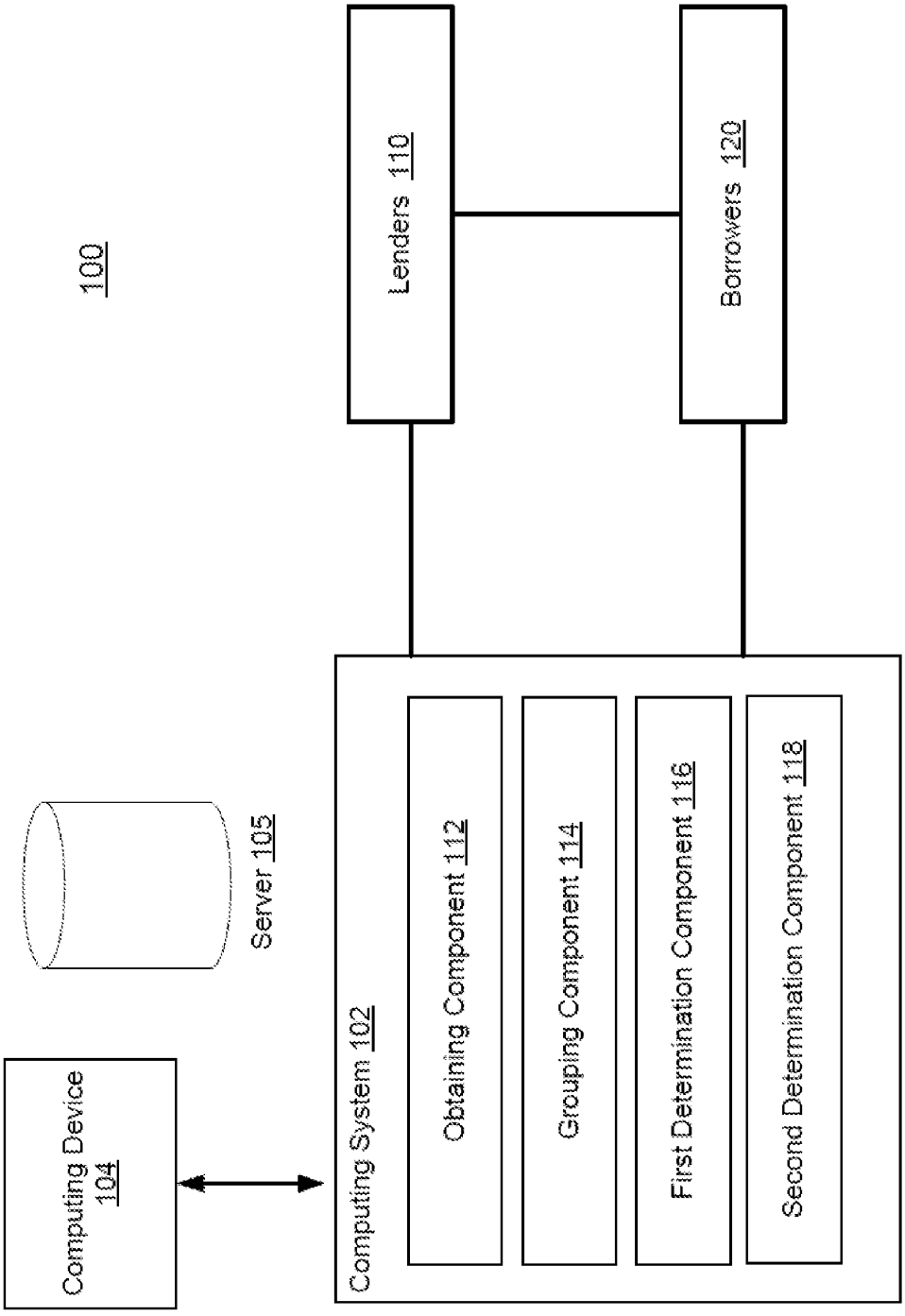
100
Lenders 110
Borrowers 120
Server 105
Computing Device 104
Computing System 102
Obtaining Component 112
Grouping Component 114
First Determination Component 116
Second Determination Component 118

