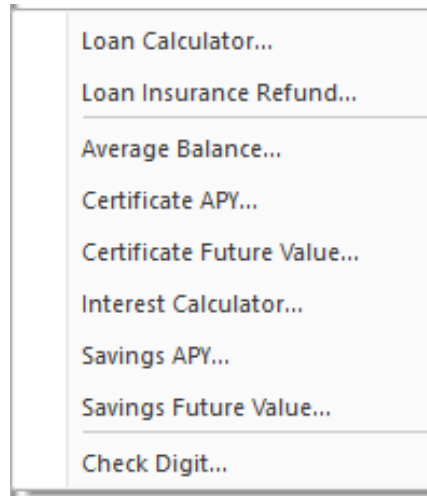


Calculators

A variety of calculators are available to be used by the staff.

The Calculators are located in [\[Main Ribbon > Tools > Calculators\]](#).



Information on the following calculators is found in the Lending Manual.

- Loan Calculator
- Loan Insurance Refund Calculator

Average Balance

The Average Balance Calculator is used to calculate the average balance of a specific share or loan suffix for a specified period of time. This can be especially useful in calculating the average balance for Verification of Deposit forms completed by the credit union. It might also be used to calculate the average daily balance for dividends.

Account: Enter the Account Base, Check Digit and Suffix.

From: Enter the beginning date for the period of time to be calculated.

Thru: Enter the ending date for the period of time to be calculated, if different than today. (The default is today's date.)

Select the Calculate button.

The Average Balance Calculator has been restricted to only allow inquiries up to one year in the past. A message of Date range cannot exceed 1 year will display, if this is attempted.

This calculator uses the effective dates for teller generated transactions (same as for the dividend calculations) when determining the balances to average. The calculator ignores effective dates and uses the processing dates for batch transactions such as Loan Transfers, ACH and Debit Cards, etc.

The system displays the Average Balance for the period specified.

Datamatic VIEW

Average Balance

Account: 61057-6-70

From: 03-01-2017

Thru: 02-28-2018

Average: \$2,037.84

Calculate

If an average balance is needed for a different period of time or a different account number or suffix, enter the new information. Select the Calculate button to calculate the average balance.

To close the window when finished, click on the X in upper right corner.

Certificate APY

The Certificate APY Calculator is used to calculate the Annual Percentage Yield for Certificates of Deposit. Usually, this is used weekly or monthly, etc. when the certificate rates are changed or when new certificate options are offered. ****Note:** The system uses a balance of \$10,000 when calculating the APY using this calculator.

The rates and APY's can be placed on a bulletin board in the credit union or a handout can be created for the employees to utilize.

Interest Frequency: This field indicates how often interest is paid on the certificate. The options for this field are:

- Annual
- Monthly
- Quarterly
- Semi-annual
- At Maturity

CD Term and CD Term Code: These two fields are used together to indicate the term of the CD. The CD Term is a numeric field defined by the credit union. The options for the CD Term Code are:

- Days
- Months
- Years

The CD Term field is a number that indicates the length of the term based on the CD Term Code. For example: 30 Days, 6 Months, 2 Years, etc.

Interest Rate: This field is used to indicate the Interest Rate earned on the CD.

Compounding Method: This field is used to indicate the compounding method of the CD Interest. The options for this field are:

- None
- Daily

Payment Method: This field is used to indicate the payment method of the certificate. The options for this field are:

- Stays in CD
- Transfer or Check

For example, the APY for a 12 Month CD at 5.10% that pays monthly and has a payment method of Stays in CD will be 5.22%. However, the APY for the same scenario CD that has a payment method of Transfer or Check will be 5.10%.

After entering the information, select the Calculate button. The system will calculate the APY based on the information entered and display the percentage in the Computed APY field. (See example on next page.)

The system displays.

Datamatic VIEW

Certificate APY

Interest Frequency:	Monthly
CD Term:	12
CD Term Code:	Months
Interest Rate:	3.00%
Compounding Method:	(none)
Payment Method:	Stays in CD
Computed Apy:	03.04%

Calculate

If a Certificate APY is needed for a different frequency, term or interest rate, etc., enter the new information. Select the Calculate button to calculate the APY.

To close the window when finished, click on the X in the upper right corner.

