CLAIMS:

1. A method for precious metal reserve management in a precious metal digital asset trading network implemented by a precious metal reserve management server, the method comprising:

determining by the reserve management server a total digital precious metal value corresponding to issued precious metal digital assets in the precious metal digital asset trading network;

determining by the reserve management server, a total reserve precious metal value based on reserve precious metal inventory data, wherein the precious metal inventory data relates to precious metal inventory stored in one or more physical locations;

generating by the reserve management server, a first transaction signal to purchase precious metal in response to the total reserve precious metal value being less than the total digital precious metal value;

analysing by the reserve management server, precious metal commodity pricing data to determine a commodity pricing change projection over a subsequent precious metal reserve rebalancing period, in response to the total reserve precious metal value being greater than or equal to the total digital precious metal value;

generating by the reserve management server, a second transaction signal to hold existing precious metal reserve inventory or purchase additional precious metal reserve inventory, in response to the determined commodity pricing change projection being greater than a first commodity pricing change threshold;

generating by the reserve management server, a third transaction signal to hold existing precious metal reserve inventory or sell a part of precious metal reserve

inventory, in response to the determined commodity pricing change projection being less than a second commodity pricing change threshold;

determining by the reserve management server a precious metal digital asset transaction trend based on a precious metal digital asset transaction data in response to the commodity pricing change projection being less than the first commodity pricing change threshold and greater than second commodity pricing change threshold; and

generating by the reserve management server a further transaction signal based on the precious metal digital asset transaction trend and a precious metal inventory float value;

wherein the precious metal reserve management method is performed at a defined rebalancing frequency.

2. The method of claim 1, wherein determining the commodity pricing change projection comprises determining one or more repeating commodity price movement patterns based on the precious metal commodity pricing data.

3. The method of claim 2, wherein determining the commodity pricing change projection further comprises analysing a subset of the precious metal commodity pricing data to determine a fit probability of the one or more repeating commodity price movement patterns.

4. The method of any one of claims 1 to 3, wherein determining the commodity pricing change projection comprises determining a market movement pressure metric based on precious metal buy and sell order data comprised in the precious metal commodity pricing data.

5. The method of any one of claims 1 to 3~~4~~, wherein determining by the reserve management server the precious metal digital asset transaction trend comprises determining an average precious metal digital asset transaction level over one or more recent transaction periods based on the precious metal digital asset transaction data.

6. The method of claim 5, wherein determining the average precious metal digital asset transaction level comprises excluding from the precious metal digital asset transaction data transactions larger than an outlier transaction threshold.

7. The method of any one of claims 1 to 3~~4~~, wherein determining by the reserve management server the precious metal digital asset transaction trend comprises analysing one or more precious metal digital asset transaction data relating to unsettled precious metal digital asset transactions.

8. The method of any one of claims 1 to 3~~7~~, wherein the precious metal reserve management server is configured to update the defined rebalancing frequency based on a difference between the commodity pricing change projection and an actual commodity price change over one or more previous rebalancing periods.

9. The method of any one of claims 1 to 3~~7~~, wherein the precious metal reserve management server is configured to update the defined rebalancing frequency based on the precious metal digital asset transaction trend and precious metal digital asset transaction data stored for one or more previous rebalancing periods.

10. The method of any one of claims 1 to 3~~9~~, wherein generating by the reserve management server the further transaction signal comprises:

generating by the reserve management server, a fourth transaction signal to purchase precious metal in response to:

the precious metal digital asset transaction trend being greater than a third threshold; and

the total reserve precious metal value being less than a sum of precious metal inventory float value and total digital precious metal value.

11. The method of any one of claims 1 to 3~~9~~, wherein generating by the reserve management server the further transaction signal based on the precious metal digital asset transaction trend and a precious metal inventory float value comprises:

determining a projected change value in the total digital precious metal value based on the determined precious metal digital asset transaction trend;

generating by the reserve management server, a fifth transaction signal to sell precious metal in response to:

the precious metal digital asset transaction trend being greater than a third threshold; and

the total reserve precious metal value being greater than a sum of the precious metal inventory float value and the total digital precious metal value and the projected change value.

12. The method of any one of claims 1 to 3~~9~~, wherein generating by the reserve management server the further transaction signal based on the precious metal digital asset transaction trend and a precious metal inventory float value comprises:

generating by the reserve management server, a sixth transaction signal to sell precious metal in response to:

the precious metal digital asset transaction trend being less than the third threshold and greater than a fourth threshold; and

the total reserve precious metal value being greater than a sum of precious metal inventory float value and total digital precious metal value.