FIG. 1

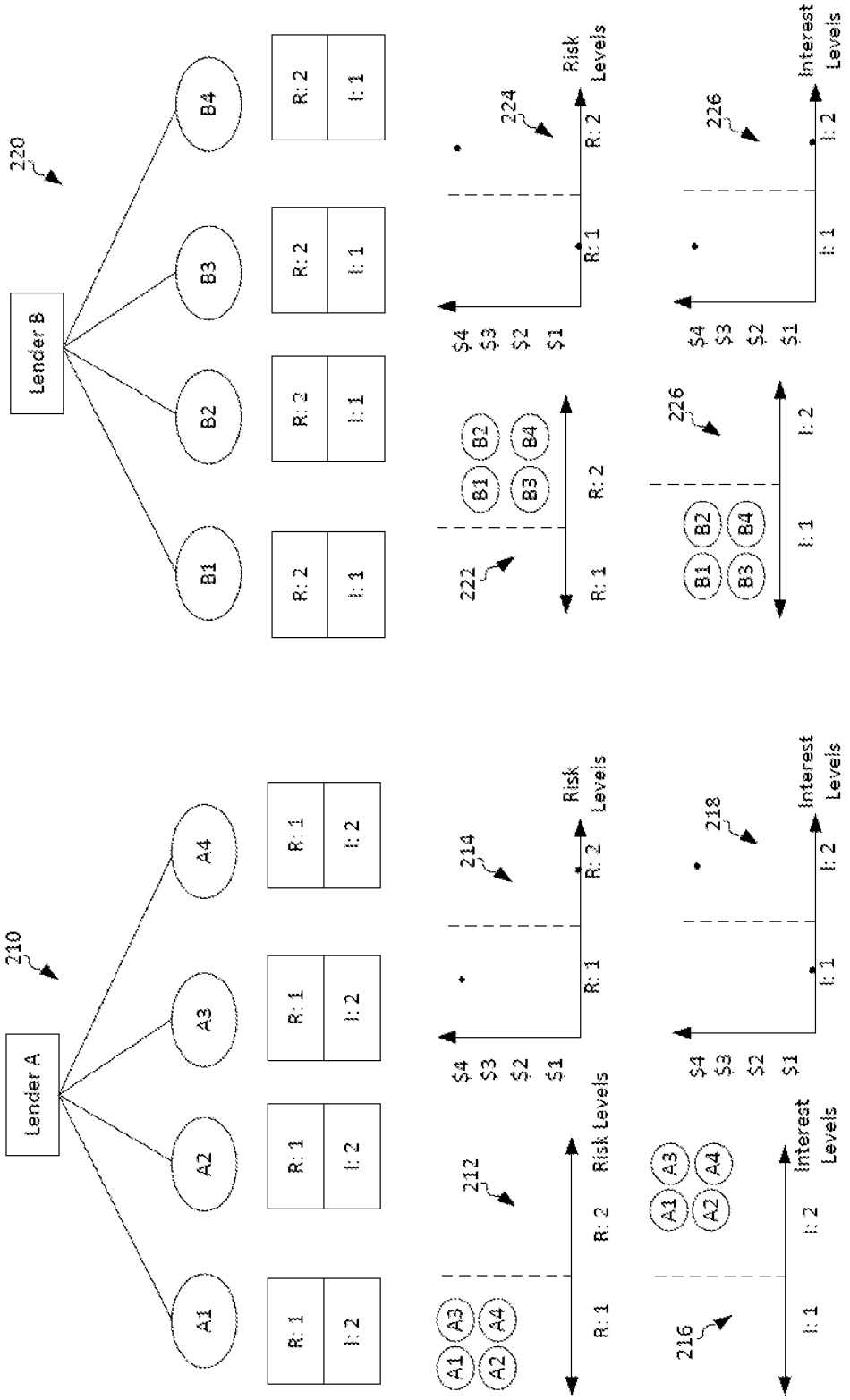
Lender A
210
A1
A2
A3
A4
R: 1
I: 2
212
Risk Levels
214
Risk Levels
216
Interest Levels
218
Interest Levels
Lender B
220
B1
B2
B3
B4
R: 2
I: 1
222
224
Risk Levels
226
Interest Levels
$4
$3
$2
$1