Certificate Future Value

The CD Future Value Calculator is used to figure the future value (with compounding) of a Certificate of Deposit when the interest stays in the certificate. The future value will be based on specific information filled in on the window. This is for general information only and should be taken as just a rough estimate to give the member an idea of the dividends/interest they would earn.

CD Original Amount: Enter the original amount in the certificate of deposit.

Interest Rate: Enter the certificate of deposit interest rate.

Term: Enter the number representing term of the certificate of deposit. (Numeric value)

Term Code: Enter the appropriate code for the term of the certificate of deposit. (Click on arrow for drop down list.) The valid options are:

Days
Months
Years

Example: Term - 180 and Term Code - D = 180 Days
Term - 3 and Term Code - Y = 3 Years

Payment Frequency: Enter the appropriate selection for the payment frequency of the certificate of deposit. This indicates how often interest is paid on the CD. (Click on arrow for drop down list.) The valid options are:

Annual
Monthly
Quarterly
Semiannual
At Maturity

After finished entering the information, select the Calculate button.

The system displays.

Datamatic VIEW

Certificate Future Value

CD Original Amount: \$5,000.00

Interest Rate: 2.2500%

Term: 3

Term Code: Years

Payment Frequency: Quarterly

CD Maturity Value: \$5,348.14

Calculate

If a future value is needed for a different amount, interest rate, term or frequency, etc., enter the new information. Select the Calculate button to calculate the future value.

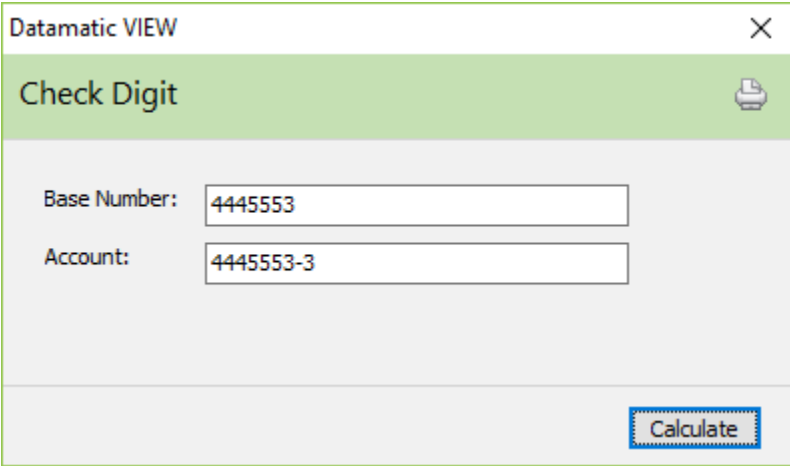
Use the Interest Calculator to calculate an estimated amount of the interest that would be earned monthly, quarterly, semi-annually or annually based on the balance and interest rate.

Check Digit

The Check Digit Calculator is used to calculate the check digit for a specific base account number. This calculator uses the mod 10 formula.

Base Number: Enter the Base Number for the check digit to be calculated. Up to a total of 17 digits may be entered for a total account number (Account Base and Check Digit) of 18 digits after the calculation is finished.

Select the Calculate button. The system displays.



If a check digit is needed for a different base number, enter the new information. Select the Calculate button to calculate the check digit.

Interest

The Interest Calculator is used to calculate an estimated amount of interest that would be earned monthly, quarterly, semi-annually or annually based on the balance and interest rate.

Original Amount: Enter the original amount for the interest to be calculated.

Interest Rate: Enter the interest rate for the interest to be calculated.

Payment Frequency: Enter the payment frequency for the interest to be calculated. The valid options are:

Annual	(based on 365 days)
Monthly	(based on 30.41 days)
Quarterly	(based on 91.25 days)
Semiannual	(based on 182.5 days)

Interest is calculated by using this calculation:

$$\text{Amount} \times \text{Interest Rate} \times \text{Number of Days} / 365$$

After finished entering the information, select the Calculate button. The system displays.

If an Interest Calculation is needed for a different amount, interest rate or frequency, enter the new information. Select the Calculate button to calculate the interest.

To close the window when finished, click on the X in the upper right corner.

Use the CD Future Value Calculator to figure the future value (with compounding) of a Certificate of Deposit when the interest stays in the certificate.