13. The method of any one of claims 1 to 3~~9~~, wherein generating by the reserve management server the further transaction signal based on the precious metal digital asset transaction trend and a precious metal inventory float value comprises:

determining a projected change value in the total digital precious metal value based on the determined precious metal digital asset transaction trend;

generating by the reserve management server, a seventh transaction signal to hold precious metal in response to:

the precious metal digital asset transaction trend being smaller than the third threshold and smaller than a fourth threshold; and

the total reserve precious metal value being less than a sum of the precious metal inventory float value and the total digital precious metal value and the projected change value.

~~14. A method for precious metal reserve management in a precious metal digital asset trading network implemented by a precious metal reserve management server, the method comprising:~~

~~determining by the reserve management server a total digital precious metal value corresponding to issued precious metal digital assets in the precious metal digital asset trading network;~~

determining by the reserve management server, a total reserve precious metal value based on reserve precious metal inventory data, wherein the reserve precious metal inventory data relates to precious metal inventory stored in one or more physical locations;

determining by the reserve management server a precious metal digital asset transaction trend based on a precious metal digital asset transaction data;

generating by the reserve management server, a first transaction signal to purchase precious metal in response to:

the precious metal digital asset transaction trend being greater than a first threshold; and

the total reserve precious metal value being less than a sum of a precious metal inventory float value and total digital precious metal value.

15. The method of claim 14 further comprising:

determining a projected change value in the total digital precious metal value based on the determined precious metal digital asset transaction trend;

generating by the reserve management server, a second transaction signal to sell precious metal in response to:

the precious metal digital asset transaction trend being greater than the first threshold; and

the total reserve precious metal value being greater than a sum of the precious metal inventory float value and the total digital precious metal value and the projected change value.

~~16. The method of claim 14 further comprising:~~

~~generating by the reserve management server, a third transaction signal to sell precious metal in response to:~~

~~the precious metal digital asset transaction trend being less than the first threshold and greater than a second threshold; and~~

~~the total reserve precious metal value being greater than a sum of precious metal inventory float value and total digital precious metal value.~~

~~17. The method of claim 14 further comprising:~~

~~determining a projected change value in the total digital precious metal value based on the determined precious metal digital asset transaction trend;~~

~~generating by the reserve management server, a fourth transaction signal to hold precious metal in response to:~~

~~the precious metal digital asset transaction trend being less than the first threshold and less than a second threshold; and~~

~~the total reserve precious metal value being less than a sum of the precious metal inventory float value and the total digital precious metal value and the projected change value.~~

1~~4~~8. A system for precious metal reserve management in a precious metal digital asset trading network, the system comprising:

at least one processor,

a memory accessible to the at least one processor, the memory comprising program code which when executed by the at least one processor configures the at least one processor to:

determine a total digital precious metal value corresponding to issued precious metal digital assets in the precious metal digital asset trading network;

determine a total reserve precious metal value based on reserve precious metal inventory data, wherein the precious metal inventory data relates to precious metal inventory stored in one or more physical locations;

generate a first transaction signal to purchase precious metal in response to the total reserve precious metal value being less than the total digital precious metal value;

analyse precious metal commodity pricing data to determine a commodity pricing change projection over a subsequent precious metal reserve rebalancing period, in response to the total reserve precious metal value being greater than or equal to the total digital precious metal value;

generate a second transaction signal to hold existing precious metal reserve inventory or purchase additional precious metal reserve inventory, in response to the determined commodity pricing change projection being greater than a first commodity pricing change threshold;

generate a third transaction signal to hold existing precious metal reserve inventory or sell a part of precious metal reserve inventory, in response to the determined commodity pricing change projection being less than a second commodity pricing change threshold;

determine a precious metal digital asset transaction trend based on a precious metal digital asset transaction data in response to the commodity pricing change projection being less than the first commodity pricing change threshold and greater than second commodity pricing change threshold; and

generate a further transaction signal based on the precious metal digital asset transaction trend and a precious metal inventory float value;

wherein the precious metal reserve management is performed at a defined rebalancing frequency.

15~~9~~. The system of claim 14~~8~~, wherein determining the commodity pricing change projection comprises determining one or more repeating commodity price movement patterns based on the precious metal commodity pricing data.

16~~20~~. The system of claim 15~~9~~, wherein determining the commodity pricing change projection further comprises analysing a subset of the precious metal commodity pricing data to determine a fit probability of the one or more repeating commodity price movement patterns.

~~2~~17. The system of any one of claims 14~~8~~ to 16~~20~~, wherein determining the commodity pricing change projection comprises determining a market movement pressure metric based on precious metal buy and sell order data comprised in the precious metal commodity pricing data.

18~~22~~. The system of any one of claims 14~~8~~ to ~~2~~16, wherein determining the precious metal digital asset transaction trend comprises determining an average precious metal digital asset transaction level over one or more recent transaction periods based on the precious metal digital asset transaction data.

