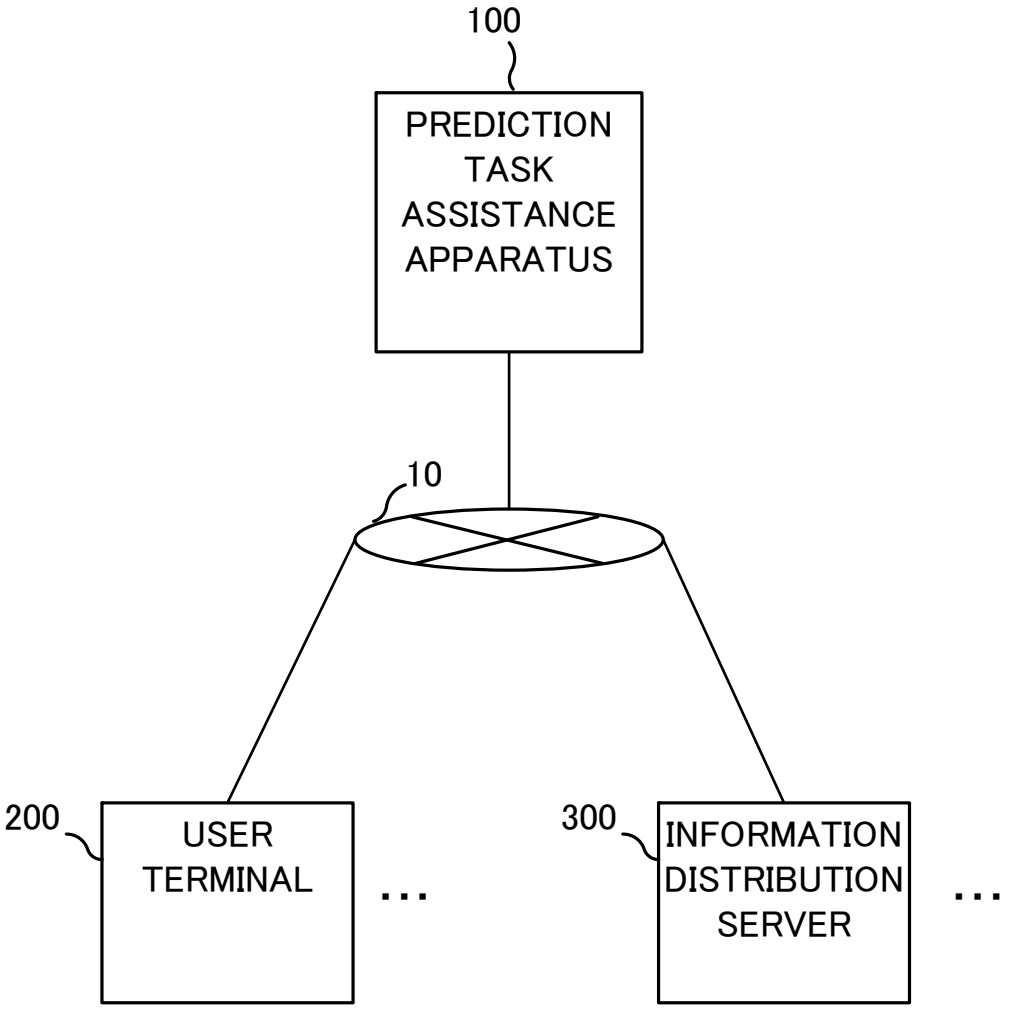

100
PREDICTION TASK ASSISTANCE APPARATUS
10
200
USER TERMINAL
...
300
INFORMATION DISTRIBUTION SERVER
...

FIG.1

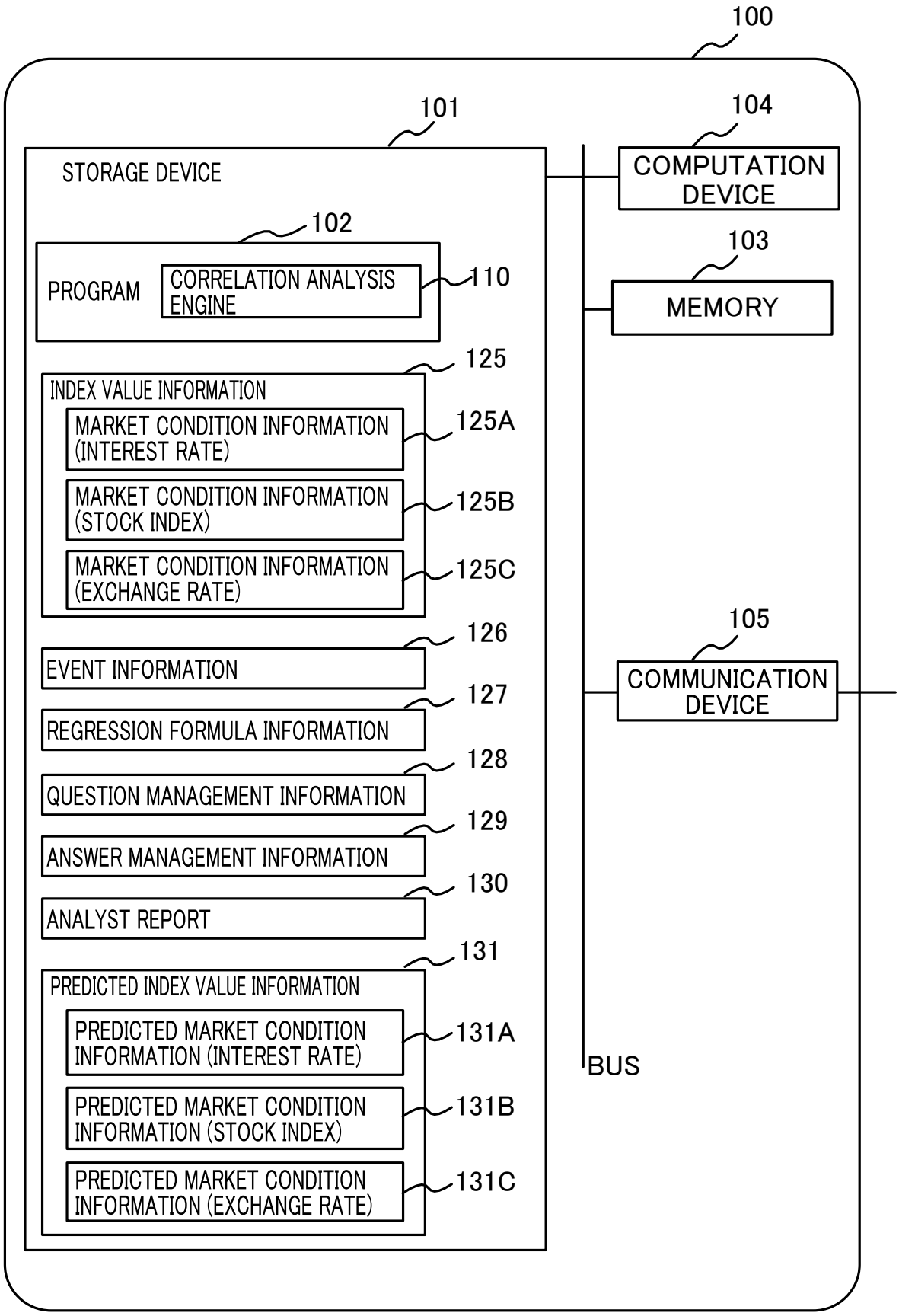

100
101
STORAGE DEVICE
102
PROGRAM
CORRELATION ANALYSIS ENGINE
110
125
INDEX VALUE INFORMATION
MARKET CONDITION INFORMATION (INTEREST RATE)
125A
MARKET CONDITION INFORMATION (STOCK INDEX)
125B
MARKET CONDITION INFORMATION (EXCHANGE RATE)
125C
126
EVENT INFORMATION
127
REGRESSION FORMULA INFORMATION
128
QUESTION MANAGEMENT INFORMATION
129
ANSWER MANAGEMENT INFORMATION
130
ANALYST REPORT
131
PREDICTED INDEX VALUE INFORMATION
PREDICTED MARKET CONDITION INFORMATION (INTEREST RATE)
131A
PREDICTED MARKET CONDITION INFORMATION (STOCK INDEX)
131B
PREDICTED MARKET CONDITION INFORMATION (EXCHANGE RATE)
131C
104
COMPUTATION DEVICE
103
MEMORY
105
COMMUNICATION DEVICE
