CLAIMS

1. A method for processing network payments using a distributed ledger, comprising:

a payment originator initiating a payment instruction to a payment beneficiary with a payment originator bank;

the payment originator bank validating the payment instruction;

a middleware communication application at the payment originator bank determining that an internal payment originator bank non-distributed banking ledger is unavailable;

the middleware communication application posting the payment instruction to a distributed ledger on a peer-to-peer network as an unconfirmed payment instruction;

the middleware communication application determining that the internal payment originator bank non-distributed banking ledger is available;

the middleware communication application at the payment originator bank posting and committing the payment instruction to the internal payment originator bank non-distributed banking ledger as a confirmed payment instruction;

the middleware communication application at the payment originator bank posting and committing the confirmed payment instruction to a distributed ledger on a peer-to-peer network;

wherein a middleware communication application at a payment beneficiary bank receives the confirmed payment instruction from the distributed ledger on the peer-to-peer network;

wherein the middleware communication application at the payment beneficiary bank posts the confirmed payment instruction to an internal payment beneficiary bank non-distributed banking ledger as a credit to a payment beneficiary account;

wherein the middleware communication application at the payment beneficiary bank posts and commits acknowledgment of the confirmed payment instruction to the distributed ledger on the peer-to-peer network; and

wherein the payment originator bank and the payment beneficiary bank reconcile the internal payment originator bank non-distributed banking ledger and the internal payment beneficiary bank non-distributed banking ledger with the distributed ledger on the peer-to-peer network.

2. The method of claim 1, further comprising:

the payment beneficiary bank validating and processing the payment instruction through a payment beneficiary bank internal system and crediting a beneficiary account.

3. The method of claim 1, wherein the distributed ledger comprises an account structure that replicates an account structure on one of the internal banking non-distributed ledgers.

4. The method of claim 1, wherein the payment instruction is for an inter-bank payment transaction, and the payment originator bank and payment beneficiary bank are not associated with the same financial institution.

5. The method of claim 1, wherein the payment instruction is conducted in a single currency.

6. A system for processing network payments using a distributed ledger, comprising:

a payment originator bank comprising:

a payment originator bank middleware communication application; and

an internal payment originator bank non-distributed banking ledger;

a payment beneficiary bank comprising:

a payment beneficiary bank middleware communication application;

an internal payment beneficiary bank non-distributed banking ledger;

a peer-to-peer payment network, wherein the payment originator bank and the payment beneficiary bank are participant members of the peer-to-peer payments network; and

a distributed ledger;

wherein:

the payment originator bank initiates a payment instruction;

the payment originator bank middleware communication application posts and commits the payment instruction to the internal payment originator bank non-distributed banking ledger as a debit to a payment originator account;

the payment originator bank middleware communication application determines that the internal payment originator bank non-distributed banking ledger is unavailable;

the payment originator bank middleware communication application posts the payment instruction to a distributed ledger on a peer-to-peer network as an unconfirmed payment instruction;

the payment originator bank middleware communication application determines that the internal payment originator bank non-distributed banking ledger is available;

the payment originator bank middleware posts and commits the payment instruction to the internal payment originator bank non-distributed banking ledger as a confirmed payment instruction;

the payment beneficiary bank middleware communication application receives the payment instruction from the distributed ledger on the peer-to-peer network;

the payment beneficiary bank middleware communication application posts the payment instruction to an internal payment beneficiary bank non-distributed banking ledger as a credit to a payment beneficiary account;

the payment beneficiary bank middleware communication application posts an acknowledgment of the payment instruction to the distributed ledger on the peer-to-peer network; and

the payment beneficiary bank reconcile the internal payment originator bank non-distributed banking ledger and the internal payment beneficiary bank non-distributed banking ledger with the distributed ledger on the peer-to-peer network.

7. The system of claim 6, wherein the payment beneficiary bank confirms the payment instruction by comparing the payment instruction on the distributed ledger to the credit to the beneficiary account.

8. The system of claim 6, wherein the distributed ledger comprises an account structure that replicates an account structure on one of the internal banking non-distributed ledgers.

9. The system of claim 6, wherein the payment originator bank and the payment beneficiary bank are associated with the same financial institution.

10. The system of claim 6, wherein the payment instruction is an inter-bank payment transaction, and the payment originator bank and payment beneficiary bank are not associated with the same financial institution.

11. The system of claim 6, wherein the payment instruction is conducted in a single currency.

12. The system of claim 6, wherein the payment instruction comprises a currency conversion.

13. The system of claim 6, wherein the payment instruction is an unconfirmed transaction.