FIG. 1

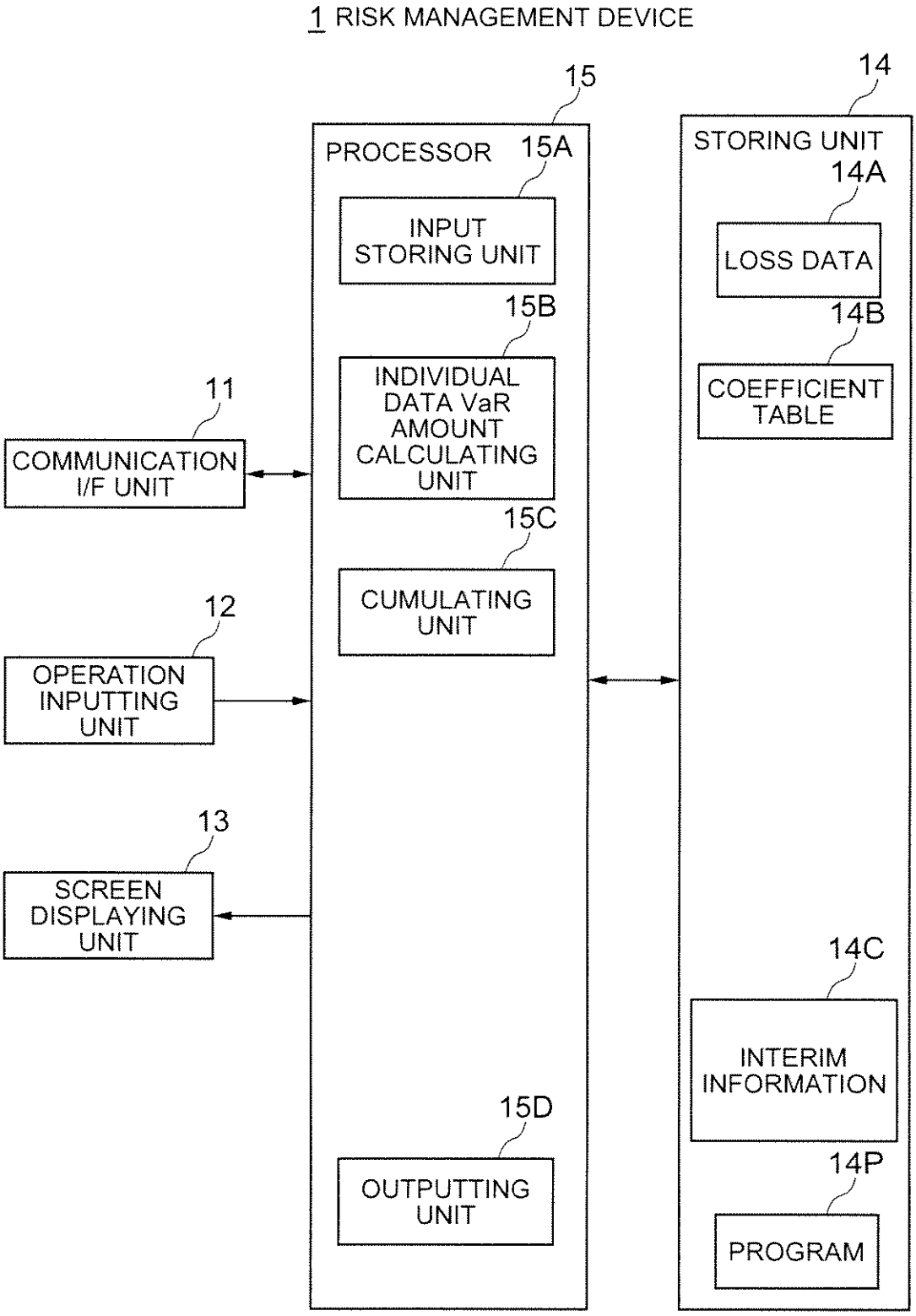

1 RISK MANAGEMENT DEVICE
15
PROCESSOR
15A
INPUT STORING UNIT
15B
INDIVIDUAL DATA VaR AMOUNT CALCULATING UNIT
15C
CUMULATING UNIT
15D
OUTPUTTING UNIT
14
STORING UNIT
14A
LOSS DATA
14B
COEFFICIENT TABLE
14C
INTERIM INFORMATION
14P
PROGRAM
11
COMMUNICATION I/F UNIT
12
OPERATION INPUTTING UNIT
13
SCREEN DISPLAYING UNIT

FIG. 2

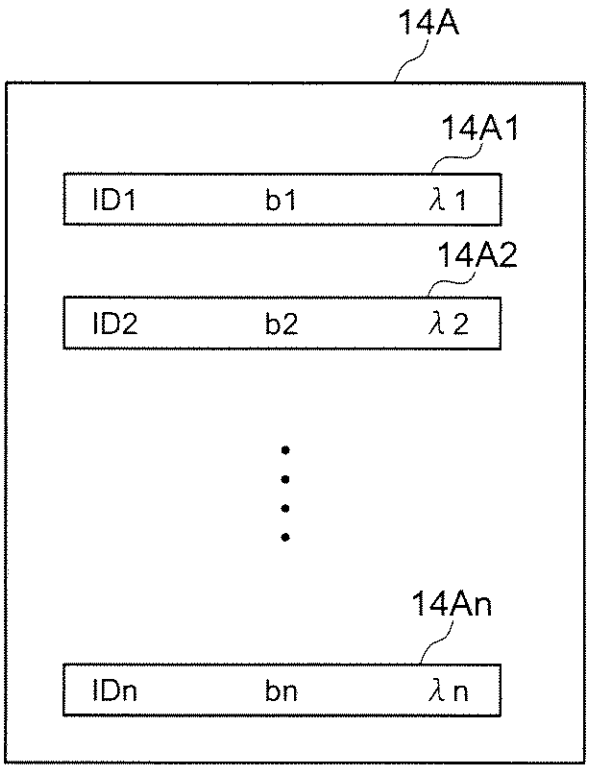


FIG. 3

ONCE EVERY X YEARS	λ (=1／X)	COEFFICIENT CORRESPONDING TO FREQUENCY (WITHOUT SMOOTH)	COEFFICIENT CORRESPONDING TO FREQUENCY (WITH SMOOTH)
1	1	5	5.722
2	0.5	4	4.250
3	0.333333	3	3.639
4	0.25	3	3.286
5	0.2	3	3.048
6	0.166667	2	2.874
7	0.142857	2	2.739
8	0.125	2	2.630
9	0.111111	2	2.541
10	0.1	2	2.465
20	0.05	2	2.048
30	0.033333	1	1.858
40	0.025	1	1.741
50	0.02	1	1.660
60	0.016667	1	1.598
70	0.014286	1	1.549
80	0.0125	1	1.508
90	0.011111	1	1.474
100	0.01	1	1.445
200	0.005	1	1.277
300	0.003333	1	1.194
400	0.0025	1	1.142
500	0.002	1	1.104
600	0.001667	1	1.075
700	0.001429	1	1.051
800	0.00125	1	1.031
900	0.001111	1	1.014
1000	0.001	0	1.000
2000	0.0005	0	0.913
3000	0.000333	0	0.869
4000	0.00025	0	0.840
5000	0.0002	0	0.819
6000	0.000167	0	0.802
7000	0.000143	0	0.789
8000	0.000125	0	0.777
9000	0.000111	0	0.767
10000	0.0001	0	0.759

FIG. 4

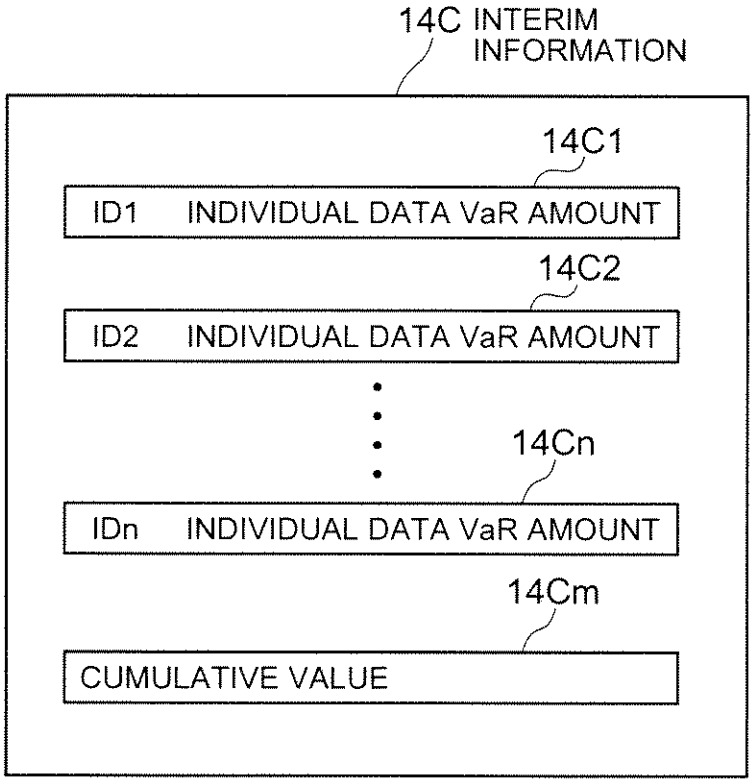

14C INTERIM INFORMATION
14C1
ID1 INDIVIDUAL DATA VaR AMOUNT
14C2
ID2 INDIVIDUAL DATA VaR AMOUNT
14Cn
IDn INDIVIDUAL DATA VaR AMOUNT
14Cm
CUMULATIVE VALUE