FIG. 2A

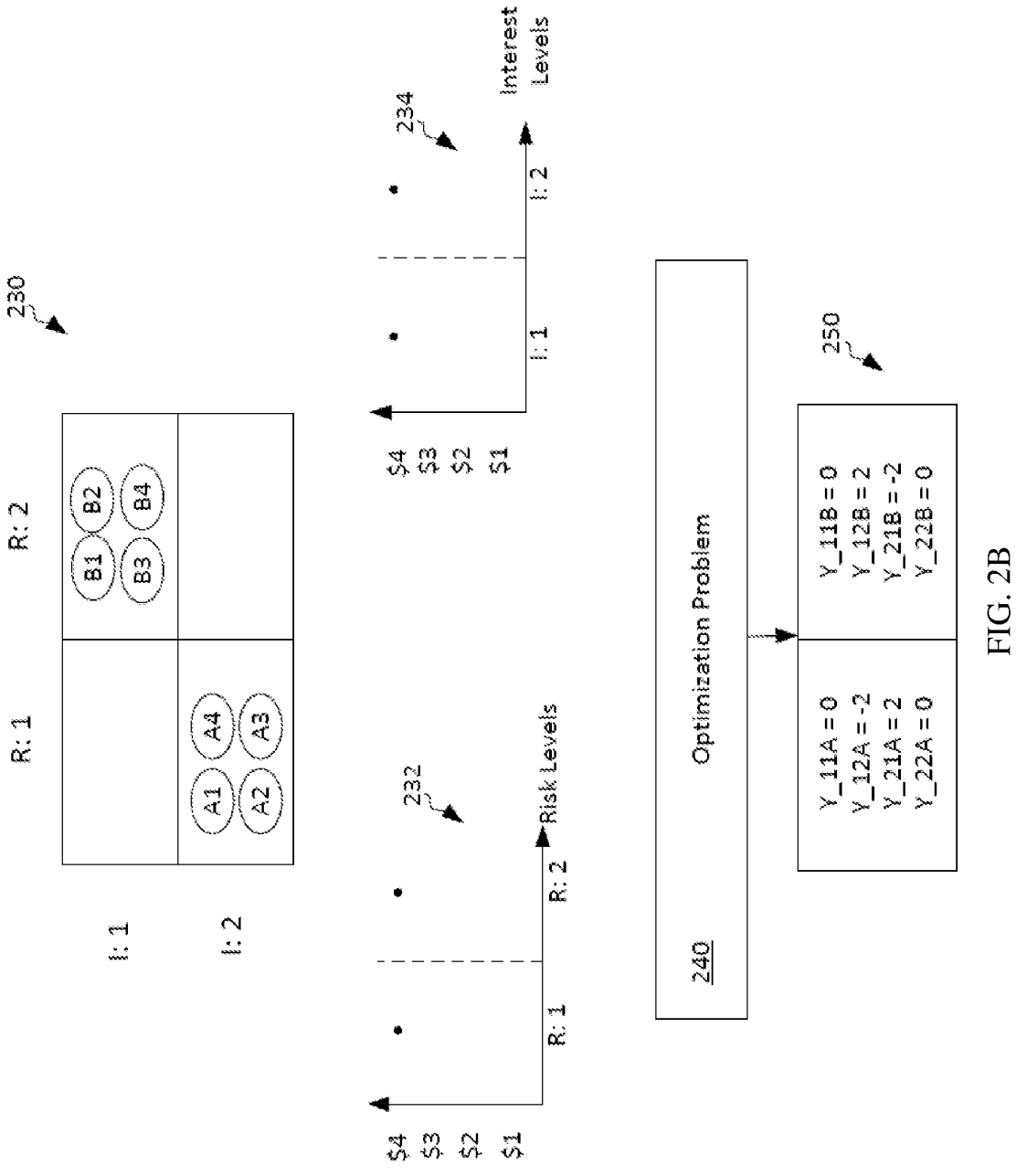
230
R: 1
R: 2
B1
B2
B3
B4
A1
A2
A3
A4
I: 1
I: 2
232
Risk Levels
R: 1
R: 2
$4
$3
$2
$1
234
Interest Levels
I: 1
I: 2
$4
$3
$2
$1
240
Optimization Problem
250
Y_11A = 0
Y_12A = -2
Y_21A = 2
Y_22A = 0
Y_11B = 0
Y_12B = 2
Y_21B = -2
Y_22B = 0

FIG. 2B

Note: "loans" in this method refers to loans of risk level m and interest level n.

