OCAUP is an acronym derived from currency Organization, Creation, Assignment, Use and Publication. It is an accounting model in the sense that it defines allowed account types, classifies transaction events between account types, and defines equations related to periodic reconciliation procedures. This document target audience includes accounting system developers who are interested in ledger-based currency design.

1. **Purpose**

   OCAUP maps a currency brand's lifecycle to changes in the unused budget of the issuing entity.

   More formally, OCAUP models brand-specific currency activity according to the planning, operational and reporting needs an independent market entity. OCAUP is a means to account for how effectively an entity self-regulates against its self-determined limits.

2. **Account Types**

   2.1 There are three types of accounts: N-type, P-type and X-type.

   Table 1: OCAUP Account Types

Type of Account	Normal Balance	Effect of Debit	Effect of Credit
N-type	Debit	increases balance	decreases balance
P-type	Credit	decreases balance	increases balance
X-type	Credit	decreases balance	increases balance

   2.2 An N-type account has a strict normal balance of debits. The cumulative balance of all N-type accounts within an entity is also known as the Unused Revenue Budget, aka the entity's current receivable limit.

   2.3 A P-type account has a strict normal balance of credits. The cumulative balance of all P-type accounts within an entity is also known as the Unused Expense Budget, aka the entity's current spendable limit.

   2.4 An X-type account has a non-strict, normal balance of credits. The cumulative balance of all X-type accounts within an entity represents the net credit outflow, i.e., the difference [outflow – inflow].

3. Organization of Accounts

3.1 An entity must establish at least one account for each of the three allowed types.

3.2 An account must be restricted to being either an administrative account or a member account.

3.3 A P-type administrative account is used for paying expenses on behalf of the whole entity. A P-type member account is used by an entity member for paying personal expenses.

3.4 An N-type administrative account is used for receiving payments from the market on behalf of the whole entity. There should be no N-type *member* accounts, although N-type accounts may be assigned to individual owners such as a salesperson that receives payments from the market on behalf of the whole entity.

3.5 An X-type administrative account represents the generalized co-transact or in an inter-entity currency activity. There should be no X-type member accounts.

3.6 Each account must have authorization for use in one or more of the following currency activity: currency creation, currency assignment originator, currency assignment recipient, internal currency use, external currency use.

4. Currency Activity Classification

4.1 There are nine classified types of currency activity as summarized in Table 2 and illustrated in the attached Figures 1 and 2.

Table 2: OCAUP Currency Activity Classification Matrix

	Credited Account		
Debited **Account**	**N-type**	**P-type**	**X-type**
N-type	Assignment	Creation	*Inflow Reversal*
P-type	Intrause	Assignment	Outflow
X-type	Inflow	*Outflow Reversal*	*Subtype Close-Out*

4.2 Currency **Creation** is the act of increasing an entity's unused expense and revenue budgets in equal quantities. Credits are accrued in a P-type account while the corresponding debits are accrued in an N-type account. Currency creation may also be described as the act of issuing credit-debit pairs. Another synonym for this event is "adding" to unused budgets.

4.3 Currency **Assignment** is the act of transferring previously created currency units. Currency assignment transfers a*ccrued* credits between two P-type accounts or *accrued* debits between two N-type accounts. The total expense or revenue limit within an entity should not increase or decrease in a currency assignment.

4.4 In an **Intrause** event, the affected P-type and N-type account balances should decrease by the same amount. Synonyms for this event are "intra-entity currency use", "unused budget cut" and "revert".

4.5 An **Inflow** event is defined as inter-entity currency use where an X-type account is debited while an N-type account is credited. Each affected balance should decrease by the same amount. An inflow results from using available revenue budget.

4.6 An **Outflow** event is defined as inter-entity currency use where a P-type account is debited while an X-type account is credited. The affected P-type account balance should decrease while the N-type account balance should increase by the same magnitude. An outflow results from using available expense budget.

4.7 An **Inflow Reversal** may occur to reverse a previously reported inter-entity transaction. Based on the information from the processed record, the N-type account is debited while an X-type account is credited. An inflow reversal decreases the inflow tally and must not cause an increase to the outflow tally.