FIG. 5

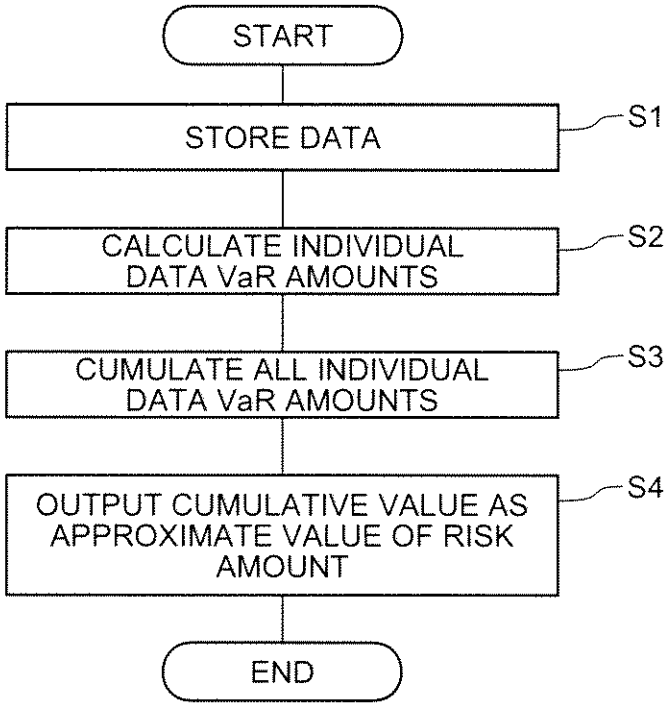

START
STORE DATA
S1
CALCULATE INDIVIDUAL DATA VaR AMOUNTS
S2
CUMULATE ALL INDIVIDUAL DATA VaR AMOUNTS
S3
OUTPUT CUMULATIVE VALUE AS APPROXIMATE VALUE OF RISK AMOUNT
S4
END

FIG. 6

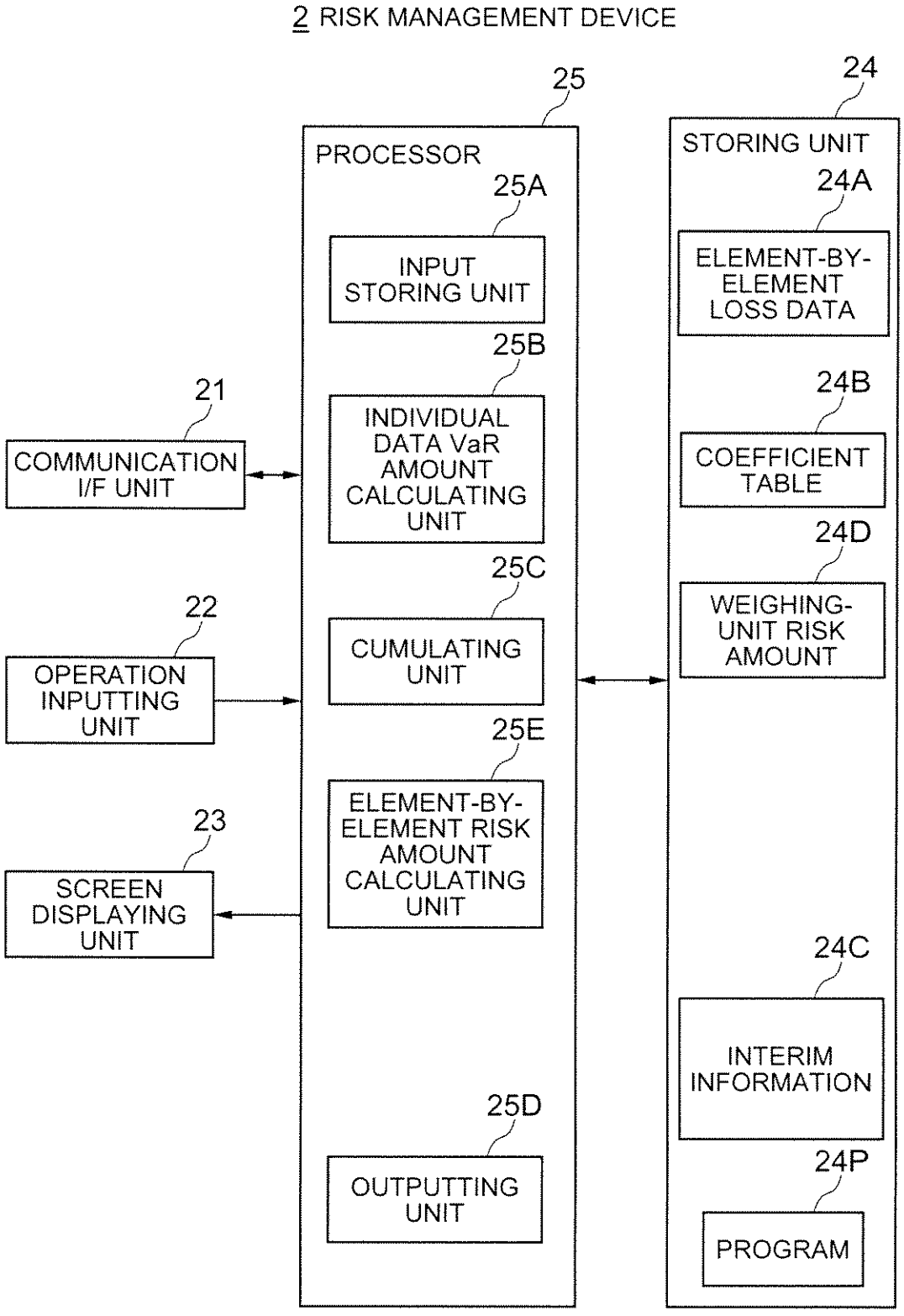

2 RISK MANAGEMENT DEVICE
25
PROCESSOR
25A
INPUT STORING UNIT
25B
INDIVIDUAL DATA VaR AMOUNT CALCULATING UNIT
25C
CUMULATING UNIT
25E
ELEMENT-BY-ELEMENT RISK AMOUNT CALCULATING UNIT
25D
OUTPUTTING UNIT
21
COMMUNICATION I/F UNIT
22
OPERATION INPUTTING UNIT
23
SCREEN DISPLAYING UNIT
24
STORING UNIT
24A
ELEMENT-BY-ELEMENT LOSS DATA
24B
COEFFICIENT TABLE
24D
WEIGHING-UNIT RISK AMOUNT
24C
INTERIM INFORMATION
24P
PROGRAM

FIG. 7

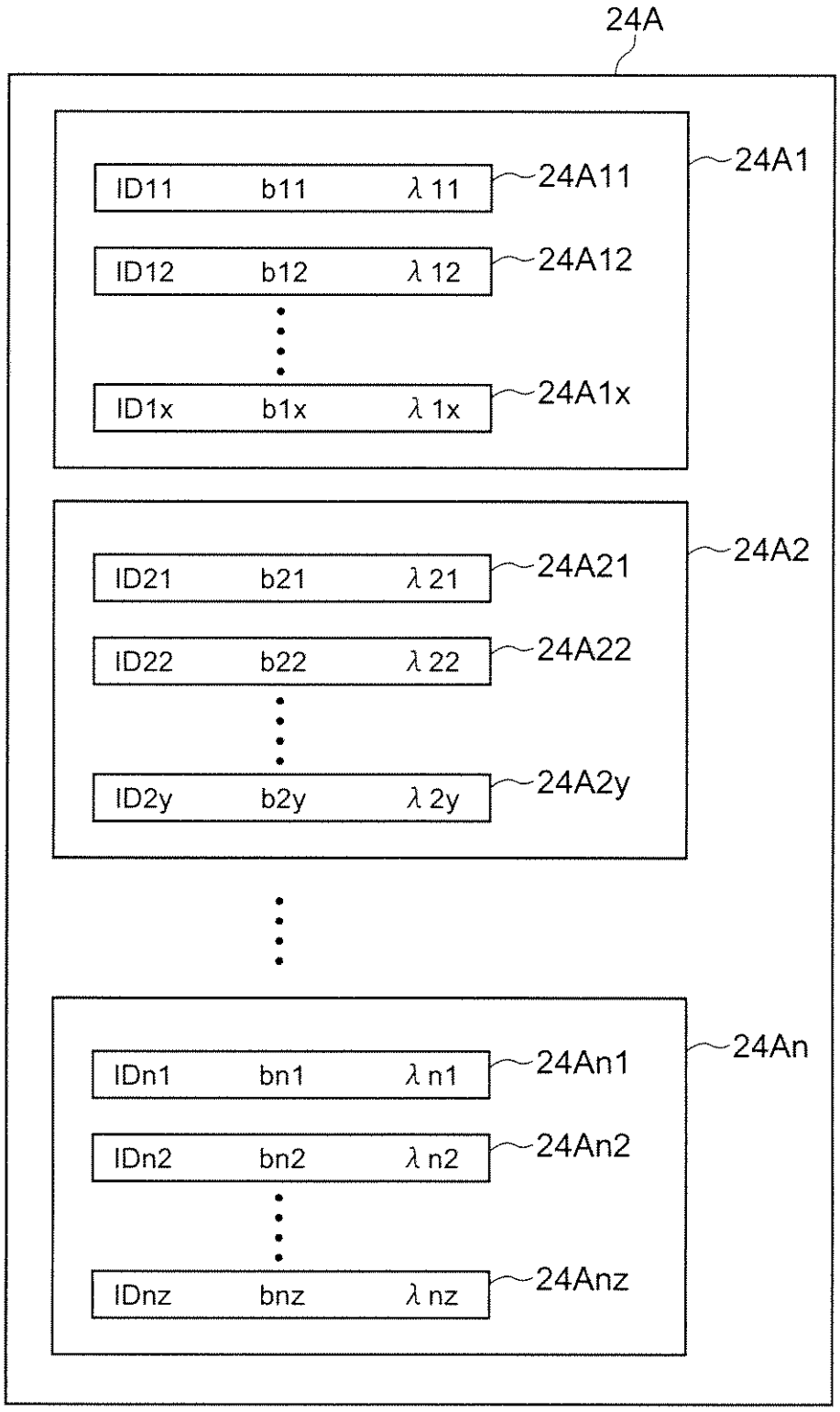

24A
24A1
ID11 b11 λ 11
24A11
ID12 b12 λ 12
24A12
ID1x b1x λ 1x
24A1x
24A2
ID21 b21 λ 21
24A21
ID22 b22 λ 22
24A22
ID2y b2y λ 2y
24A2y
24An
IDn1 bn1 λ n1
24An1
IDn2 bn2 λ n2
24An2
IDnz bnz λ nz
24Anz