BUS

FIG.2

125A

MARKET CONDITION INFORMATION (INTEREST RATE)

MARKET CONDITION INFORMATION CODE	REFERENCE DATE	INTEREST RATE NAME	CATEGORY	CURRENCY	PERIOD	RATE
10001	2018/1/17	JPY Tibor1M	Tibor	JPY	1M	0.24769
10002	2018/1/17	USD Libor1M	Libor	USD	1M	0.25000
10003	2018/1/17	USD Libor2M	Libor	USD	2M	0.33091
10001	2018/1/18	JPY Tibor1M	Tibor	JPY	1M	0.25769
10002	2018/1/18	USD Libor1M	Libor	USD	1M	0.26000
10003	2018/1/18	USD Libor2M	Libor	USD	2M	0.34091
...	...	...	...	...	...	...

FIG.3A

MARKET CONDITION INFORMATION (STOCK INDEX)

125B

MARKET CONDITION INFORMATION CODE	REFERENCE DATE	STOCK INDEX NAME	RATE
20001	2018/1/17	NY DOW	25,792.00
20002	2018/1/17	TOPIX	1,890
20003	2018/1/17	NASDAQ COMPOSITE INDEX	7,223
20001	2018/1/18	NY DOW	25,842.00
20002	2018/1/18	TOPIX	1,940.00
20003	2018/1/18	NASDAQ COMPOSITE INDEX	7,273.00
...	...	...	...