1923. The system of claim 1822, wherein determining the average precious metal digital asset transaction level comprises excluding from the precious metal digital asset transaction data transactions larger than an outlier transaction threshold.

204. The system of any one of claims 149 to 1623, wherein the precious metal digital asset transaction trend comprises analysing one or more precious metal digital asset transaction data relating to unsettled precious metal digital asset transactions.

215. The system of any one of claims 148 to 1624, wherein the at least one processor is further configured to update the defined rebalancing frequency based on a difference between the commodity pricing change projection and an actual commodity price change over one or more previous rebalancing periods.

226. The system of any one of claims 148 to 1625, wherein the at least one processor is further configured to update the defined rebalancing frequency based on the precious metal digital asset transaction trend and an precious metal digital asset transaction data stored for one or more previous rebalancing periods.

237. The system of any one of claims 148 to ~~2~~16, wherein generating the further transaction signal comprises:

generating by the at least one processor, a fourth transaction signal to purchase precious metal in response to:

the precious metal digital asset transaction trend being greater than a third threshold; and

the total reserve precious metal value being less than a sum of precious metal inventory float value and total digital precious metal value.

2~~4~~8. The system of any one of claims 1~~4~~8 to ~~2~~16, wherein generating the further transaction signal comprises:

determining by the at least one processor, a projected change value in the total digital precious metal value based on the determined precious metal digital asset transaction trend;

generating by the at least one processor, a fifth transaction signal to sell precious metal in response to:

the precious metal digital asset transaction trend being greater than a third threshold; and

the total reserve precious metal value being greater than a sum of the precious metal inventory float value and the total digital precious metal value and the projected change value.

2~~5~~9. The system of any one of claims 1~~4~~8 to ~~2~~16, wherein generating the further transaction signal comprises:

generating by the at least one processor, a sixth transaction signal to sell precious metal in response to:

the precious metal digital asset transaction trend being less than the third threshold and greater than a fourth threshold; and

the total reserve precious metal value being greater than a sum of precious metal inventory float value and total digital precious metal value.

26~~30~~. The system of any one of claims 1~~4~~8 to ~~2~~16, wherein generating the further transaction signal comprises:

determining by the at least one processor a projected change value in the total digital precious metal value based on the determined precious metal digital asset transaction trend;

generating, by the at least one processor, a seventh transaction signal to hold precious metal in response to:

the precious metal digital asset transaction trend being smaller than the third threshold and smaller than a fourth threshold; and

the total reserve precious metal value being less than a sum of the precious metal inventory float value and the total digital precious metal value and the projected change value.

~~31. A system for precious metal reserve management in a precious metal digital asset trading network, the system comprising:~~

~~at least one processor,~~

~~a memory accessible to the at least one processor, the memory comprising program code which when executed by the at least one processor configures the at least one processor to:~~

~~determine a total digital precious metal value corresponding to issued precious metal digital assets in the precious metal digital asset trading network;~~

~~determine a total reserve precious metal value based on reserve precious metal inventory data, wherein the reserve precious metal inventory data relates to precious metal inventory stored in one or more physical locations;~~

determine a precious metal digital asset transaction trend based on precious metal digital asset transaction data;

generate a first transaction signal to purchase precious metal in response to:

the precious metal digital asset transaction trend being greater than a first threshold; and

the total reserve precious metal value being less than a sum of a precious metal inventory float value and total digital precious metal value.

32. The system of claim 31, wherein the program code when executed by the at least one processor further configures the at least one processor to:

determine a projected change value in the total digital precious metal value based on the determined precious metal digital asset transaction trend;

generate by the reserve management server, a second transaction signal to sell precious metal in response to:

the precious metal digital asset transaction trend being greater than the first threshold; and

the total reserve precious metal value being greater than a sum of the precious metal inventory float value and the total digital precious metal value and the projected change value.

33. The system of claim 31 or claim 32, wherein the program code when executed by the at least one processor further configures the at least one processor to:

generate a third transaction signal to sell precious metal in response to:

~~the precious metal digital asset transaction trend being less than the first threshold and greater than a second threshold; and~~

~~the total reserve precious metal value being greater than a sum of precious metal inventory float value and total digital precious metal value.~~

~~34. The system of any one of claims 31 to 33, wherein the program code when executed by the at least one processor further configures the at least one processor to:~~

~~determine a projected change value in the total digital precious metal value based on the determined precious metal digital asset transaction trend;~~

~~generate a fourth transaction signal to hold precious metal in response to:~~

~~the precious metal digital asset transaction trend being less than the first threshold and less than a second threshold; and~~

~~the total reserve precious metal value being less than a sum of the precious metal inventory float value and the total digital precious metal value and the projected change value.~~

27~~35~~. A computer readable storage media comprising computer-readable instructions that when executed by the one or more processing units performs the method of any one of claims 1 to 3~~17~~.