FIG. 8

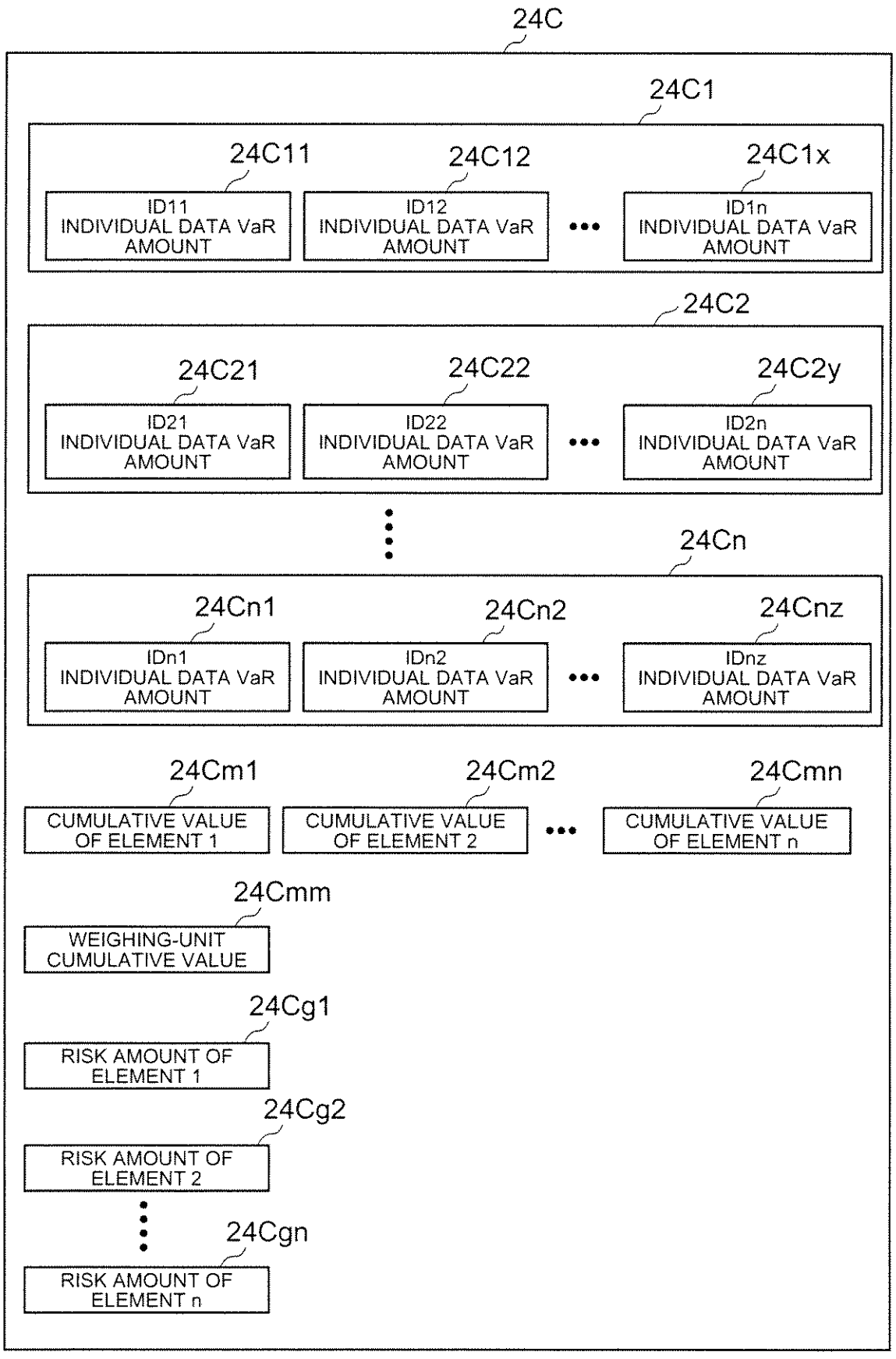

24C
24C1
24C11
ID11
INDIVIDUAL DATA VaR
AMOUNT
24C12
ID12
INDIVIDUAL DATA VaR
AMOUNT
24C1x
ID1n
INDIVIDUAL DATA VaR
AMOUNT
24C2
24C21
ID21
INDIVIDUAL DATA VaR
AMOUNT
24C22
ID22
INDIVIDUAL DATA VaR
AMOUNT
24C2y
ID2n
INDIVIDUAL DATA VaR
AMOUNT
24Cn
24Cn1
IDn1
INDIVIDUAL DATA VaR
AMOUNT
24Cn2
IDn2
INDIVIDUAL DATA VaR
AMOUNT
24Cnz
IDnz
INDIVIDUAL DATA VaR
AMOUNT
24Cm1
CUMULATIVE VALUE
OF ELEMENT 1
24Cm2
CUMULATIVE VALUE
OF ELEMENT 2
24Cmn
CUMULATIVE VALUE
OF ELEMENT n
24Cmm
WEIGHING-UNIT
CUMULATIVE VALUE
24Cg1
RISK AMOUNT OF
ELEMENT 1
24Cg2
RISK AMOUNT OF
ELEMENT 2
24Cgn
RISK AMOUNT OF
ELEMENT n

FIG. 9

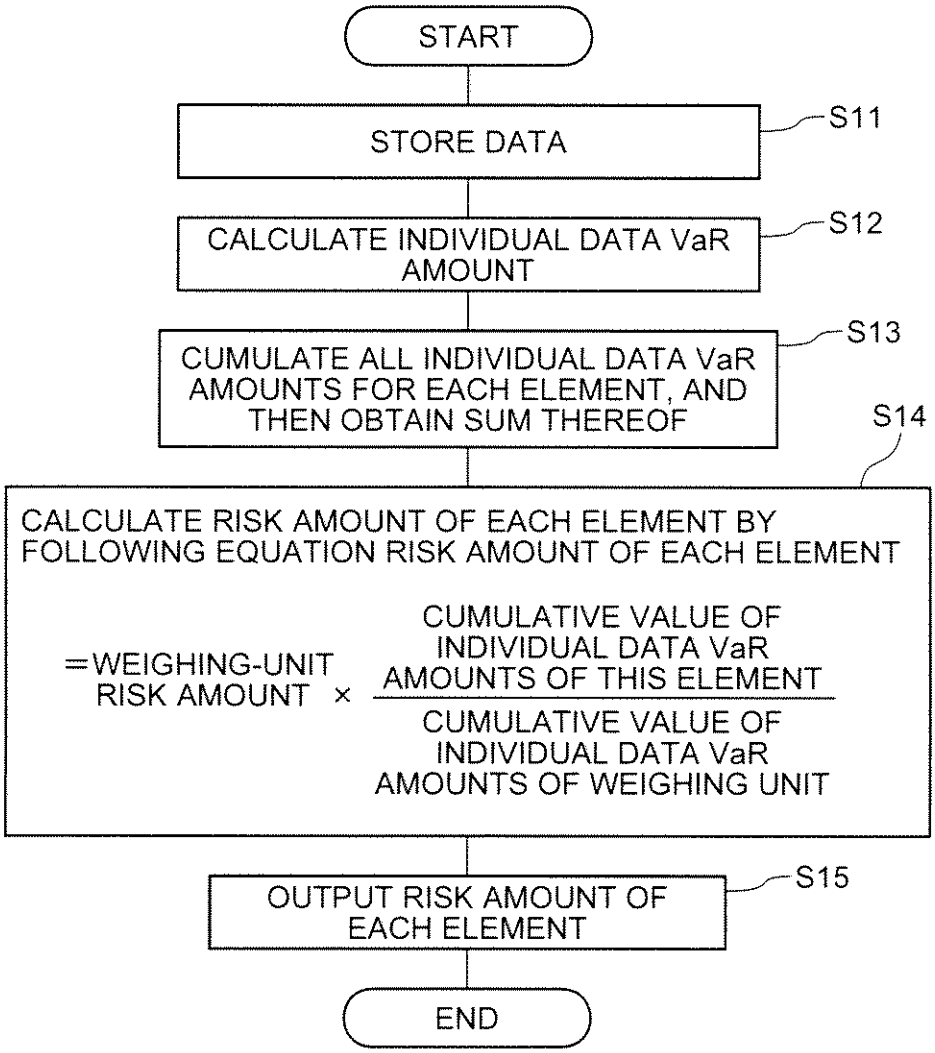

START
STORE DATA
S11
CALCULATE INDIVIDUAL DATA VaR AMOUNT
S12
CUMULATE ALL INDIVIDUAL DATA VaR AMOUNTS FOR EACH ELEMENT, AND THEN OBTAIN SUM THEREOF
S13
S14
CALCULATE RISK AMOUNT OF EACH ELEMENT BY FOLLOWING EQUATION RISK AMOUNT OF EACH ELEMENT
=WEIGHING-UNIT RISK AMOUNT × CUMULATIVE VALUE OF INDIVIDUAL DATA VaR AMOUNTS OF THIS ELEMENT / CUMULATIVE VALUE OF INDIVIDUAL DATA VaR AMOUNTS OF WEIGHING UNIT
OUTPUT RISK AMOUNT OF EACH ELEMENT
S15
END

