

Alerts

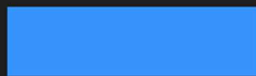

Deposits

Average Balance

Process:

For every deposit account in a relationship (grouped by household number), the described steps are followed. Later, we will walk through a manual aggregation on the household level and the associated Daily Deposit Update excel file will be helpful for tying this all together.

- 1) Take notemtdavgbal (average monthly balance snapshot at the end of each month) for a rolling period of n months.
 - a. The variable 'n' gets set to 3 months and 12 months to create separate dataframes that can be used for rolling balances.
 - b. Shown below is the 3 month dataframe for an account number that we are validating

# acctnbr	effdate	monthendyn	# notemtdavgbal	
Missing: 0 (0%) Distinct: 1 (33%)	Missing: 0 (0%) Distinct: 3 (100%)	Missing: 0 (0%) Distinct: 3 (100%)	Missing: 0 (0%) Distinct: 3 (100%)	
	Min: 2025-04-30 00:00:00 Y Max: 2025-06-30 00:00:00	100%		
Min 108888 Max 108888			Min 69554.93 Max 106004.61	
752618	108888	2025-06-30 00:00:00	Y	106004.61
703753	108888	2025-05-30 00:00:00	Y	78377.45
643126	108888	2025-04-30 00:00:00	Y	69554.93

- c. To validate, we can to Insight (COCC) and search for that deposit account by account number
 - i. Navigate to Inquiries -> Average Balance Inquiry

My Dashboard Account - 108888

Deposit Account Maintenance

Maintenance Additional Services Inquiries **Messaging** Monetary

Account Number »

Major » Checking

Minor » 1st Choice Business

Branch » BCSB - CUMBERLAND

Ownership Type » Single

Interest Rate 0.00

Statement Account Number

Retirement Plan Number

Funds Source

Delivery Method <Product Default>

Account Analysis Query

Average Balance Inquiry

Balance and Interest

Balance History

Contact

Direct/Indirect Relationships

Enhanced Balance Information

External Docs

History Query

Investor Custodial Account Summary

Product Review

Related Accounts

Relationship Profile

Signatures

Transaction History

VISA Credit Card

Valid Yes

☐ Passbook Account ☒ Draw From

☒ Transaction ☒ Automatically Escheat

☒ Positive Pay Account ☒ Reg E OD Opt-In

Account Description OPERATING ACCOUNT

Hold Account

Account Officer JUSTIN ALAN JEFFREY

Close Reason

Active Account Class

Standard Account Class

- d. The rolling average is on completed months, so you would look at the run date of the alerts file and the trailing window of months would start at current month minus 1.
 - i. For example, during this validation on 07/14/2025, the trailing 3 months would be for April-June.
 - ii. See the accompanied screenshots from COCC to recreate this with the exact same numbers

My Dashboard Account - 108888

Average Balance

Account Number 108888 Year to Date 113,053.94

Current Statement Cycle 154,955.04 Quarter to Date 154,955.04

Prior Statement Cycle 105,619.42 Month to Date 154,955.04

Collected **Collected Interest** **Query**

From Date 06-01-2025 Thru Date 06-30-2025

Type

☒ Ledger

☐ Collected

☐ Collected Interest

Negatives Adjusted

☒ Actual

☐ Negatives Adjusted

☐ Negatives Only

Average 106,004.61

Calculate

Close

My Dashboard

Account - 108888

Average Balance

Account Number	108888	Year to Date	113,053.94
Current Statement Cycle	154,955.04	Quarter to Date	154,955.04
Prior Statement Cycle	105,619.42	Month to Date	154,955.04

Collected

Collected Interest

Query

From Date

05-01-2025

Thru Date

05-31-2025

Type

☒ Ledger

☐ Collected

☐ Collected Interest

Negatives Adjusted

☒ Actual

☐ Negatives Adjusted

☐ Negatives Only

Average

78,377.45

Calculate

Close

My Dashboard

Account - 108888

Average Balance

Account Number	108888	Year to Date	113,053.94
Current Statement Cycle	154,955.04	Quarter to Date	154,955.04
Prior Statement Cycle	105,619.42	Month to Date	154,955.04

Collected

Collected Interest

Query

From Date

04-01-2025

Thru Date

04-30-2025

Type

☒ Ledger

☐ Collected

☐ Collected Interest

Negatives Adjusted

☒ Actual

☐ Negatives Adjusted

☐ Negatives Only

Average

69,554.93

Calculate

Close

2) Next, we take an average of these monthly avg balances

Export as file		Refresh data		Report an issue	
# acctnbr			# 3Mo_AvgBal		
Missing:	0 (0%)	Missing:	0 (0%)		
Distinct:	1 (100%)	Distinct:	1 (100%)		
				1	
				Distinct values	
Min 108888		Max 108888			
913		108888		84645.66333333333	

In COCC, this could've been done in 1 step by feeding in the full date range.
(04-01-2025 to 06-30-2025)

My Dashboard

Account - 108888

Average Balance

Account Number108888

Year to Date113,053.94

Current Statement Cycle154,955.04

Quarter to Date154,955.04

Prior Statement Cycle105,619.42

Month to Date154,955.04

Collected

Collected Interest

Query

From Date04-01-2025

Thru Date06-30-2025

Type

☒ Ledger

☐ Collected

☐ Collected Interest

Negatives Adjusted

☒ Actual

☐ Negatives Adjusted

☐ Negatives Only

Average

84,576.78

Calculate

Close

Moving to the daily deposit file, we can see this is the 3 month average balance listed for 1 of the accounts and then this is summed up on the household level to get the total 3 month relationship balance.

