CLAIMS

1. A method of settling a payment transaction between a customer and a merchant via a payment service, the method comprising:

receiving with a trade engine module and by the payment service from a merchant, a respective identification of a merchant external wallet address for each of one or more assets of the merchant, wherein each of the assets comprises a respective value in an associated currency;

receiving with the trade engine module and by the payment service from the merchant, an allocation specification defining a division of payments to the merchant among the one or more assets;

receiving, with the trade engine module and by the payment service, an order from the merchant, the order defining a transaction value in a fiat currency;

dividing, with the trade engine module, the transaction value into a plurality of allocations based on the allocation specification;

for each of the allocations, determining a conversion rate, with the trade engine module, between the fiat currency and the currency of the asset associated with the allocation;

converting, with the trade engine module, each of the allocations from the fiat currency to the currency of the asset associated with the allocation, based on the conversion rate;

notifying, with the trade engine module, the merchant of the value of each allocation in the currency of the asset associated with the corresponding allocation.

2. The method of claim 1, further comprising:

receiving, by the trade engine module, the transaction value from the merchant in the fiat currency;

in response to receiving the transaction value, by the trade engine module, providing to the merchant the value of each allocation in the currency of the asset associated with the corresponding allocation.

3. The method of claim 1, wherein converting each of the allocations from the fiat currency to the currency of the asset associated with the allocation comprises:

computing a volume weighted average price of the currency of the asset across a plurality of public exchanges of the currency of the asset.

4. The method of claim 3, wherein the volume weighted average price is based on visible market liquidity of the currency of the asset.

5. The method of claim 1, wherein converting each of the allocations from the fiat currency to the currency of the asset associated with the allocation comprises: querying a current price in the currency of the asset versus the fiat currency on both sides of a plurality of currency exchanges.

6. The method of claim 1, wherein converting each of the allocations from the fiat currency to the currency of the asset associated with the allocation comprises: determining liquidity of the currency of the asset on a plurality of currency exchanges.

7. An apparatus for settling a point of sale transaction involving a plurality of currencies between a customer and a merchant, the apparatus comprising:

a mobile device comprising a processor in communication with a memory and in communication with a user interface;

a trade engine module in the memory and executable by the processor, the trade engine module configured to:

receive from the merchant, a respective identification of a merchant external wallet address for each of one or more assets of the merchant, wherein each of the assets comprises a respective value in an associated currency;

receive from the merchant, an allocation specification on defining a division of payments to the merchant among the one or more assets;

receive an order from the merchant, the order defining a transaction value in a fiat currency;

divide the transaction value into a plurality of allocations based on the allocation specification;

for each of the allocations, determine a conversion rate between the fiat currency and the currency of the asset associated with the allocation;

convert each of the allocations from the fiat currency to the currency of the asset associated with the allocation, based on the conversion rate; and

notify the merchant of the value of each allocation in the currency of the asset associated with the corresponding allocation.

8. The apparatus of claim 7, wherein the trade engine is further configured to:

transmit the transaction value from the merchant to a payment service in one or more electronic currencies referenced to the fiat currency; and

in response to receiving the transaction value, receive from the payment service to the merchant the value of each allocation in the currency of the asset associated with the corresponding allocation.

9. The apparatus of claim 7, wherein converting each of the allocations from the fiat currency to the currency of the asset associated with the allocation comprises:

computing a volume weighted average price of the currency of the asset across a plurality of public exchanges of the currency of the asset.

10. The apparatus of claim 9, wherein the volume weighted average price is based on visible market liquidity of the currency of the asset.

11. The apparatus of claim 7, wherein converting each of the allocations from the fiat currency to the currency of the asset associated with the allocation comprises:

querying a current price in the currency of the asset versus the fiat currency on both sides of a plurality of currency exchanges.

12. The apparatus of claim 7, wherein converting each of the allocations from the fiat currency to the currency of the asset associated with the allocation comprises: determining liquidity of the currency of the asset on a plurality of currency exchanges.