FIG. 10

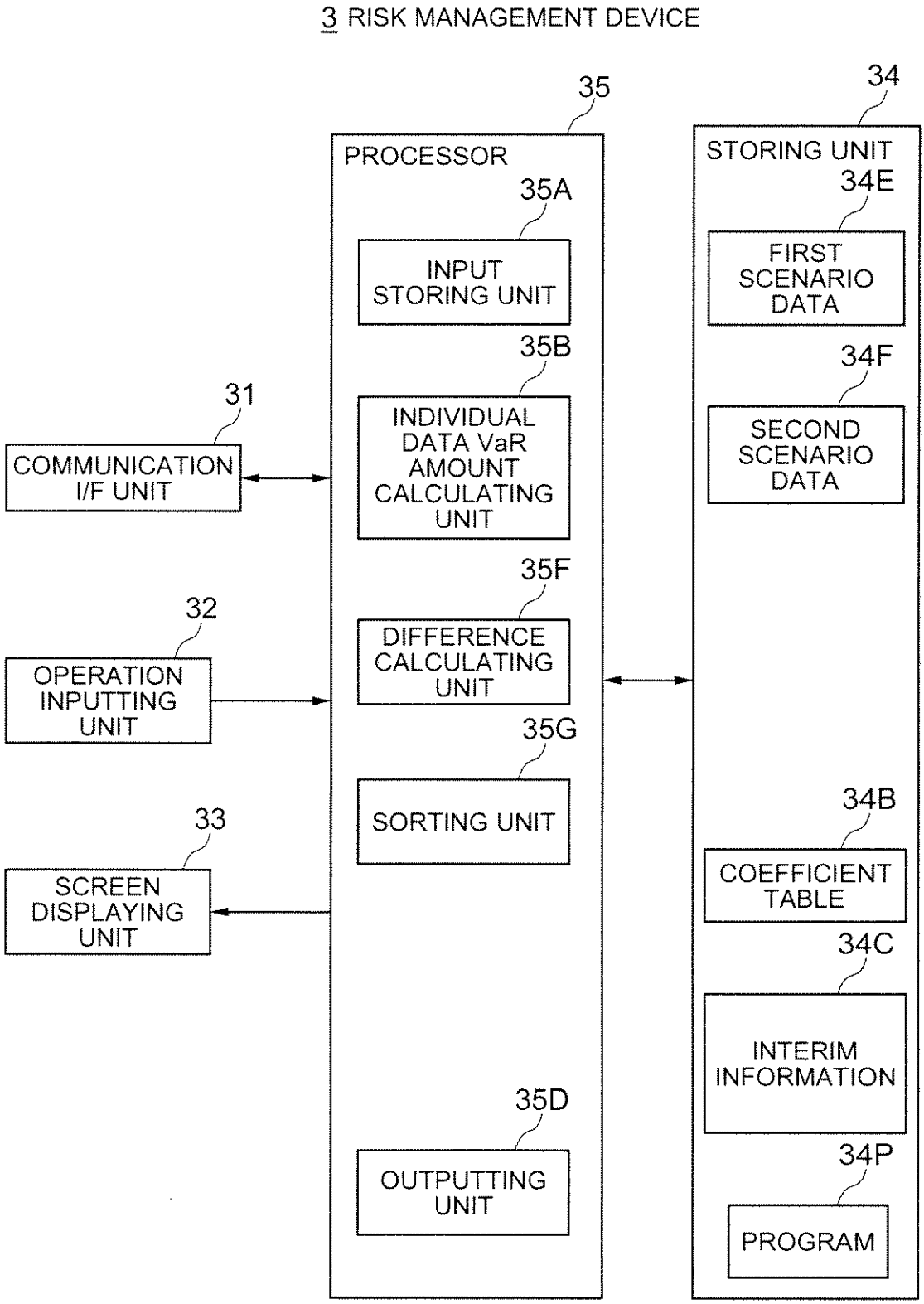

3 RISK MANAGEMENT DEVICE
35
PROCESSOR
35A
INPUT STORING UNIT
35B
INDIVIDUAL DATA VaR AMOUNT CALCULATING UNIT
35F
DIFFERENCE CALCULATING UNIT
35G
SORTING UNIT
35D
OUTPUTTING UNIT
34
STORING UNIT
34E
FIRST SCENARIO DATA
34F
SECOND SCENARIO DATA
34B
COEFFICIENT TABLE
34C
INTERIM INFORMATION
34P
PROGRAM
31
COMMUNICATION I/F UNIT
32
OPERATION INPUTTING UNIT
33
SCREEN DISPLAYING UNIT

