy	CNS/SIGN	4,178.63	5.5000	42.00	42.00	408				
7216092425	Lbjbvq, Munish	CNS/SIGN	4,764.89	7.5000	48.00	48.00	408				
7216077906	Jfilvusf, Vpejwc E	CNS/DLAC	7,831.37	9.5000	172.00	172.00	50				
7216077344	Miaheelsm, Hukstf F	CNS/DLAC	10,283.43	9.5000	491.00	491.00	23				
7216077378	Mivoxif, Zbeios A	CNS/DLAC	6,881.56	9.5000	329.00	329.00	23				
7216077899	Roakmk, Dykrs L	CNS/DLAC	5,245.22	9.5000	251.00	251.00	23				
7216077617	Lrbkts, Blmey L	CNS/DLAC	11,162.40	9.5000	533.00	533.00	23				
7216077592	Brah, Biawck	CNS/DLAC	14,572.44	9.5000	696.00	696.00	23				
7216077609	Crcrkrs, Gsqjrm J	CNS/DLAC	7,479.18	9.5000	357.00	357.00	23				
7216077360	Micku, Jigt L	CNS/DLAC	9,965.03	9.5000	441.00	441.00	25				
5547700202	Gspyrvkxg, Ywdk L	CNS/NHEL	15,251.36	5.0000	578.20	578.20	28			MONTH	
5456300201	Dvgsiw, Gmwno E J	CNS/NHEL	14,667.03	5.0000	537.97	537.97	29				
7200071680	Ihsyye, Vbnyc M	CNS/NHEL	8,496.03	2.9900	304.04	304.04	29				
7216080818	Yuadi, Nrmuan J	CNS/DLAC	11,822.71	9.5000	445.00	445.00	30				
7216080800	Yiculhpnuun, Rnqwtz	CNS/DLAC	23,641.02	9.5000	889.00	889.00	30				
7216080793	Yebawniy, Vybiujb D	CNS/DLAC	20,097.87	9.5000	756.00	756.00	30				
9976603367	Wiqim, Wdvspon	CNS/NHEL	10,146.60	12.5000	409.16	395.53	30				
5666300201	Gscfjfp, Jmhljme W	CNS/NHEL	13,915.14	5.0000	494.38	494.38	30				
9976603379	Sfkso, Outscu M	CNS/NHEL	2,666.85	9.5000	97.35	100.22	30				
7200073589	Kikvh, Rowqi	CNS/NHEL	14,260.42	14.7500	571.20	571.20	30				
1104100201	Iwzarp, Ucfwcfv	CNS/NHEL	9,723.64	5.0000	345.47	345.47	30				
1108300201	Lmbb, Ufqlpvf J	CNS/NHEL	15,657.52	5.0000	556.29	556.29	30				
6712500201	Posdxb, Zirwdf J	CNS/NHEL	12,398.35	5.0000	440.50	440.50	30				
7200071169	Ovillo, Vwsyhaj J	CNS/NHEL	11,702.35	8.0000	431.66	431.66	30				
7200078639	EMENSIO, SYFZEL M	CNS/NHEL	1,384.09	18.0000	56.16	56.16	31				

Report sorted by Major/Minor/Last Name(Organization Name)

**Field Listing:**

Field	Description
<b>Loan Payment Recalculation</b>	
Account Number	The account number on which payment amount recalculated.
Name	The name of the owner of account.
Minor	The minor product type of account.
Balance Used to Calc	The account balance used for payment recalculation.
Curr Rate	The current interest rate on account.
Current Payment	The current payment amount of account.
New Payment	The new payment amount of account.
Calc Sched	The calculation schedule used for payment recalculation.
Term Used	The term used for payment recalculation.
Alt Payment Amount	The alternate payment amount.
Addtl Payment Amount	The additional payment amount.
Pre Auth Freq	The allotment frequency.
PreAuth Amount	The allotment amount.
<b>Summary</b>	
Grand Total # of Accounts processed	Total number of accounts processed for payment amount recalculation.