Input:

(1) loans from all lenders

(2) Y_mnj: loan flow decision variables, each decision variable corresponding to loans from lender j.

Output:

loans to be migrated, and the corresponding source lenders and the corresponding destination lenders.

Step1: dividing the lenders into receiving lenders that receive migrated loans, and providing lenders that provide the migrated loans.

Step 2:

```
foreach receiving lenders:
    total_received_loans = 0
    foreach providing lenders:
        total_migrated_loans = 0
        sort the loans of the providing lender
        foreach the sorted loans of the providing lender:
            if total_migrated_loans + this loan > Y_mnj of the providing lender:
                mark this loan as No_Migrate
            if (this loan is not No_Migrate and
                the receiving lender accepts this loan and
                accepting this loan will not exceed Y_mnj of the receiving lender):
                recommend this loan to be migrated from the providing lender to the receiving lender
                updating total_received_loans amd total_migrated_loans as if loan X has been migrated
                mark this loan as No_Migrate
```

Step 3: return all the recommendations.

FIG. 3A

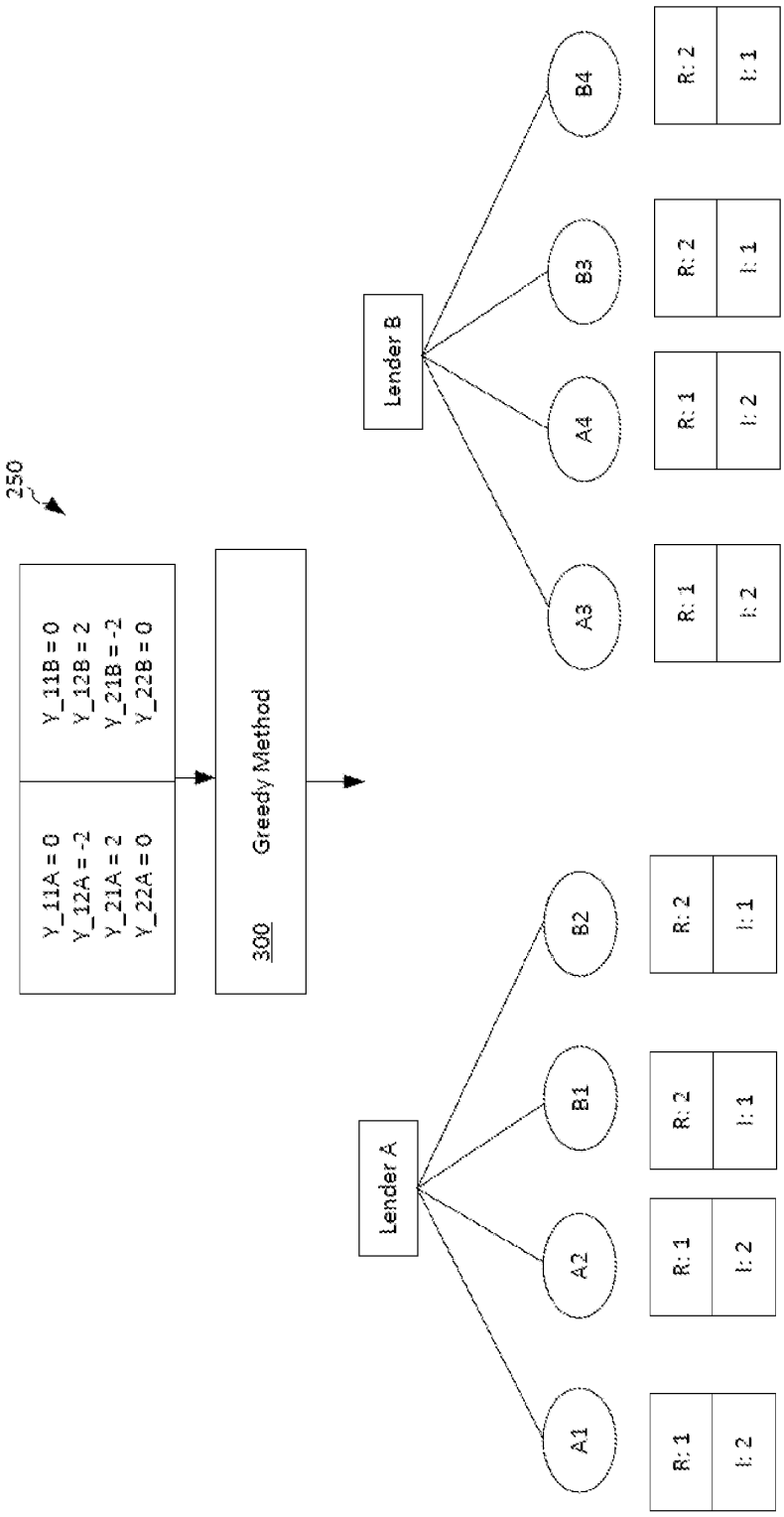
250
Y_11A = 0
Y_12A = -2
Y_21A = 2
Y_22A = 0
Y_11B = 0
Y_12B = 2
Y_21B = -2
Y_22B = 0
Greedy Method
300
Lender A
A1
A2
B1
B2
R: 1
I: 2
R: 1
I: 2
R: 2
I: 1
R: 2
I: 1
Lender B
A3
A4
B3
B4
R: 1
I: 2
R: 1
I: 2
R: 2
I: 1
R: 2
I: 1