FIG. 11

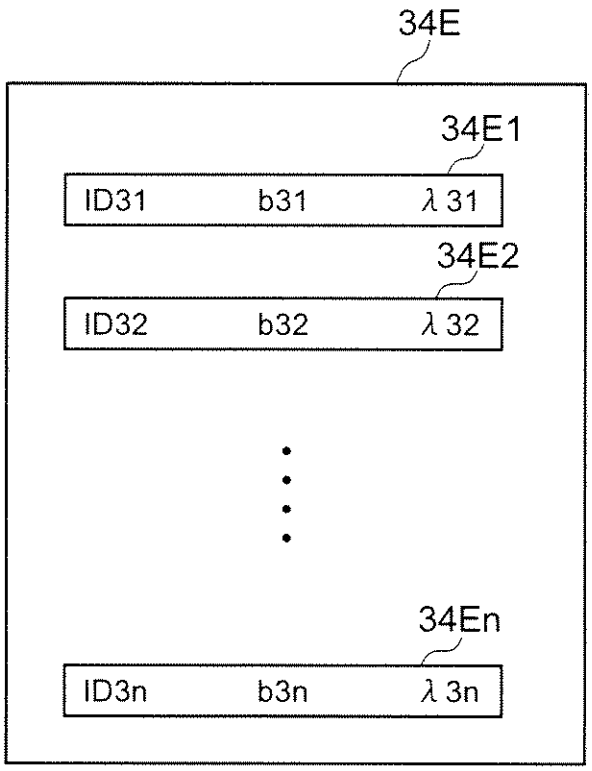


FIG. 12

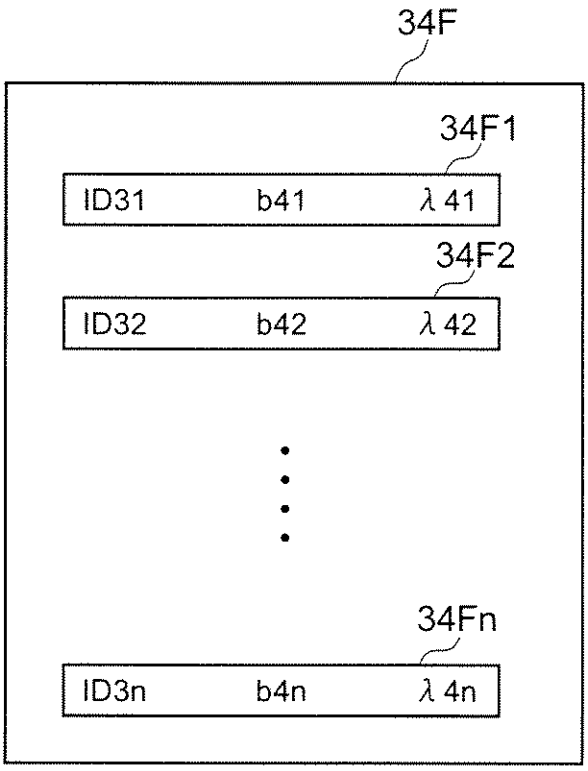


FIG. 13

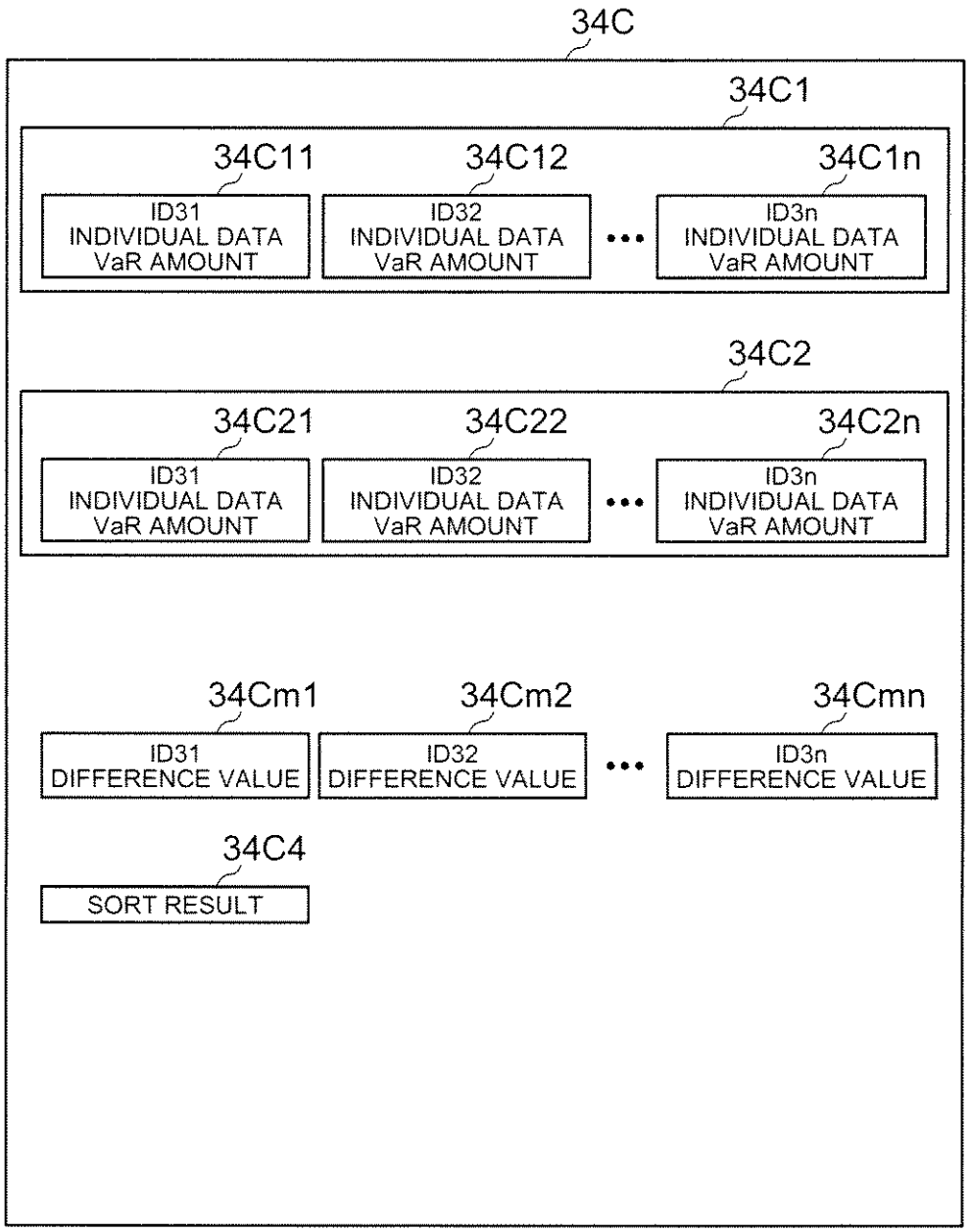

34C
34C1
34C11
34C12
34C1n
ID31
INDIVIDUAL DATA
VaR AMOUNT
ID32
INDIVIDUAL DATA
VaR AMOUNT
ID3n
INDIVIDUAL DATA
VaR AMOUNT
34C2
34C21
34C22
34C2n
ID31
INDIVIDUAL DATA
VaR AMOUNT
ID32
INDIVIDUAL DATA
VaR AMOUNT
ID3n
INDIVIDUAL DATA
VaR AMOUNT
34Cm1
34Cm2
34Cmn
ID31
DIFFERENCE VALUE
ID32
DIFFERENCE VALUE
ID3n
DIFFERENCE VALUE
34C4
SORT RESULT

FIG. 14

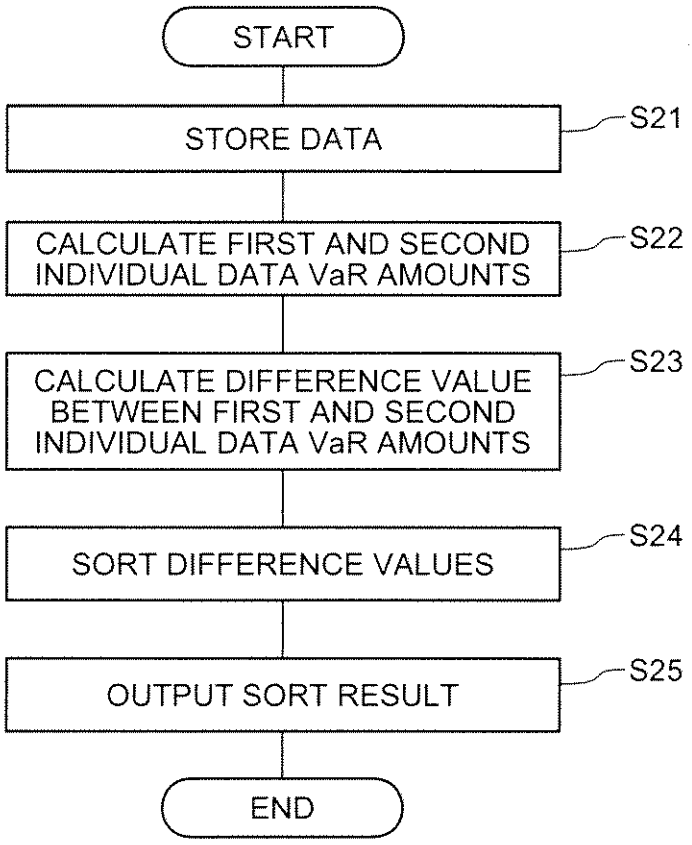

START
STORE DATA
S21
CALCULATE FIRST AND SECOND INDIVIDUAL DATA VaR AMOUNTS
S22
CALCULATE DIFFERENCE VALUE BETWEEN FIRST AND SECOND INDIVIDUAL DATA VaR AMOUNTS
S23
SORT DIFFERENCE VALUES
S24
OUTPUT SORT RESULT
S25
END

FIG. 15

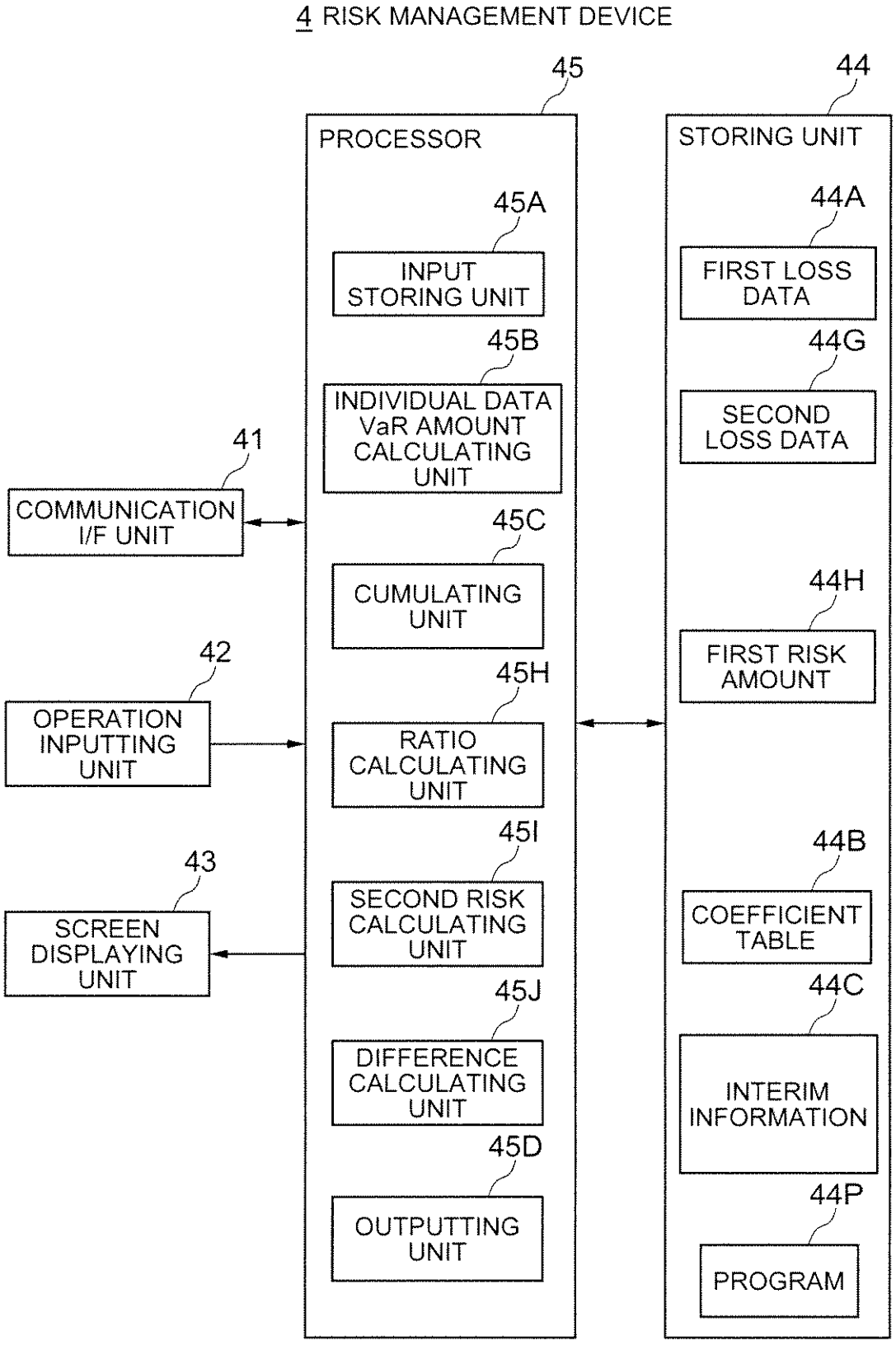

4 RISK MANAGEMENT DEVICE
45
PROCESSOR
45A
INPUT STORING UNIT
45B
INDIVIDUAL DATA VaR AMOUNT CALCULATING UNIT
45C
CUMULATING UNIT
45H
RATIO CALCULATING UNIT
45I
SECOND RISK CALCULATING UNIT
45J
DIFFERENCE CALCULATING UNIT
45D
OUTPUTTING UNIT
44
STORING UNIT
44A
FIRST LOSS DATA
44G
SECOND LOSS DATA
44H
FIRST RISK AMOUNT
44B
COEFFICIENT TABLE
44C
INTERIM INFORMATION
44P
PROGRAM
41
COMMUNICATION I/F UNIT
42
OPERATION INPUTTING UNIT
43
SCREEN DISPLAYING UNIT

