

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 is verified to have a trustable undertaking (TU) service guaranteed by a buyer financial institution that automatically makes a payment for the buyer to the seller 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; and
 - a buyer financial institution node corresponding to the buyer 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, and
 - 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, and
 - wherein the buyer financial institution node is configured to:
 - communicate with a computing device of the buyer financial institution to verify that the buyer has the corresponding TU service for the order guaranteed by the buyer financial institution, and
 - 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 in response to determining that the corresponding payment condition for the order payment is met.
2. The system of claim 1, wherein the buyer financial institution node is configured to:

receive order payment data confirming that the buyer financial institution has successfully made the order payment to the seller according to the corresponding TU service for the order; and

store the order payment data on the corresponding blockchain.

3. The system of any one of preceding claims, wherein the blockchain network of the plurality of trustable nodes further comprises:

a seller financial institution node corresponding to a seller financial institution, wherein the seller has a seller financial account in the seller financial institution, and wherein the seller financial institution node is configured to store payment reception data on the corresponding blockchain, 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.

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

determine, based on the TU service data, that the buyer selects to use the corresponding TU service for the order on the trading platform, and

transmit a request to the computing device of the buyer financial institution through the buyer financial institution node, the request requesting the buy financial institution to verify whether the buyer is qualified for the corresponding TU service for the order guaranteed by the buyer financial institution.

5. The system of claim 4, wherein the buyer financial institution node is configured to:

receive verification data from the computing device of the buyer financial institution, the verification data confirming that the buyer has the corresponding TU service for the order guaranteed by the buyer financial institution, and

store the verification data on the corresponding blockchain.

6. The system of claim 5, wherein the trading platform is configured to:

determine, based on the verification data stored on the corresponding blockchain, that the buyer has the corresponding TU service for the order guaranteed by the buyer financial institution, and

validate the order after determining that the buyer has the corresponding TU service for the order guaranteed by the buyer financial institution.

7. The system of any one of preceding claims, 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 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 for the order payment is met.

8. The system of any one of preceding claims, 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 corresponding TU service, and the second payment 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 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.

9. The system of claim 8, 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.

10. The system of claim 9, wherein the trading platform node is configured to:

after the buyer logs in a buyer trading account on the trading platform, communicate with the computing device of the buyer financial institution through the buyer financial institution node to verify whether a buyer financial account of the buyer in the buyer financial institution is qualified for the trustable automatic payment service, the buyer trading account comprising information of the buyer financial account.

11. The system of any one of claims 8 to 10, 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.

12. The system of any one of preceding claims, 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.

13. The system of any one of preceding claims, wherein the system comprises the trading platform.

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.