Exceptions will be provided as detailed below:

Message	Scenario
No Payment Calculated –Review Account	No existing payment on the account and the Note Due balance type is not on the product.
Pmt Updated Only-Review Allotment	Scheduled Pre-Authorization frequency doesn't match the payment frequency and the preauthorized transfer amount was not updated.
Pmt Updated-Future Pmt Amt Deleted	A future dated payment amount was deleted from the account during the recalculation.
Error reading Rate Schedule specified by 8PCS product variable. Please review.	<p>If the payment calculation method is either</p> <ul style="list-style-type: none"> <li>• Percentage of Balance</li> <li>• Tiered Pmt Based on Balance</li> <li>• Tiered Pmt Based on Note Rate</li> <li>• Term Pmt Based on Balance</li> </ul> <p>then a valid Rate Schedule Number must be entered in the "Payment Calc Schedule Number" (8PCS) product-level variable. Review both the variable and associated Rate Schedule for incorrectly setup data.</p>
The Payment Type of XXXX is invalid for this application.	This program only supports loan payment types of "FDUE","FBI" and "FB"
Payment cannot be updated - A VINT row must be setup for FB loans.	Loans with a Note/Balance payment type of "FB" must have the Note/Interest payment type set to "VINT".

Message	Scenario
Acct # XXXX – Multiple User Field values exist - payment amount not updated	When an account has both an active Alternate Payment amount and an active Additional Payment Amount user field.
Invalid custom Rounding Method Code specified: XXXX or Rounding Method Amount must be greater than zero	Calculation Variable (8URM) has a value however the value either does not exist in the System Table 'RNDMETH' or the value exists but does not have RndMethAmt value
The Payment Frequency does not exist	The payment period does not exist on loan
The Payment Frequency of XXXX is invalid for this application	The payment period is not valid
The Reason Recalc Payment variable is not set on the following product: XXXX	Recalc Payment Reason is not set
ERROR - The payment was not Recalculated for Account: 9999999	A new payment amount could not be calculated.

Warning Messages will be provided as detailed below:

Message	Scenario
WARNING - Payment updated - future payment amount was deleted or WARNING - Payment will be updated and a future payment amount will be deleted	A future dated payment exists
WARNING - Payment updated only - Allotment Period not MNTH, BIWK or WEEK cannot divide payment	Scheduled Pre-Authorization exists, Payment frequency is Monthly, the Pre-Authorization frequency is not Monthly and the Pre-Authorization frequency is missing or invalid from the External Interface Cross Reference variable "Period Multiplier for PreAuth"
WARNING - Payment updated only - Payment Period not MNTH cannot divide the pre-authorized tran	Scheduled Pre-Authorization exists, Payment frequency is other than monthly, Pre-Authorization frequency does not equal Payment frequency
WARNING - Payment updated only - review pre-authorized transactions	A scheduled Pre-Authorization exists, however the Update Pre Authorized Transfer variable is set to NONE or a schedule Pre-Authorization exists, and the runtime parameter Update Active Allotments is set to No.
WARNING - Payment not recalculated. Recalc Payment Reason set to NEVER	Recalc Payment Reason set to NEVER

**Additional requirements:**

- Requires DNA 4.0 or higher
- This process will not create or edit receivables. DNA processing will continue to generate all necessary receivables based on the Next Payment to Be Billed at the account level (if calendar period receivable generation) and/or the Cycle (if On Cycle

receivable generation) using the billing receivable lead days on the product. Also, this process will not reset the Next Payment to Be Billed on a paid ahead account when the payment is recalculated.

- This application does not produce notices.
- This is an updating application that cannot be run back in time.
- The capability to suppress a third biweekly transfer in a month is not included.
- No changes are being made to DNA payment processing thru any channels.

### Configuration Checklist:

Please review the items indicated in the checklist below and ensure that all items have been properly setup before running this application.

Item	Test Environment	Production Environment
Parameters		
Variables		
External Interface CrossReference		

### Installation:

**Note:** If you obtained this application from the DNAAppstore, please disregard the installation instructions below. If you did not obtain this application from the DNAAppstore, please complete the installation instructions below.

- Run the PS\_LOANPMTRECALC.WTS file (Installation Script) to register the application. If not defined already, edit the institution option BATP (PS Batch Report Directory) with the designation of a custom program directory (ex: G:\OSI\BANK\BAT\_EXE\PS).
- Copy the PS\_LOANPMTRECALC.SQT to the Professional Services (PS) directory. Once PS\_LOANPMTRECALC.WTS script has been successfully run, PS\_LOANPMTRECALC.SQT can be executed in Batch.
- This application requires the running of the script PS\_LOANPMTRECALC\_DDL.SQL (DDL Script): Copy this file to any directory accessible to the applicable SQL application (SQL Developer, PL/SQL Developer, etc.).
- In the System Module of DNA, go to Institution > Applications and enter the supplied Authorization Key for this application.