FIG. 16

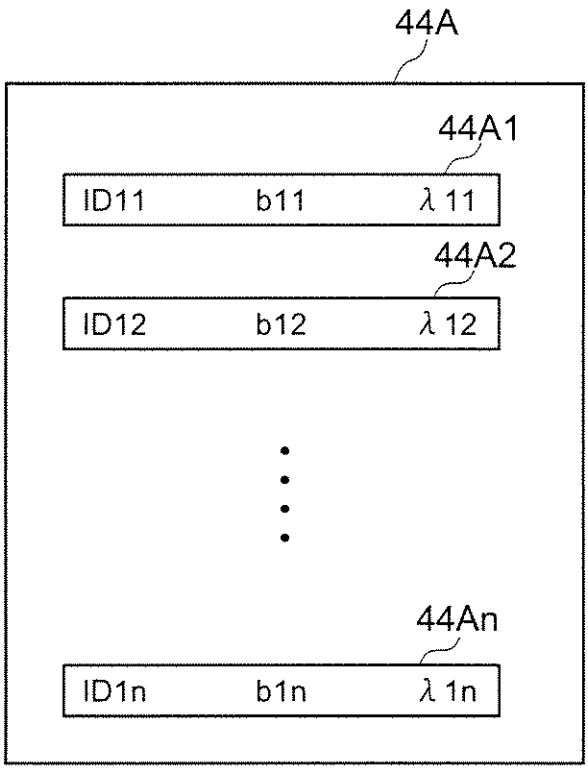


FIG. 17

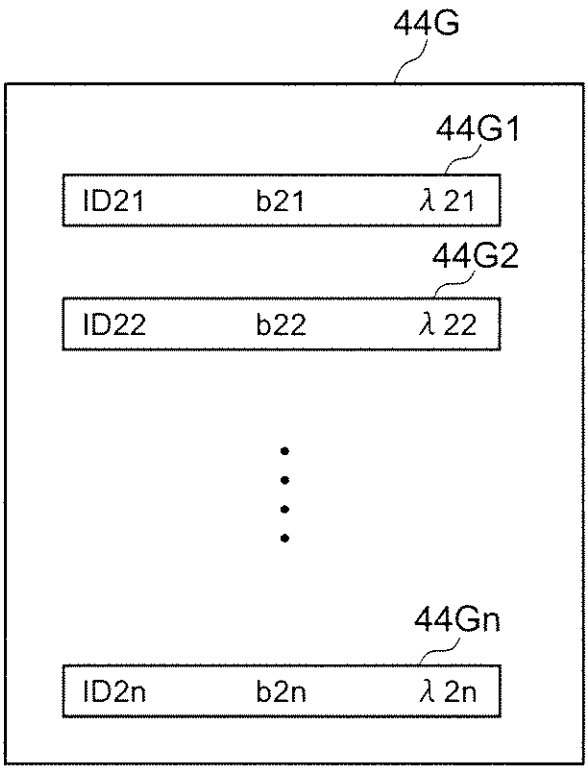


FIG. 18

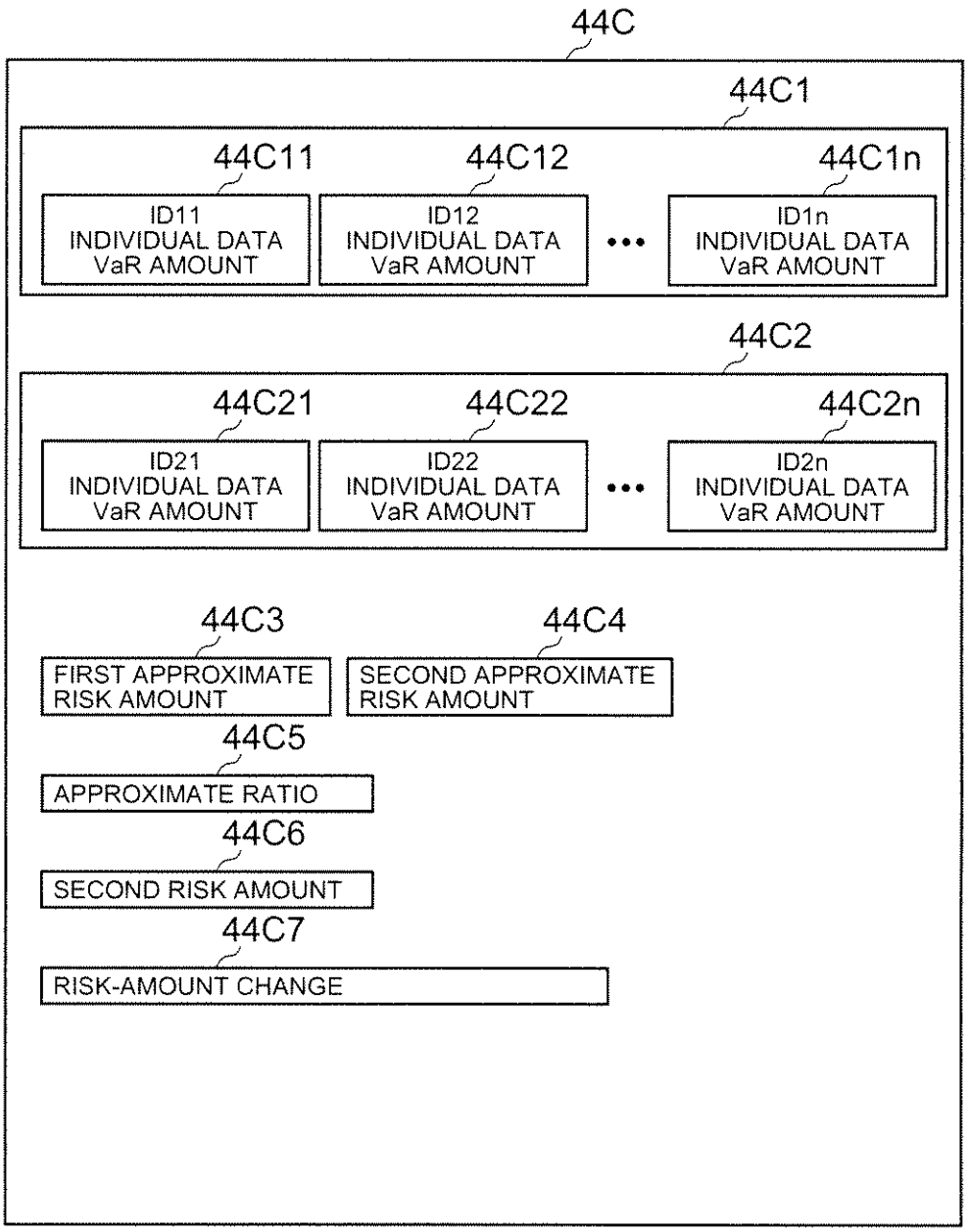

44C
44C1
44C11
ID11
INDIVIDUAL DATA
VaR AMOUNT
44C12
ID12
INDIVIDUAL DATA
VaR AMOUNT
44C1n
ID1n
INDIVIDUAL DATA
VaR AMOUNT
44C2
44C21
ID21
INDIVIDUAL DATA
VaR AMOUNT
44C22
ID22
INDIVIDUAL DATA
VaR AMOUNT
44C2n
ID2n
INDIVIDUAL DATA
VaR AMOUNT
44C3
FIRST APPROXIMATE
RISK AMOUNT
44C4
SECOND APPROXIMATE
RISK AMOUNT
44C5
APPROXIMATE RATIO
44C6
SECOND RISK AMOUNT
44C7
RISK-AMOUNT CHANGE