FIG. 3B

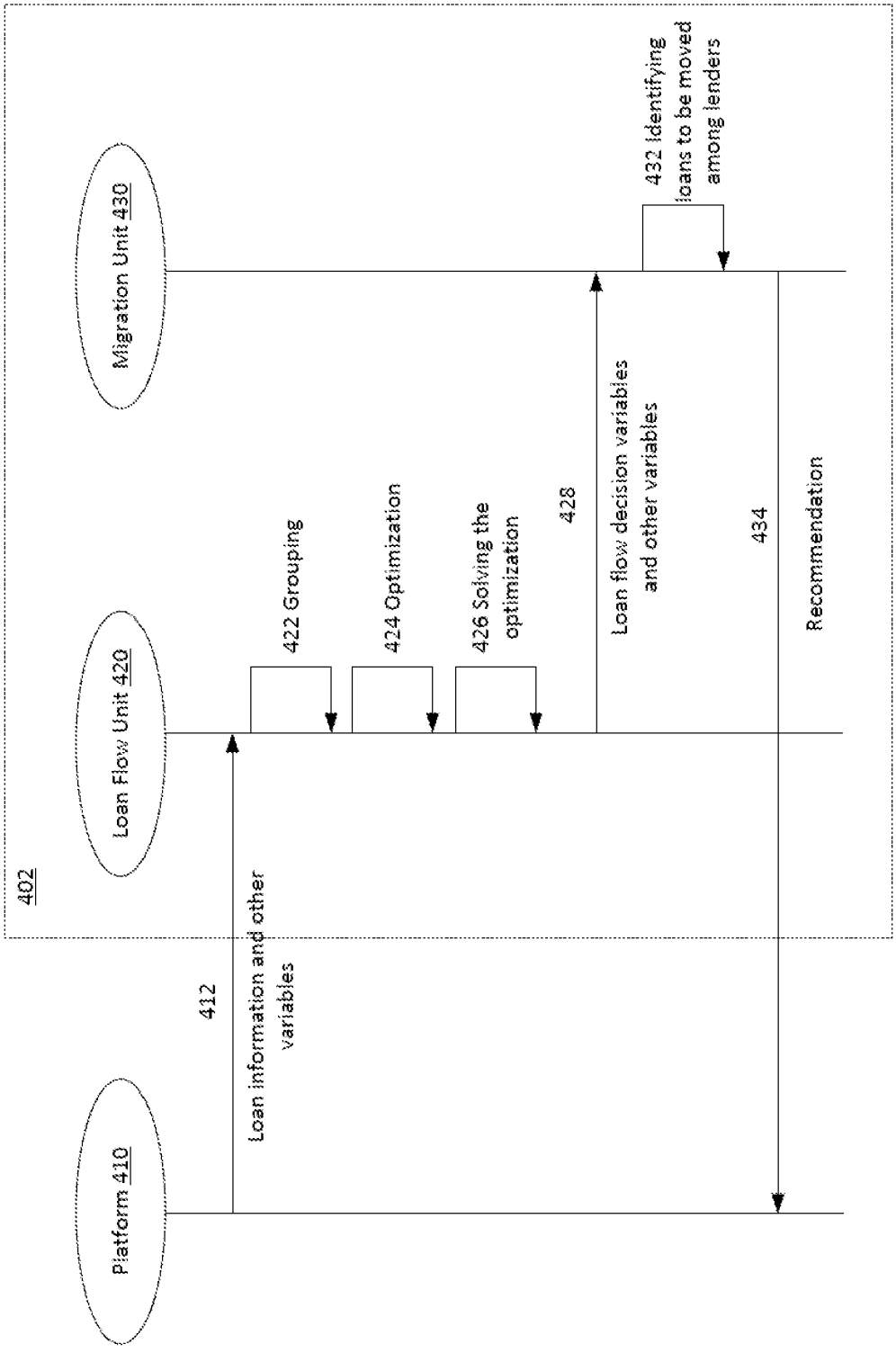
402
Platform 410
Loan Flow Unit 420
Migration Unit 430
412
Loan information and other variables
422 Grouping
424 Optimization
426 Solving the optimization
428
Loan flow decision variables and other variables
432 Identifying loans to be moved among lenders
434
Recommendation