Savings APY

The Savings APY Calculator is used to calculate the Annual Percentage Yield for Shares Accounts. Usually, this is used weekly or monthly, etc. when the share rates are changed or when new share options are offered. The system uses a balance of **\$10,000** when calculating the APY using this calculator.

The rates and APY's can be placed on a bulletin board in the credit union or a handout can be created for the employees to utilize.

Dividend Type - The Dividend Type is used to indicate the calculation used for computing the Dividends. Since the APY is a projection on an actual dividend, there is no difference between the Average Daily Balance and Daily Interest. The options for the field are:

Fixed - All accounts earn the same rate regardless of their balance.

Split Rate - Accounts earn one rate on the entire balance, but that rate is determined by the balance. (If this option is selected, additional fields will be displayed to enter the different rates and balance ranges.)

Plateau - Accounts earn different rates based on the portion of their balance within each rate tier. (If this option is selected, additional fields will be displayed to enter the different rates and balance ranges.)

Dividend Frequency - The Dividend Frequency is used to indicate how often the dividend is paid. The options for this field are:

- Annually
- Monthly
- Quarterly
- Semi-Annually

Fixed Dividend Rate - Enter the fixed dividend amount, if Fixed is selected for the Dividend Type.

Dividend Compounding - This field is used to indicate the compounding method for the dividends. The options for this field are:

- None
- Daily

After entering the information, select the Calculate button. The system will calculate the APY based on the information entered and display the percentage in the Computed APY field. For a fixed rate dividend, the system will compute a single APY. For Split and Plateau dividends, the system will compute multiple APY's based on the tier of rates that have been entered. (See examples on the next couple pages.)

Example of Fixed Dividend.

Datamatic VIEW

Savings APY

Dividend Type: Fixed

Dividend Frequency: Quarterly

Fixed Dividend Rate: 2.50%

Dividend Compounding: (none)

Computed Apy: 02.52%

Calculate

Example of Split Rate Dividend.

Datamatic VIEW X

Savings APY Print

Dividend Type: ▼

Dividend Frequency: ▼

Fixed Dividend Rate:

Dividend Compounding: ▼

Split / Plateau		Balance Range		APY
Range	Rate	From	To	
100	2.00%	\$100.00	\$999.00	02.02%
1000	2.25%	\$1000.00	\$9999.00	02.78%
10000	2.50%	\$10000.00	\$2499.00	02.27%
2500	2.75%	\$2500.00	\$99999.00	02.78%
100000	3.00%	\$100000.00	\$999999.00	03.03%

Example of Plateau Dividend.

Datamatic VIEW X

Savings APY Print

Dividend Type:

Dividend Frequency:

Fixed Dividend Rate:

Dividend Compounding:

Split / Plateau		Balance Range		Apy Range	
Range	Rate	From	To	From	To
500	1.50%	\$1.00	\$500.00		01.51%
5000	1.75%	\$501.00	\$5000.00	01.51%	01.74%
25000	2.00%	\$5001.00	\$25000.00	01.74%	01.96%
999999	2.25%	\$25001.00	\$999999.00	01.96%	02.26%

Savings Future Value

The Savings Future Value Calculator is used to figure the future value of a share account. The future value will be based on specific information filled in on the window. This is for general information only and should be taken as just a rough estimate to give the member an idea of the dividends/interest they would earn.

Initial Amount: Enter the initial amount of the funds in the share account.

Rate: Enter the share dividend rate.

Add on Payments: Enter the deposit amount to be made to the account. As far as the calculation, the frequency of add on payments is the same as the compounding frequency. This is a required field for this calculation.

Compound Frequency: Select the compound frequency for the calculation.

Start Date: Enter the starting date for the calculation.

End Date: Enter the ending date for the calculation.

After finished entering the information, select the Calculate button. The system displays.

Field	Value
Initial Amount:	\$100.00
Rate:	2.0000%
Add On Payments:	\$10.00
Compound Frequency:	Quarterly
Start Date:	04-01-2018
End Date:	04-01-2019
Projected Savings:	\$142.52

Calculate

If a future value is needed for a different amount, rate, add on payment amount, compounding frequency or date, etc., enter the new information. Select the Calculate button to calculate the future value.