FIG. 19

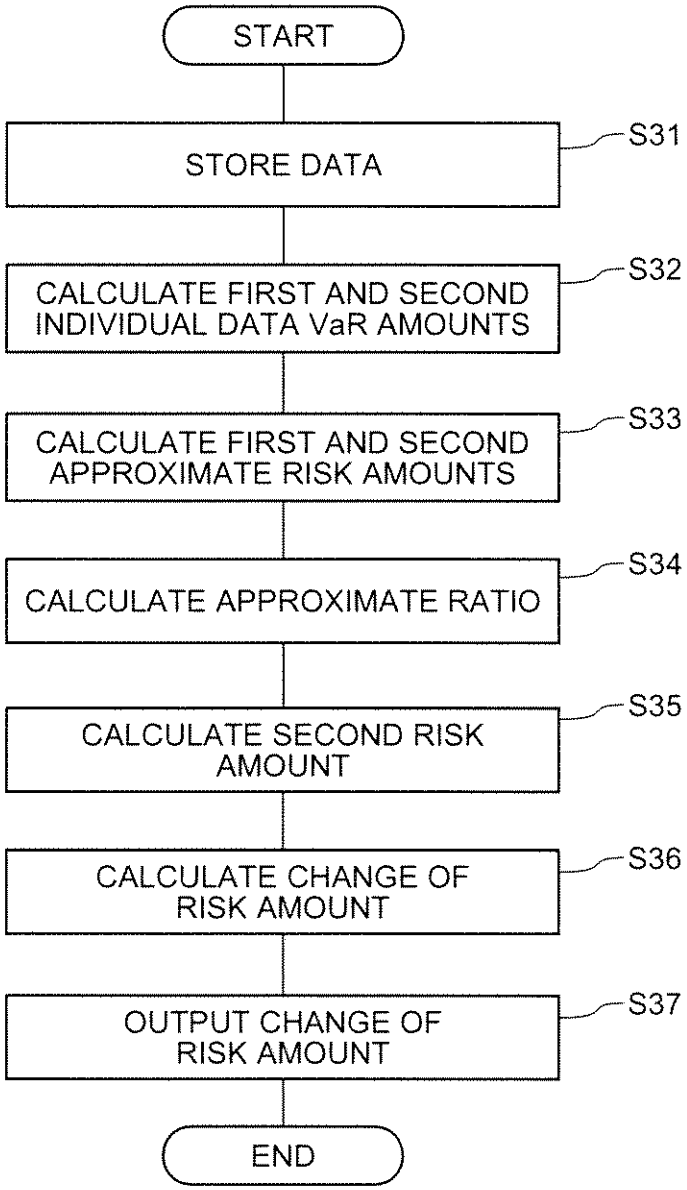

START
STORE DATA
S31
CALCULATE FIRST AND SECOND INDIVIDUAL DATA VaR AMOUNTS
S32
CALCULATE FIRST AND SECOND APPROXIMATE RISK AMOUNTS
S33
CALCULATE APPROXIMATE RATIO
S34
CALCULATE SECOND RISK AMOUNT
S35
CALCULATE CHANGE OF RISK AMOUNT
S36
OUTPUT CHANGE OF RISK AMOUNT
S37
END

FIG. 20

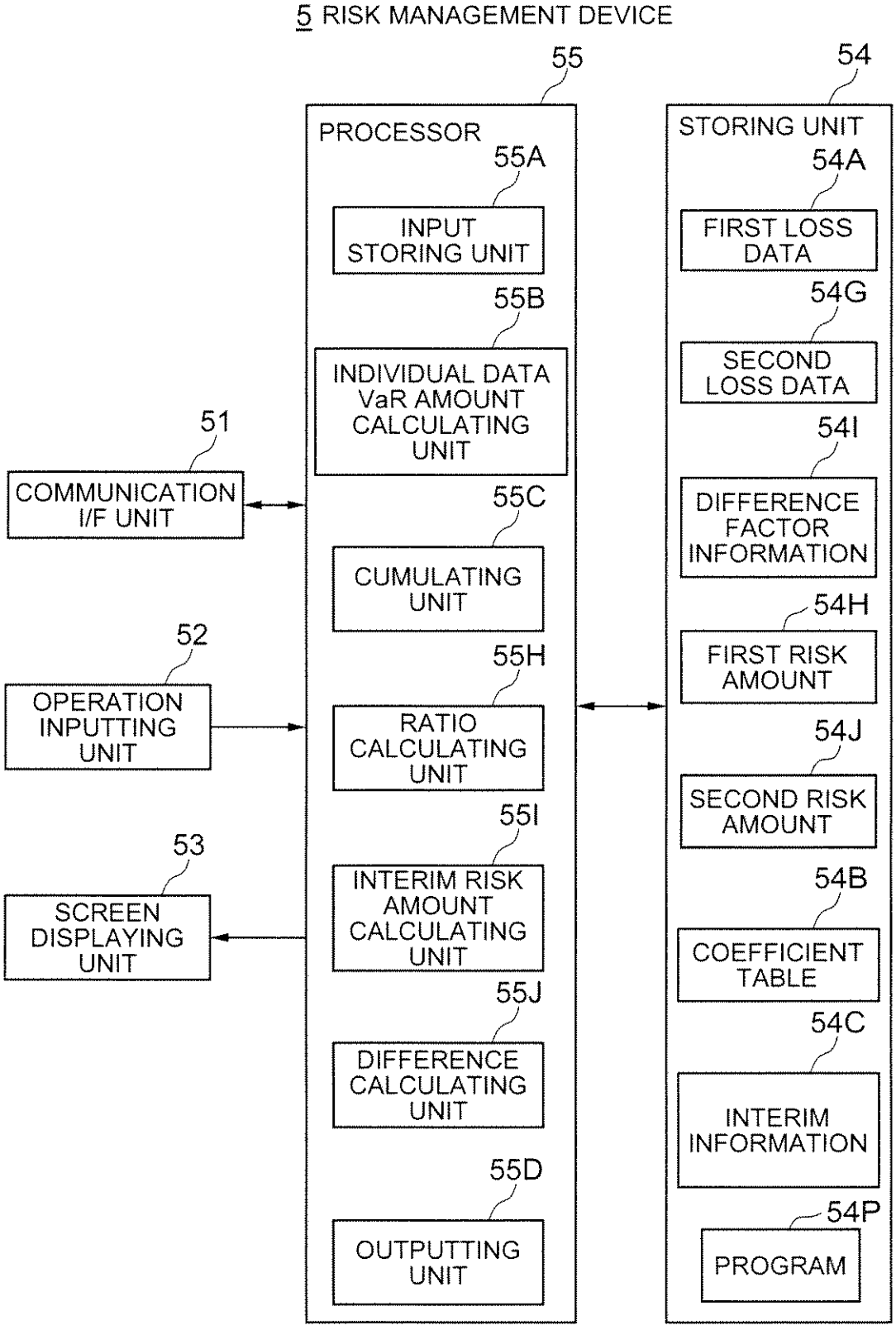

5 RISK MANAGEMENT DEVICE
55
PROCESSOR
55A
INPUT STORING UNIT
55B
INDIVIDUAL DATA VaR AMOUNT CALCULATING UNIT
55C
CUMULATING UNIT
55H
RATIO CALCULATING UNIT
55I
INTERIM RISK AMOUNT CALCULATING UNIT
55J
DIFFERENCE CALCULATING UNIT
55D
OUTPUTTING UNIT
54
STORING UNIT
54A
FIRST LOSS DATA
54G
SECOND LOSS DATA
54I
DIFFERENCE FACTOR INFORMATION
54H
FIRST RISK AMOUNT
54J
SECOND RISK AMOUNT
54B
COEFFICIENT TABLE
54C
INTERIM INFORMATION
54P
PROGRAM
51
COMMUNICATION I/F UNIT
52
OPERATION INPUTTING UNIT
53
SCREEN DISPLAYING UNIT

FIG. 21

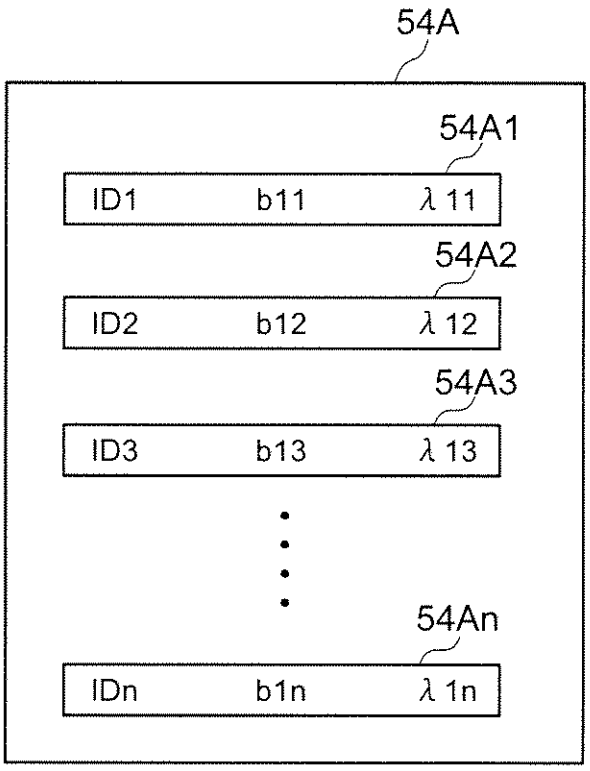

54A
54A1
ID1
b11
λ 11
54A2
ID2
b12
λ 12
54A3
ID3
b13
λ 13
54An
IDn
b1n
λ 1n

FIG. 22

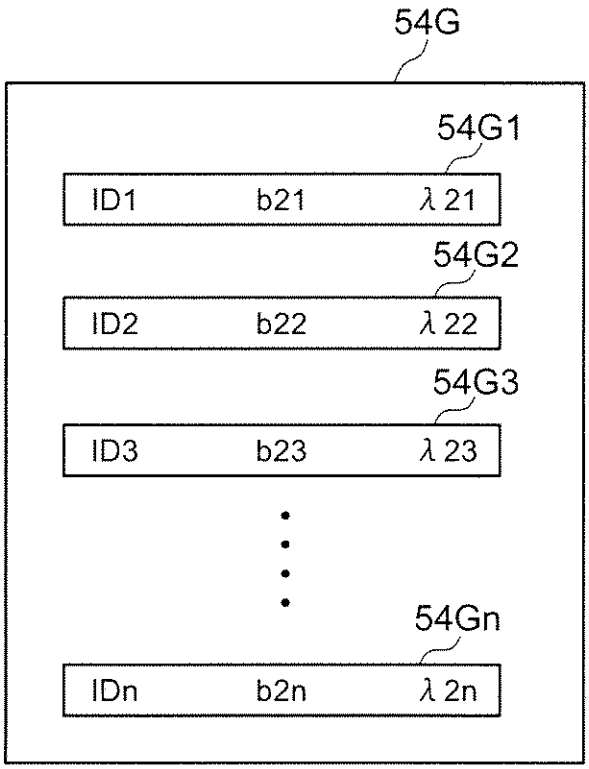

54G
54G1
ID1
b21
λ 21
54G2
ID2
b22
λ 22
54G3
ID3
b23
λ 23
54Gn
IDn
b2n
λ 2n

FIG. 23

34C4

FACTOR	CHANGED LOSS DATA	CONTENT OF CHANGE
CHANGE IN RISK REDUCTION MEASURES	ID2	LOSS OCCURRENCE FREQUENCY ($\lambda 12 \rightarrow \lambda 22$)
	ID3	LOSS OCCURRENCE FREQUENCY ($\lambda 13 \rightarrow \lambda 23$)
CHANGE OF OPERATIONAL ENVIRONMENTS	ID1	LOSS AMOUNT (b11→b21)
	ID2	LOSS AMOUNT (b12→b22)