FIG. 4

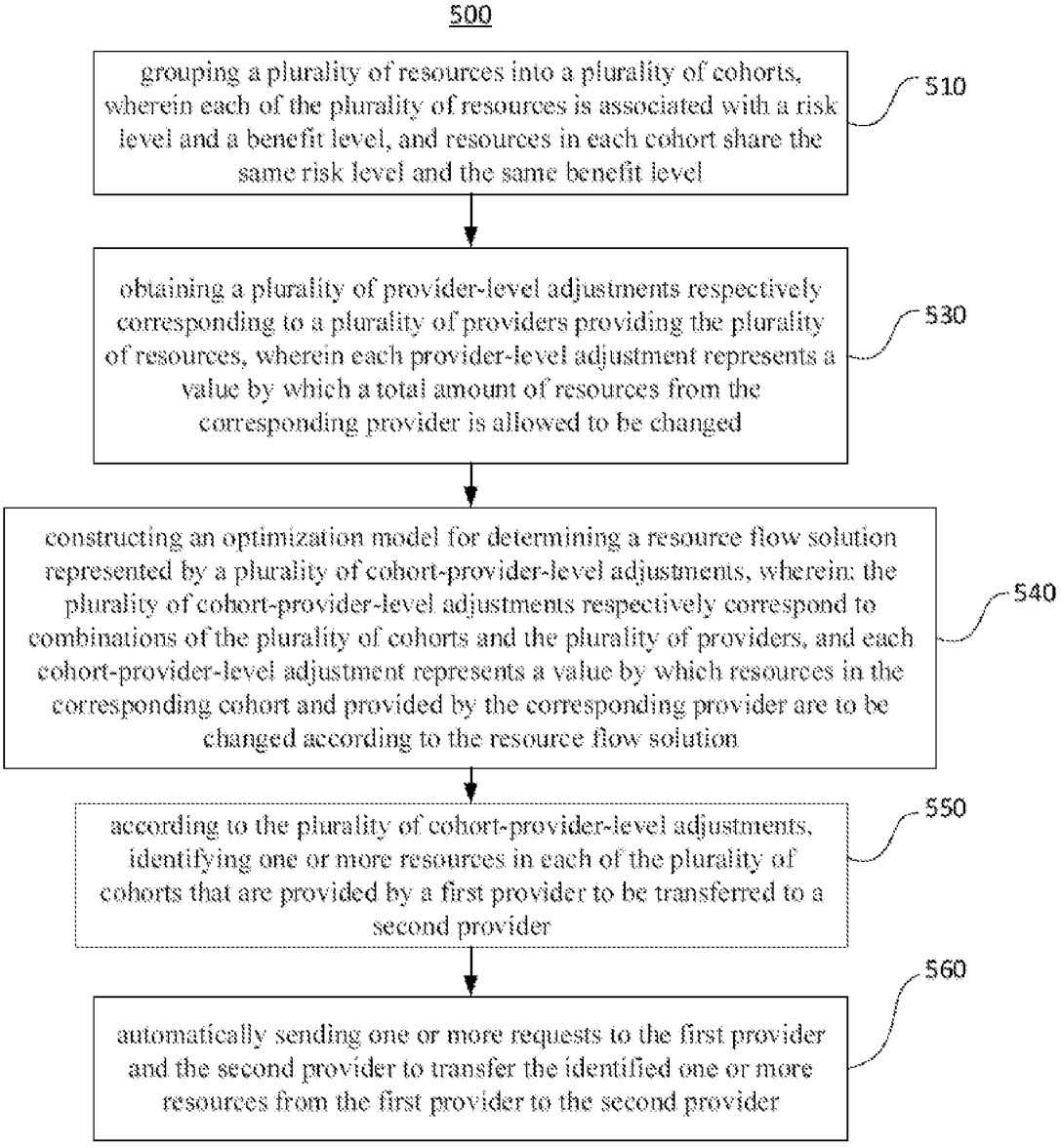
500
grouping a plurality of resources into a plurality of cohorts, wherein each of the plurality of resources is associated with a risk level and a benefit level, and resources in each cohort share the same risk level and the same benefit level
510
obtaining a plurality of provider-level adjustments respectively corresponding to a plurality of providers providing the plurality of resources, wherein each provider-level adjustment represents a value by which a total amount of resources from the corresponding provider is allowed to be changed
530
constructing an optimization model for determining a resource flow solution represented by a plurality of cohort-provider-level adjustments, wherein: the plurality of cohort-provider-level adjustments respectively correspond to combinations of the plurality of cohorts and the plurality of providers, and each cohort-provider-level adjustment represents a value by which resources in the corresponding cohort and provided by the corresponding provider are to be changed according to the resource flow solution
540
according to the plurality of cohort-provider-level adjustments, identifying one or more resources in each of the plurality of cohorts that are provided by a first provider to be transferred to a second provider
550
automatically sending one or more requests to the first provider and the second provider to transfer the identified one or more resources from the first provider to the second provider
560