A	M	N	O	P	Q	R	S	T
acctnbr	3Mo_AvgBal	TTM_AvgBal	TTM_DAYS_OVERDRAW	TTM_NSF_COUNT	YTD_DAYS_OVERDRAW	YTD_NSF_COUNT	householdnbr	datelastmaint
108888	84645.66333	137003.6792	0	0	0	0	230955	2021-09-24 22:54:28
151010958	210478.8167	206973.58	0	0	0	0	230955	2024-02-22 20:50:20
151010859	102068.6933	101420.285	0	0	0	0	230955	2024-02-22 20:50:20
Total	\$ 397,193.17	\$ 445,397.54						3

This goes directly into the Alerts flag for deposit changes.

The Days Overdrawn is computed the same way where we roll up on the household level.

- 1) Instead of Average Balance Inquiry, you can visit Additional -> Statistics and find the 'DOD' (Days Overdrawn) and this is computed on the account level and then rolled up.

My Dashboard

Account - 108888

Deposit Account Maintenance

Maintenance

Additional

Services

Inquiries

Messaging

Monetary

Account Number

Branch

Ownership

Interest

Statement Account Number

Retirement Number

Funds Source

Delivery Method

Automatic Deposit Transfers

Balance Types

Branch

Copy Account

Document Request

Exclude Applications

External Accounts

File Types

Hold Account

Industry Codes

Interest Parameters

Mail

Memo Balances

Non-Tax Owner Notice

Roles

Service Charge Group

Statistics

Status Change

Tickler

Title

Withholding

Valid

Passbook Account

Transaction

Positive Pay Account

Draw From

Automatically Escheat

Reg E OD Opt-In

Account Description

Hold Account

Account Officer

Close Reason

Active Account Class

Standard Account Class

Date Last Contact

My Dashboard Account - 108888

Statistics

Search Criteria

Account Number » 108888

Statistic Type »

Select Period

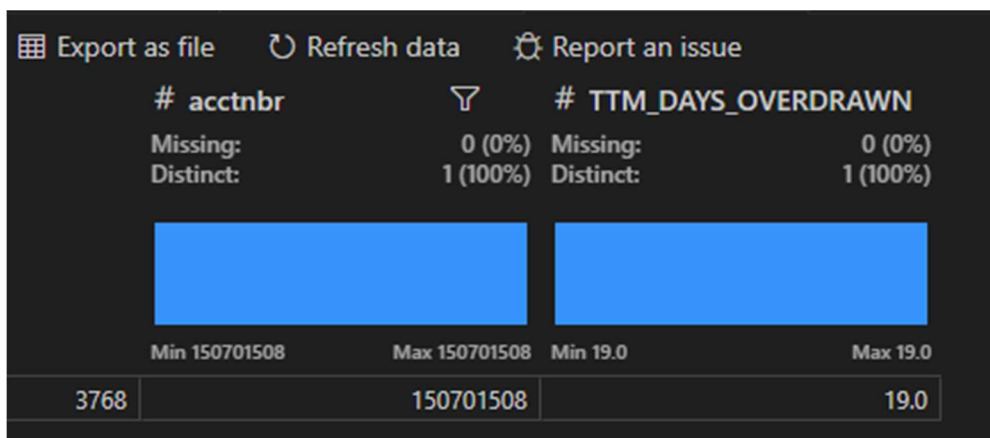
☐ Life ☐ Year ☐ Quarter ☒ Month

Query

Account Statistics

Statistic	Period	Number of Items	Total Amount
# Days of UCF Hold			
# Days Overdrawn			
# of Minor Changes			
# of OverCreditAvailable Charges			
# of OverCreditAvailable Charges R			
# of OverCreditAvailable Charges V			
# of OverCreditLimit Charges			
# of OverCreditLimit Charges Rever			

Switching to an account number where # of Overdrafts > 0, here what the data looks like in the alerts data pipeline.



In COCC:

My Dashboard
Account - 150701508

Statistics

Search Criteria

Account Number
150701508

Statistic Type
Days Overdrawn

Select Period

☐ Life
☐ Year
☐ Quarter
☒ Month

Query

Account Statistics

Statistics Type	Period	Number of Items	Total Amount
# Days Overdrawn	2023 November	1	330.04
# Days Overdrawn	2024 April	1	249.23
# Days Overdrawn	2024 June	1	92.59
# Days Overdrawn	2024 July	2	277.64
# Days Overdrawn	2024 August	1	56.92
# Days Overdrawn	2024 October	2	477.86
# Days Overdrawn	2025 February	4	1,334.76
# Days Overdrawn	2025 April	7	1,646.78
# Days Overdrawn	2025 May	3	259.00

Note that in COCC, the statics are stored with Month and Year, so we make all statics as of the beginning of the month

- If there was an overdraft in May 2025, this becomes 05/01/2025 as date of occurrence.

The start date/end dates for statistics are shown below, for a run for today.

```

start_date_ttm
[9] ✓ 0.0s
... datetime.datetime(2024, 7, 1, 0, 0)

end_date_ttm
[10] ✓ 0.0s
... datetime.datetime(2025, 7, 14, 13, 57, 57, 415473)

```

The logic:

- The start date is whatever the current month is, go back 1 year and take the first of the month
- Any statistics that occur during that range will be aggregated on the account level and then the household level.

By that logic, we can see how we'd get exactly 19 by looking at this date range from the COCC view:

2024 July	2
2024 August	1
2024 October	2
2025 February	4
2025 April	7
2025 May	3

Since the production codebase and business logic stays the same, different data flowing through the same data pipeline will apply the same steps and create deterministic & repeatable results. Any changes that need to be made will be tracked in version control and discussed with business line before becoming effective.

If you have any questions, please reach out to BI dept.

Chad Doorley, 2025-07-14