FIG. 24

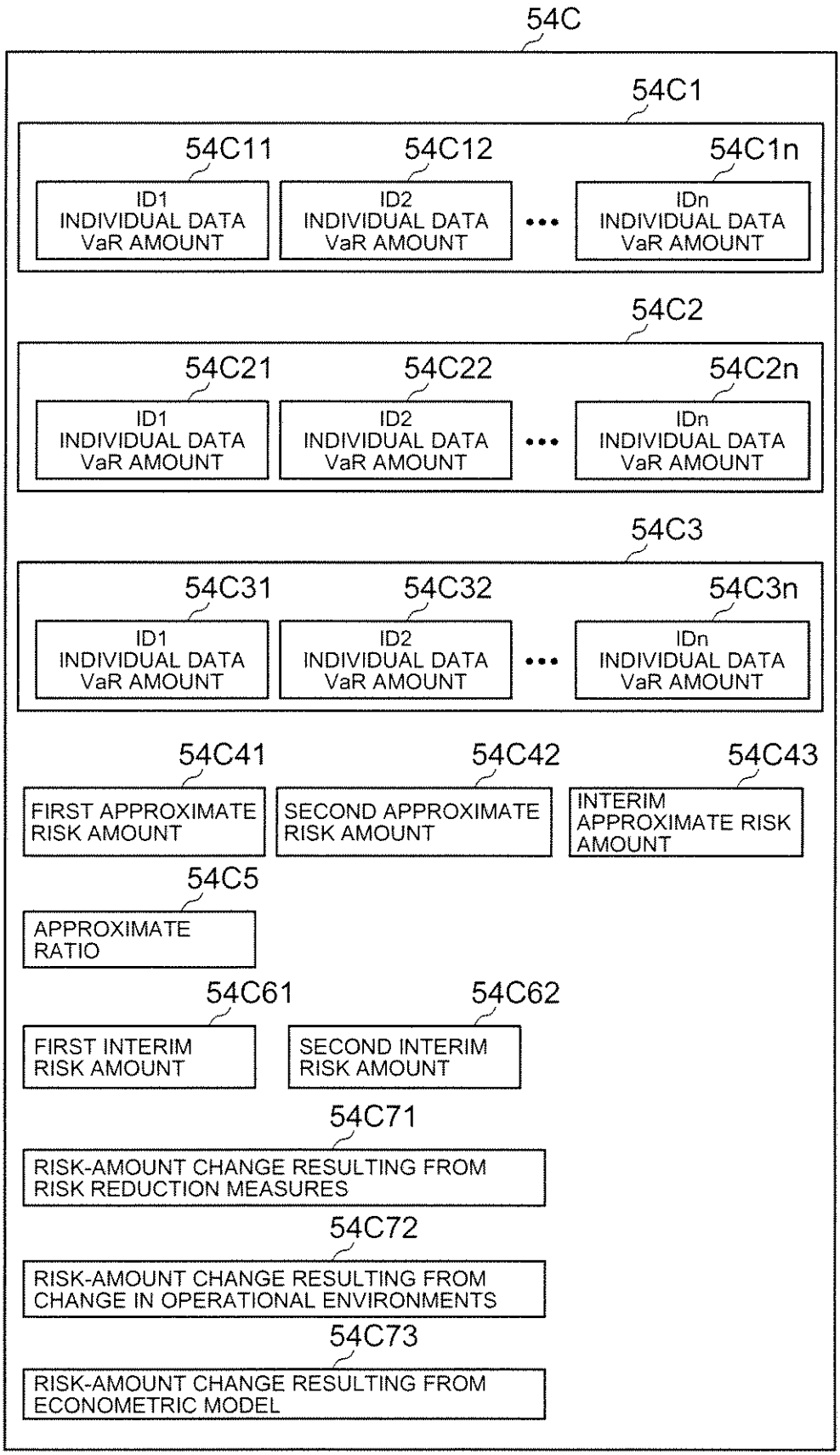
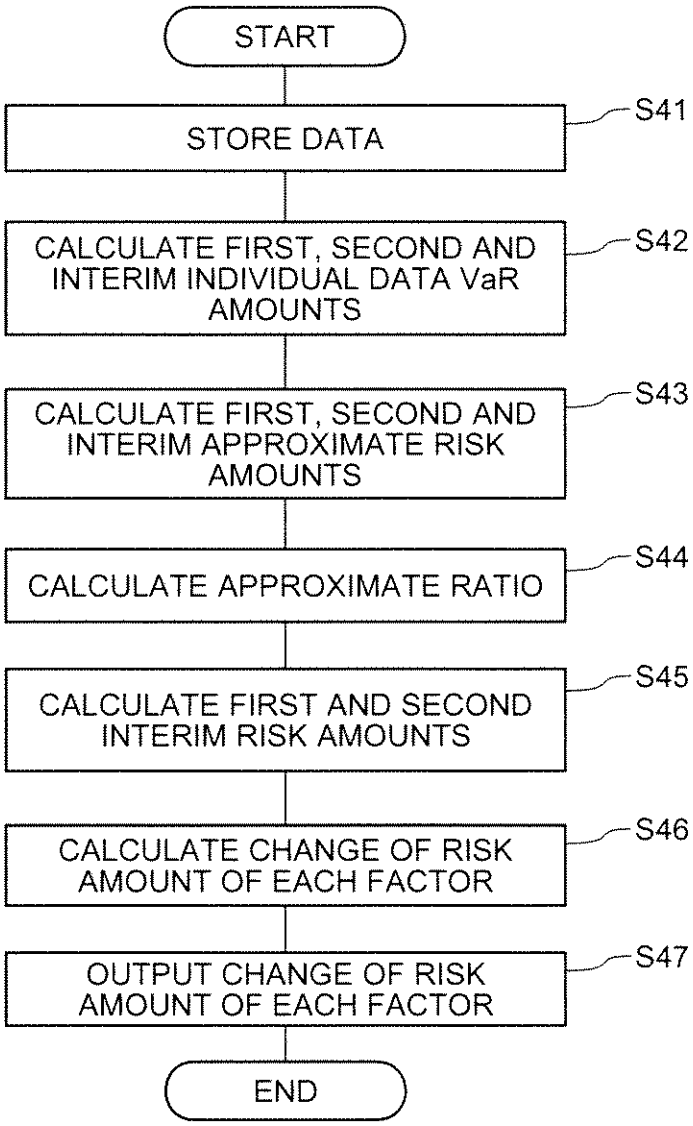

54C
54C1
54C11
ID1
INDIVIDUAL DATA
VaR AMOUNT
54C12
ID2
INDIVIDUAL DATA
VaR AMOUNT
54C1n
IDn
INDIVIDUAL DATA
VaR AMOUNT
54C2
54C21
ID1
INDIVIDUAL DATA
VaR AMOUNT
54C22
ID2
INDIVIDUAL DATA
VaR AMOUNT
54C2n
IDn
INDIVIDUAL DATA
VaR AMOUNT
54C3
54C31
ID1
INDIVIDUAL DATA
VaR AMOUNT
54C32
ID2
INDIVIDUAL DATA
VaR AMOUNT
54C3n
IDn
INDIVIDUAL DATA
VaR AMOUNT
54C41
FIRST APPROXIMATE
RISK AMOUNT
54C42
SECOND APPROXIMATE
RISK AMOUNT
54C43
INTERIM
APPROXIMATE RISK
AMOUNT
54C5
APPROXIMATE
RATIO
54C61
FIRST INTERIM
RISK AMOUNT
54C62
SECOND INTERIM
RISK AMOUNT
54C71
RISK-AMOUNT CHANGE RESULTING FROM
RISK REDUCTION MEASURES
54C72
RISK-AMOUNT CHANGE RESULTING FROM
CHANGE IN OPERATIONAL ENVIRONMENTS
54C73
RISK-AMOUNT CHANGE RESULTING FROM
ECONOMETRIC MODEL

FIG. 25


START
STORE DATA
S41
CALCULATE FIRST, SECOND AND INTERIM INDIVIDUAL DATA VaR AMOUNTS
S42
CALCULATE FIRST, SECOND AND INTERIM APPROXIMATE RISK AMOUNTS
S43
CALCULATE APPROXIMATE RATIO
S44
CALCULATE FIRST AND SECOND INTERIM RISK AMOUNTS
S45
CALCULATE CHANGE OF RISK AMOUNT OF EACH FACTOR
S46
OUTPUT CHANGE OF RISK AMOUNT OF EACH FACTOR
S47
END