FIG. 5

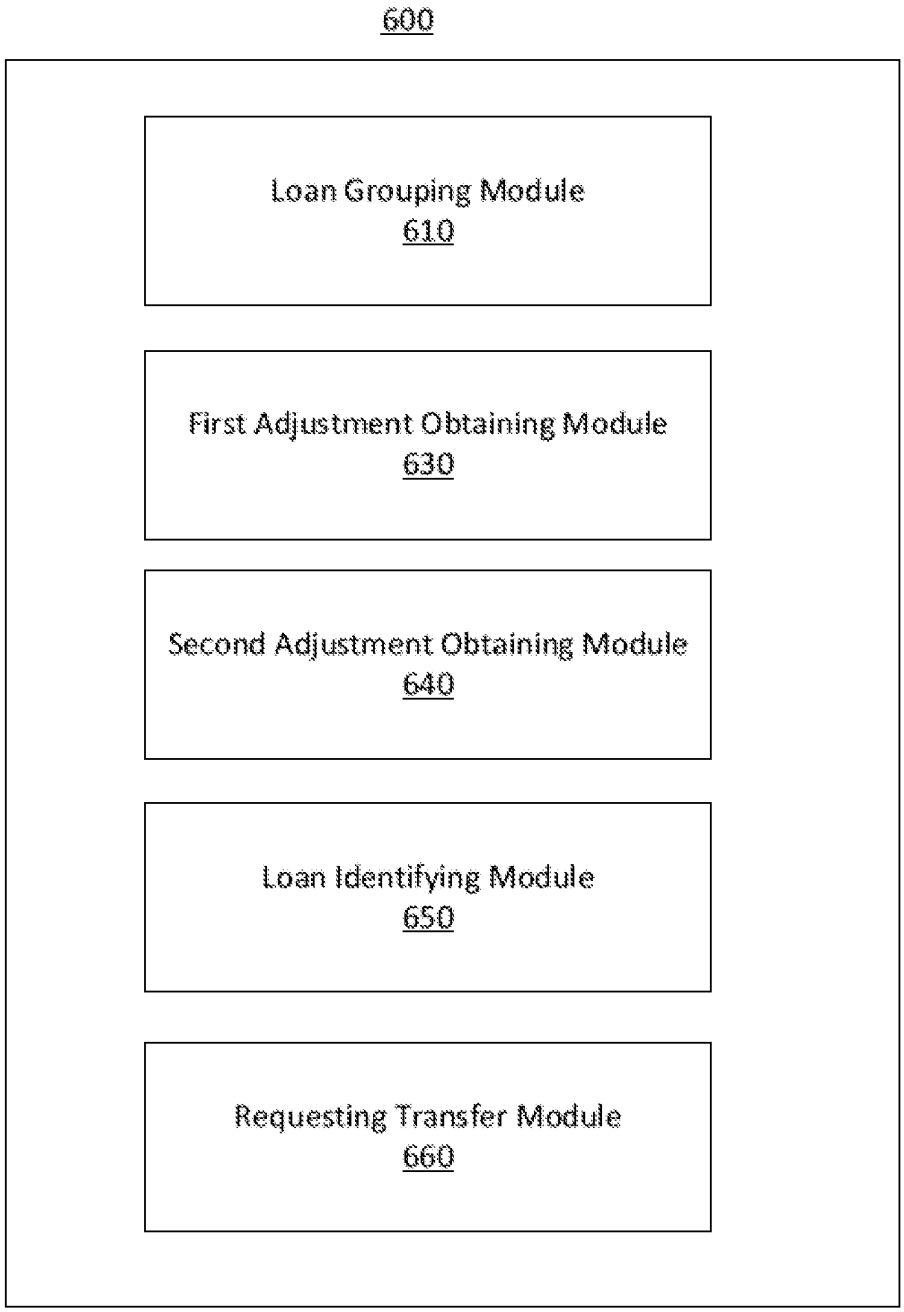
600
Loan Grouping Module
610
First Adjustment Obtaining Module
630
Second Adjustment Obtaining Module
640
Loan Identifying Module
650
Requesting Transfer Module
660

