

CLAIMS

1. A system for managing blockchain-based trustable transaction services, comprising:
 - a blockchain network of a plurality of trustable nodes that comprises:
 - a trading platform node corresponding to a trading platform for providing blockchain-based trustable trading services between a buyer and a seller, wherein the buyer has a buyer financial account in a buyer financial institution, and the seller has a seller financial account in a seller financial institution, and wherein the buyer is verified to have a trustable undertaking (TU) service guaranteed by the buyer financial institution that automatically makes a payment for the buyer based on a credit of the buyer in the buyer financial institution in response to that a condition specified in a smart contract deployed on a blockchain of the blockchain network is met;
 - a buyer financial institution node corresponding to the buyer financial institution;
 - and
 - a seller financial institution node corresponding to the seller financial institution, wherein the trading platform node is configured to:
 - store order data of an order on a corresponding blockchain of the blockchain network for the order after the order is confirmed by the buyer and the seller on the trading platform, the order data comprising one or more payment conditions for the order and TU service data representing a corresponding TU service for the order,
 - in response to verifying that the buyer is authorised for the corresponding TU service for the order guaranteed by the buyer financial institution, generate a trustable undertaking certificate for the order based on the TU service data, the trustable undertaking certificate comprising an amount of the order payment for the order and an amount of the payment that is guaranteed by the buyer financial institution that automatically makes the payment on behalf of the buyer in response to the condition specified in the smart contract deployed on the blockchain of the blockchain network being met, and
 - store the trustable undertaking certificate for the order on the blockchain, and
 - wherein the seller financial institution node is configured to:
 - in response to a verification request by the seller financial institution, access the blockchain to obtain the trustable undertaking certificate; and transmit the trustable undertaking certificate to a computing device of the seller financial institution to determine

whether to approve, by the seller financial institution, a financing request of the seller based on the obtaining of the trustable undertaking certificate.

2. The system of claim 1, wherein one of the buyer financial institution and the seller financial institution is an offshore entity, and the other one of the buyer financial institution and the seller financial institution is an onshore entity,

wherein the offshore entity and the onshore entity are subject to different financial regulations, and

wherein the buyer financial institution node corresponding to the buyer financial institution and the seller financial institution node corresponding to the seller financial institution belong to the same blockchain network of the plurality of trustable nodes.

3. The system of claim 1 or 2, wherein the seller financial institution node is configured to:

receive approval data from the computing device of the seller financial institution, the approval data indicating that the seller financial institution has approved the financing request of the seller for a financing amount based on the trustable undertaking certificate, and

store the approval data on the blockchain, wherein the approval data references the trustable undertaking certificate.

4. The system of any one of preceding claims, wherein the seller financial institution node is configured to:

receive financing payment data from the computing device of the seller financial institution, the financing payment data confirming that a financing amount associated with the financing request has been paid by the seller financial account in the seller financial institution, and

store the financing payment data on the blockchain.

5. The system of any one of preceding claims, wherein the trustable undertaking certificate comprises at least one of:

an identifier of the trustable undertaking certificate,

an effective time of the trustable undertaking certificate,
the corresponding payment condition for the order payment,
information of the order including at least one of an order identifier, a total cost of the order, or product information,

logistics information for the order including at least one of a shipping method, a trade term, a shipping cost, or a shipping insurance cost,

information of the buyer and the seller,
information of the buyer financial institution and the seller financial institution, or
information of the buyer financial account in the buyer financial institution and the seller financial account in the seller financial institution.

6. The system of any one of preceding claims, wherein the seller financial institution node is configured to:

receive payment reception data from the computing device of the seller financial institution, the payment reception data confirming that the order payment for the order has been received by the seller financial account in the seller financial institution from the buyer financial institution, and

store the payment reception data on the blockchain.

7. The system of any one of preceding claims, wherein the trading platform node is configured to:

generate a corresponding smart contract for the order based on the order data of the order, wherein the corresponding smart contract comprises an automatic function that automatically instructs the buyer financial institution to make an order payment for the order to the seller according to the corresponding TU service for the order in response to determining that a corresponding payment condition for the order payment is met.

8. The system of claim 7, wherein the trading platform node is configured to:

verify whether the buyer is authorized for the corresponding TU service for the order on the trading platform with a computing device of the buyer financial institution through the buyer financial institution node.

9. The system of claim 7 or 8, wherein the buyer financial institution node is configured to:

execute the corresponding smart contract, wherein executing the corresponding smart contract comprises automatically instructing the computing device of the buyer financial institution to make the order payment to the seller according to the corresponding TU service for the order in response to determining that the corresponding payment condition for the order payment is met.

10. The system of claim 9, wherein the blockchain network is configured to:

execute the corresponding smart contract to automatically instruct the computing device of the buyer financial institution to make the order payment to the seller according to the corresponding TU service for the order in response to determining that a predetermined time has reached or a predetermined time period has lapsed after the corresponding payment condition is met.

11. The system of claim 9 or 10, wherein the one or more payment conditions comprises a first payment condition for a first payment for the order and a second payment condition for a second payment for the order,

wherein the second payment is the order payment made according to the TU service for the order, and the second condition comprises the corresponding payment condition, and

wherein the buyer financial institution node is configured to:

execute the corresponding smart contract to automatically instruct the computing device of the buyer financial institution to make the first payment to the seller according to a trustable automatic payment service for the buyer provided by the buyer financial institution in response to determining that the first payment condition for the first payment is met, and

execute the corresponding smart contract to automatically instruct the computing device of the buyer financial institution to make the second payment to the seller according to the corresponding TU service for the order in response to determining that the second payment condition for the second payment is met.

12. The system of claim 11, wherein the first payment is an initial payment for the order, and the first payment condition comprises a validation of the order, and

wherein the second payment is a remaining payment for the order, and the second payment condition comprises at least one of:

a bill of landing associated with the order having been submitted by the seller on the trading platform,

the submitted bill of landing having been confirmed by the buyer on the trading platform,

an invoice associated with the order having been generated by the blockchain network,

the generated invoice having been confirmed by the buyer, or

a consensus having been reached between the buyer and the seller on the order.

13. The system of any one of claims 7 to 12, wherein the corresponding smart contract further comprises an order status update function that automatically updates a status of the order in response to determining the status of the order is changed based on order status data uploaded to the corresponding blockchain, and

wherein the status of the order indicates at least one of:

products associated with the order having been prepared or shipped by the seller,

the products having been inspected by a customs office,

the products being transported by at least one logistics provider,

a bill of landing associated with the order having been submitted by the seller on the trading platform,

the submitted bill of landing having been confirmed by the buyer on the trading platform,

an invoice associated with the order having been generated by the blockchain network,

the generated invoice having been confirmed by the buyer,

a consensus having been reached between the buyer and the seller on the order,

the automatic payment having been made by the buyer financial institution,
the automatic payment having been received by the seller, or
the products having been received by the buyer.

14. A computer-implemented method performed by the system of any one of claims 1 to 13.

15. An apparatus for managing blockchain-based trustable transaction services, the apparatus comprising a plurality of modules for performing the computer-implemented method of claim 14.