CLAIMS

1. A computer-implemented method performed by a service system for providing blockchain-based message services, the method comprising:

receiving shipping data and shipping insurance order data associated with a purchase order;

determining, by executing a first smart contract based on first one or more predetermined rules and the shipping data, whether a shipping insurance order corresponding to the shipping insurance order data is valid;

in response to determining that the shipping insurance order is valid, initiating a consensus algorithm to record the shipping data and the shipping insurance order data on a blockchain;

generating, by executing the first smart contract, a first event message including a notification that a shipping insurance of the purchase order is valid, wherein the first smart contract invokes an event management function to periodically generate the first event message until an acknowledgement receipt feedback is received;

receiving shipping insurance premium distribution data indicating a distribution of shipping insurance premium associated with the shipping insurance order to one or more service providers;

determining, by executing a second smart contract based on second one or more predetermined rules, that the distribution of the shipping insurance premium is valid;

initiating the consensus algorithm of a blockchain network to record the shipping insurance premium distribution data on the blockchain; and

generating, by executing the second smart contract, a second event message notifying that the shipping insurance premium is distributed according to the shipping insurance premium distribution data.

2. The computer-implemented method of claim 1, wherein the first event message and second event message are stored on the blockchain as transactions.

3. The computer-implemented method of any previous claim, wherein the first event message is included in a plurality of event messages directed to an insurance provider and is

communicated to the insurance provider through a blockchain node associated with the insurance provider, and wherein the shipping insurance premium is received in response to communicating the first event message to the insurance provider.

4. The computer-implemented method of any previous claim, wherein the second event message is included in a plurality of event messages directed to the one or more service providers.

5. The computer-implemented method of any previous claim, wherein the shipping data is received from a delivery services provider and proves that the purchase order is shipped by the delivery services provider.

6. The computer-implemented method of any previous claim, wherein the first one or more predetermined rules include one or more of a coverage limit of a declared value of the purchase order, items covered by the shipping insurance, or an insurance limit of the purchase order, and wherein the shipping insurance order is valid when the purchase order satisfies the first one or more predetermined rules.

7. The computer-implemented method of any previous claim, wherein the shipping insurance order is received from a shipping insurance service platform or an electronic business platform, and wherein the shipping insurance order indicates one or more of items insured, an insurance premium, a declared value of the purchase order, or an insurance included for the purchase order.

8. The computer-implemented method of any previous claim, wherein the consensus algorithm is one of proof of work (PoW), proof of stake (PoS), or practical Byzantine fault tolerance (PBFT).

9. The computer-implemented method of any previous claim, wherein the one or more service providers include one or more of the service system, a shipping insurance service platform, or an insurance provider.

10. The computer-implemented method of any previous claim, wherein the second one or more predetermined rules provide a shipping insurance premium distribution plan agreed upon by the service system, the shipping insurance service platform, or the insurance provider.

11. The computer-implemented method of any previous claim, wherein the shipping insurance premium is withheld by the service system in response to determining that the shipping insurance order is valid, and the shipping insurance premium is distributed to the service system, the shipping insurance service platform, and the insurance provider according to the second one or more predetermined rules in response to determining that the distribution of the shipping insurance premium is valid.

12. A system for providing blockchain-based message services, comprising:

one or more processors; and

one or more computer-readable memories coupled to the one or more processors and having instructions stored thereon that are executable by the one or more processors to perform the method of any of claims 1 to 11.

13. An apparatus for providing blockchain-based message services, the apparatus comprising a plurality of modules for performing the method of any of claims 1 to 11.