4.8 An **Outflow Reversal** may occur to reverse a previously reported inter-entity transaction. Based on the information from the processed record, the X-type account is debited while the P-type account is credited. An outflow reversal decreases the outflow tally, and must not cause an increase in the inflow tally.

4.9 A **Subtype Close-Out** represents the transfer of all remaining balance from an expired X-type account subtype to an active X-type account. For example, a new X-type account sub-type may be established to dynamically track December 2008's monthly inflow balance. This example subtype would then be closed at the end of the December 2008 by transferring its balance to the main X-type account.

4.10 All recorded currency activity must be mapped to the preceding definitions for the classification matrix. Recorded currency activity that does not map to the classification matrix will generate a misleading report.

6. Reconciliation and Publication

6.1 In the following equation, the Unused Revenue Balance is represented by **N**, the cumulative balance of all N-type accounts. The Unused Expense Balance is represented by **P**, the cumulative balance of all N-type accounts. The Net Outflow is represented by **X**, the cumulative balance of all X-type accounts.

Current Balance Equation: $X = N - P$

Event Tally Equation for the Unused Expense Budget:

$$P = \text{Starting Balance} + \text{Create} - \text{Intrause} - \text{Outflow}$$

Event Tally Equation for Unused Revenue Budget:

$$N = \text{Starting Balance} + \text{Create} - \text{Intrause} - \text{Inflow}$$

6.2 An entity must publish auditable periodic tallies of changes to its budget. Published tallies must include budget creation, intrause, inflows and outflows.

6.3 The published currency flow between two entities must reconcile. That is, for any given reconciliation period, Entity A's reported inflow from Entity B must equal B's reported outflow to A.

7. Accounting Cycle

The accounting cycle is listed below in order of increasing frequency of occurrence:

7.1 Organization of Accounts – occurs at the establishment of an independent currency brand and when adding, deleting or reclassifying accounts, due to member turnover and/or reprioritization of entity objectives and goals

7.2 Creation of Currency – occurs at the beginning of a reporting period, typically on a quarterly or annual basis

7.3 Assignment of Currency – occurs as work is completed, or in monthly or semi-monthly periods such as when an employee collects his wages

7.4 Use of Currency – occurs each and every time a transaction payment is made

7.5 Publication – should occur as soon as an electronic ledger entry is made, or as a summary of transactions for print-based ledgers