FIG. 6

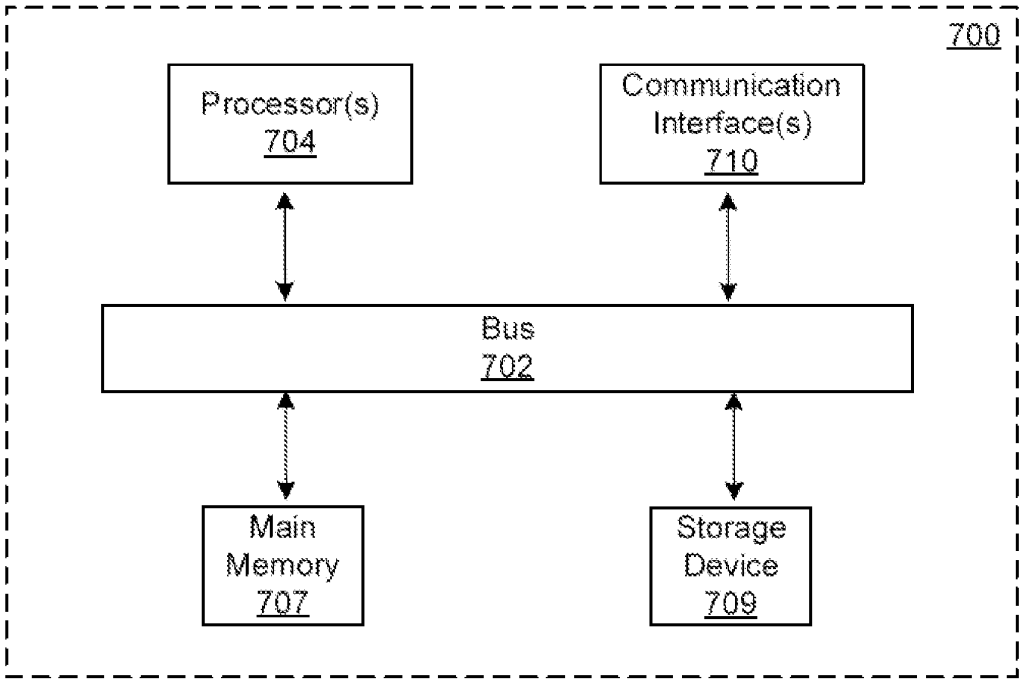
700
Processor(s)
704
Communication
Interface(s)
710
Bus
702
Main
Memory
707
Storage
Device
709

FIG. 7