### Revisions:

Date	App Version #	Change
10/2020	1.2.1.7	Reconsider the logic of calculation of Non Capitalized SINS.
08/2020	1.2.1.6	Changed label to Fiserv Confidential



Date	App Version #	Change
06/2020	1.2.1.6	Recompiled .sql to correct Activity writes (accounts numbers appended with .000000 causing an error "Write-Actv (12899) ORA-12899: value too large for column "OSIBANK"."ACTV"."RPTSORTKEY"); Documentation report sorting description corrected; Documentation updated for Fiserv classification; Deleted 8UAA parameter "V" value as an option in installation script (Only values are Y or N are supported); AppStore Installation script description for Calculation Variable Value U\$1 changed from Round Up To Nearest Dollar to Round Up To Next Dollar; Cleaned up updates in installation script; Updated 8URM description in Document from 8URM User Defined Payment Rounding Method to User-Defined Pmt Rounding Meth
06/2020	1.2.1.5	Documentation update – Update Active Allotments (8UAA) parameter options updated
05/2020	1.2.1.5	Application is enhanced to consider Non Financed Debit Protection Premiums (SINS) in the new calculated payment.
10/2019	1.2.1.4	Fixed validation findings.
10/2019	1.2.1.3	Changes done for table PS_LOANPMTRECALC, to handle unique constraint error.
10/2019	1.2.1.2	Added column RCVBGENMETHCD to the reporting table PS_LOANPMTRECALC.
10/2019	1.2.1.1	Changes done for the reporting table, deleting data from PS_LOANPMTRECALC before it starts processing.
08/2019	1.2.1.0	Added reporting table PS_LOANPMTRECALC
01/2019	1.2.0.9	Preauthorization updates limited from Scheduled preauthorizations to Scheduled preauthorizations associated with the transaction of "Regular Payment" so that Scheduled preauthorizations associated with "Principal Receipt" are not updated.
12/2018	1.2.0.8	Modified logic when the remaining balance is less than the payment amount to exclude future transactions posted carry over in the payment calculation.
10/2018	1.2.0.7	Corrected Set Up script file extension from SQL to WTS.
03/2018	1.2.0.6	Addressed issue where multiple payment rows resulted in cases where a payment amount was being changed and a payment already existed for that day.
02/2018	1.2.0.5	Documentation update - Added Fiserv Confidential Label
01/2018	1.2.0.5	Corrected Term Payment Calculations for non-Monthly, non-Biweekly, non-Twice Monthly payment frequencies
11/2017	1.2.0.4	The correct business day will now be selected when running the application after midnight.
09/2017	1.2.0.3	Addressed issue with payment amounts inadvertently updated when application run non-updating.
12/2016	1.2.0.2	Corrected Percentage of Current Balance based on Current Credit Limit Amount option to get the limit as of the queue effective date instead of the day before.

Date	App Version #	Change
8/2016	1.2.0.1	Added new payment calculation method to 8PCN variable. Percentage of Current Balance based on Current Credit Limit Amount (this option uses the loan limit amount to determine the tier to use when calculating the payment on the current balance)
04/2016	1.2.0.0	Added Create Account Note (8CAN) runtime parameter Added Key benefits to document Changed documented exception Multiple User Field values exist - payment amount not updated in document to match application EXCEPTION: Payment not updated-Alternate and Additional Payment user fields both have values Added all missing exceptions to document
06/2015	1.1.0.2	Future Payments functionality changed to only look for Note Balance, Note Interest and Note Due payments
02/2014	1.1.0.1	Added new variable 8URM which provides an option for using user-define rounding methods.
08/2013	1.1.0.0	Fixed the validation findings.
06/2013	1.0.0.0	Re-Packaged and Re-documented for DNAappstore.
10/2011	1.0.0.0	Clarified Term Pmt Based on Balance and Term Definition/Specific Term variable settings; clarified Rate Change activity and Start and Thru Date runtime parameters.
04/2011	1.0.0.0	Added Term Payment Based on Balance Payment Calculation Method and Balance to Use specifically for this method and Term Payment method.
04/2011	1.0.0.0	Changes added for case 1408704 and 1408749. The changes added a cross-reference when relating a Monthly payment to an alternate calendar period for the Pre-Authorized Transaction and adding an extend output format.
02/2011	1.0.0.0	Added the following enhancements: Rate Review, Additional Payment Amount, Pre Authorized Transfers and Payment Recalculation Term options.
01/2011	1.0.0.0	Corrected Minimum Pmt Compare YN variable; was 8MPC, correct value is 8CPM.
01/2011	1.0.0.0	Explained biweekly calculations for minimum monthly pmt.