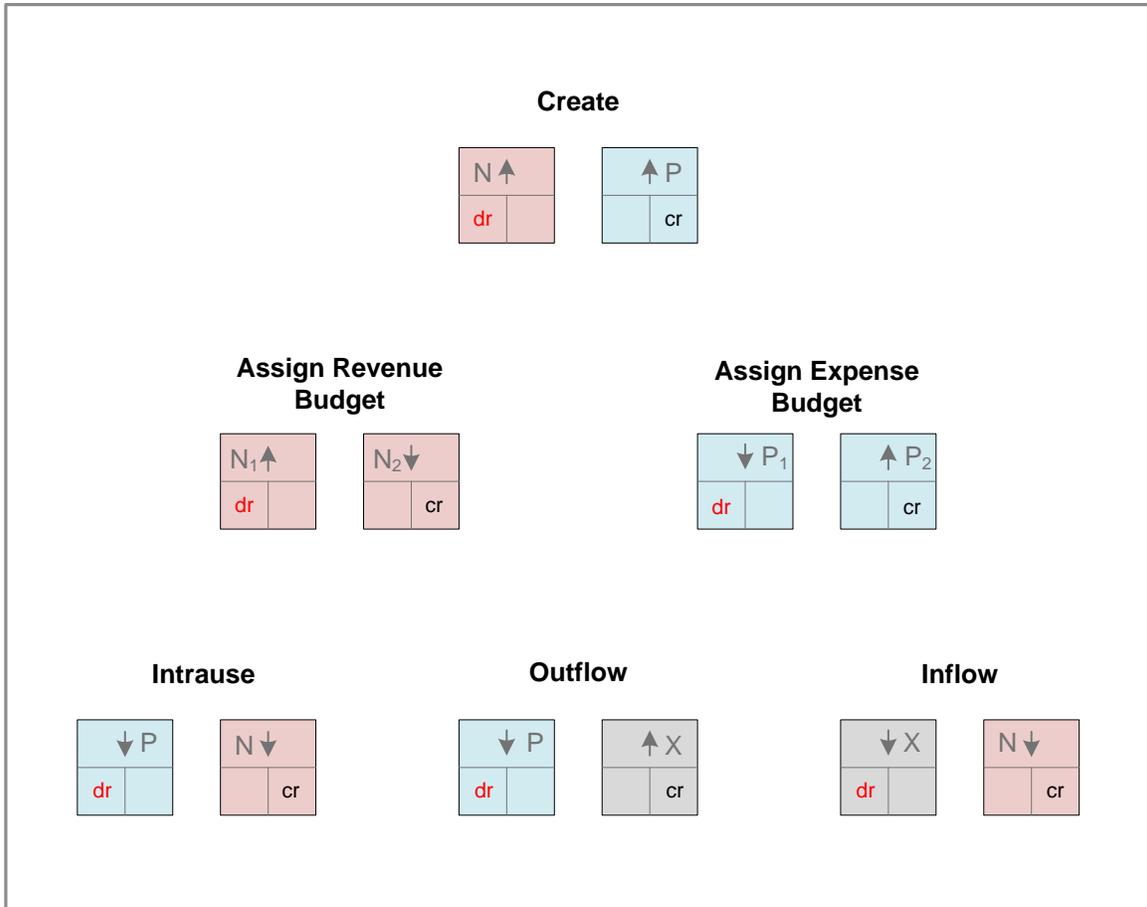*Revised 2009-07-05 / ELS*

Attachments

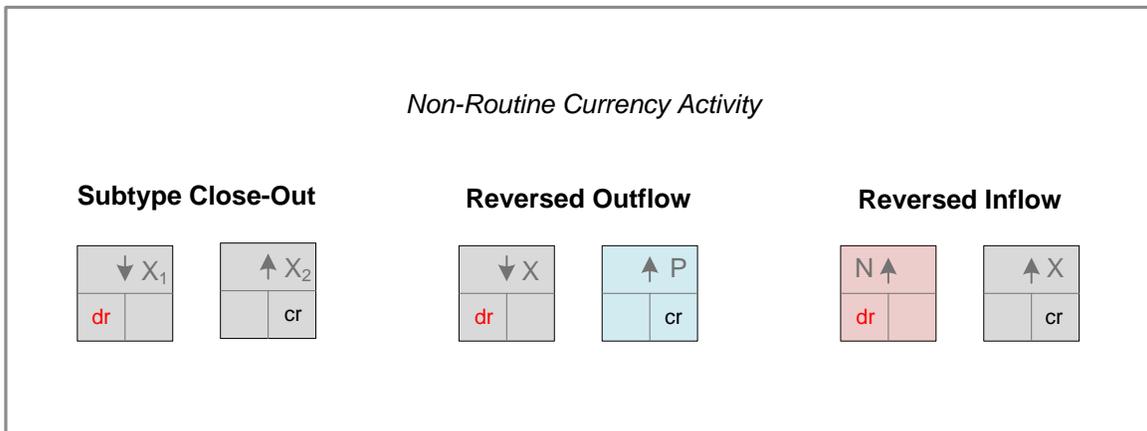|	
Figure 1	OCAUP Currency Activity Represented as Double-Entry Account Postings
Figure 2	Journal Examples for Tracking OCAUP Currency Activity
Table A1	Comparison of Mutual-Credit and OCAUP-based Systems

Revision History

2009-07-05   Corrected Figure 2 Al's External_Brands balance to -5 during the Main Revenue currency inflow use

2009-06-10   Changed 'External' to 'X-type'; Distinguished between strict normal balance (n, p-type) and non-strict normal balance (x-type); Corrected Figure 2 Al's ending X-type balance to -5; Made minor clarifications to Table A-1

2009-05-09   Major Edits: Changed "Negative" and "Positive" nomenclature to N-Type and P-Type, respectively; Added External account type; Added Currency Activity Matrix table; Added Figures 1 and 2; added Table A-1

2009-03-20   Minor Edits

2008-09-26   Corrected intrause description in 6.1 (changed interentity to intrause)

OCAUP Currency Activity
Represented as Double-Entry Account Postings

Create

Assign Revenue Budget

Assign Expense Budget

Intrause

Outflow

Inflow

N = Unused Revenue Budget
P = Unused Expense Budget
X = External Accounts

↑ Balance Increase
↓ Balance Decrease

dr = Debit
cr = Credit

Non-Routine Currency Activity

Subtype Close-Out

Reversed Outflow

Reversed Inflow

Journal Examples for Tracking
OCAUP Currency Activity

Al's Pizza

Independently Maintained
Journal/Ledger Accounts

Account	Debit	Credit	Balance
Main Revenue			0
Main Expense			0
External_Brands			0
Main Revenue	100		100
Main Expense		100	100
Currency Assignment is optional; Al's Pizza did not set-up other accounts where credits or debits may be assigned			
External_Brands	5		-5
Main Revenue		5	95

Tallies			
Create or Adds	100	100	
Intra-Use or Cuts	0	0	
Inflow	5	5	
Outflow	0	0	

Ending Balance

Main Revenue			95
Main Expense			100
External_Brands			-5

OCAUP Currency Activity

- **Organize**
- **Create** (aka "Add" to budget)
- **Assign**
- **Use**
- **Publish**

The ending balance for each account are carried over to the next period.

Auto Shop One

Independently Maintained
Journal/Ledger Accounts

Account	Debit	Credit	Balance
Main Revenue	*N-type Account*		0
Main Expense			0
Bob's Expense			0
Cy's Expense	*P-type Accounts*		0
Dan's Expense			0
General Expense			0
External_Brands	*X-type Account*		0
Main Revenue	220		220
Main Expense		220	220
Main Expense	220		0
Bob's Expense		50	50
Cy's Expense		50	50
Dan's Expense		50	50
General Expense		70	70
Bob's Expense	5		45
External_Brands		5	5

Tallies			
Create or Adds	220	220	
Intra-Use or Cuts	0	0	
Inflow	0	0	
Outflow	5	5	

Ending Balance

Main Revenue			220
Total N-Type Account Balance = aka Unused Revenue Budget			*220*
Main Expense			0
Bob's Expense			45
Cy's Expense			50
Dan's Expense			50
General Expense			70
Total P-Type Account Balance = aka Unused Expense Budget			*215*
External_Brands			5

Comparison of Mutual-Credit and OCAUP-based Systems

Design Aspect	Mutual Credit Systems such as LETS	OCAUP-based Systems
Currency Issuance	"On-demand" at time of transaction. (This claim should not apply to systems that assign debit limits, as any pre-assigned limits are essentially issued units.)	Currency is planned and issued as periodic increase to an entity's unused budgets
Normal Balance of Account Types	Accounts have a normal balance of credits, with expected dynamic fluctuation to and from negative balances	Specifies account types and normal balances, with strict avoidance of abnormal or negative budget balances (except for X-type accounts)
Measurement Focus	The focus is on the net benefit received or given within a community context, i.e., what an entity owes or should give back to the community.	The focus is on the ability of an entity to self-regulate against its budgets.
Expected Accounting System Set-Up	An entity is assigned and holds an account in a centrally administered ledger.	An entity administers its own accounts and ledger.
Who Determines Limits	In practice, an entity would be assigned community defined limits.	An entity sets its own limits, represented as budgets.
Locality of Accounts in a Transaction	Trades are expected to occur mostly or completely between members/ registered entities of the same community. Transacting accounts belong to the same ledger.	Trades are expected to occur between members of independent entities in inter-entity transactions. Inflow and outflow transactions use generalized accounts that represent the other entity.
Strategy for Better Market Access	To gain better market access, participants would seek to become members of mutual credit systems with large memberships, and/or to become members in many such systems.	To gain better market access, an entity promotes the acceptability of its currency brand in the market. Entity members benefit by having diverse product offerings from *other* entities.
Who the Currency Administrator Reports To	The community currency administration reports to its members. Publishing budgets and reporting market performance are not necessary.	A currency brand administrator reports to the public, and must openly publish its budgets and results in order to gain widespread trust of its currency brand.