FIG.3B

MARKET CONDITION INFORMATION (EXCHANGE RATE)

125C

MARKET CONDITION INFORMATION CODE	REFERENCE DATE	EXCHANGE RATE NAME	RATE
30001	2018/1/17	DOLLAR/YEN	110.73
30002	2018/1/17	EURO/YEN	135.19
30003	2018/1/17	CHINESE YUAN/YEN	17.19
30001	2018/1/18	DOLLAR/YEN	113.73
30002	2018/1/18	EURO/YEN	138.19
30003	2018/1/18	CHINESE YUAN/YEN	20.19
...	...	...	...

FIG.3C

EVENT INFORMATION

126

EVENT CODE	OCCURRENCE DATE	EVENT NAME	VALUE
0001	19800101	PRESENCE OR ABSENCE OF ECONOMIC TURMOIL	0
0001	19810101	PRESENCE OR ABSENCE OF ECONOMIC TURMOIL	0
0001	19820101	PRESENCE OR ABSENCE OF ECONOMIC TURMOIL	1
0001	19830101	PRESENCE OR ABSENCE OF ECONOMIC TURMOIL	0
...	...	...	...
0002	19800101	ECONOMIC GROWTH RATE	0.038
0002	19810101	ECONOMIC GROWTH RATE	0.035
0002	19820101	ECONOMIC GROWTH RATE	−0.010
0002	19830101	ECONOMIC GROWTH RATE	0.040
...	...	...	...

FIG.4

127

REGRESSION FORMULA INFORMATION

MARKET CONDITION INFORMATION CODE	APPLICATION START DATE	REGRESSION FORMULA	CORRESPONDENCES BETWEEN VARIABLES AND ANSWER KEYS
10001	2018/1/1	y＝1.01・X1+0.002・X2+0.124・X3+0.212・X4+・・・	X1:00101, X2:00102, X3:00103, X4:00104, X5:00105, X6:00201, X7:00202
20001	2018/1/1	y＝0.81・X1+0.353・X2+1.002・X3+0.021・X4+・・・	X1:00101, X2:00102, X3:00103, X4:00104, X5:00105, X6:00201, X7:00202
10001	2018/12/31	y＝1.10・X1+0.482・X2+0.367・X3+0.003・X4+・・・	X1:00101, X2:00102, X3:00103, X4:00104, X5:00105, X6:00201, X7:00202
20001	2018/12/31	y＝0.356・X1+1.018・X2+0.03・X3+0.012・X4+・・・	X1:00101, X2:00102, X3:00103, X4:00104, X5:00105, X6:00201, X7:00202
・・・	・・・	・・・	・・・

FIG.5

128

QUESTION MANAGEMENT INFORMATION

QUESTION KEY	QUESTION CONTENTS	ANSWER KEY	CHOICE	・・・
001	ECONOMIC GROWTH RATE: PLEASE SELECT OUTLOOK ON ECONOMIC GROWTH RATE OF JAPAN	00101	INCREASE	・・・
		00102	SLIGHT INCREASE	・・・
		00103	FLAT	・・・
		00104	SLIGHT DECREASE	・・・
		00105	DECREASE	・・・
002	PRESENCE OR ABSENCE OF ECONOMIC TURMOIL: PLEASES SELECT OUTLOOK ON OCCURRENCE OF ECONOMIC TURMOIL EQUIVALENT TO 2008 FINANCIAL CRISES	00201	PRESENT	・・・
		00202	ABSENT	・・・
・・・	・・・	・・・	・・・	・・・

FIG.6A

129

ANSWER MANAGEMENT INFORMATION

BANK CODE	REGISTRATION DATE	SCENARIO ID	SCENARIO NAME	ANSWER NUMBERS (COMBINATION)
0001	2018/01/18	000100001	OPTIMISTIC SCENARIO 1	00101,000201
0001	2018/01/19	000100002	PESSIMISTIC SCENARIO 1	00102,000202,
0002	2018/02/18	000200001	OPTIMISTIC SCENARIO 1	00101,000201
...	...	...	...	...

BACKGROUND OF SCENARIO SELECTION
WE DETERMINED THAT REAL ECONOMIC GROWTH RATE OF JAPAN IN THIS YEAR IS TO SLIGHTLY INCREASE BASED ON JAPANESE ECONOMIC OUTLOOK PROVIDED BY INTERNATIONAL MONETARY FUND (IMF) ....
XXXXXXXXX
XXXXXXXXX
...

FIG.6B

130

ANALYST REPORT

REGISTRATION DATE	REPORT TITLE	REPORT CONTENTS
2018/1/1	DOWNWARD PRESSURE ON LONG-TERM INTEREST RATE, STRONG OUTLOOK THAT BOJ'S EASY-MONEY POLICY IS LENGTHENED	LONG-TERM INTEREST RATE IS EXPECTED TO DECREASE IN BOND MARKET. BACKGROUND OF THIS PREDICTION IS AS FOLLOWS: INTEREST RATE IS EXPECTED TO BE UNCHANGED IN MONETARY POLICY MEETING OF BOJ AND THERE IS OUTLOOK THAT CURRENT EASY-MONEY POLICY IS LENGTHENED; THUS DOWNWARD PRESSURE TENDS TO BE PLACED ON INTEREST RATE. .....
...	...	...

FIG.7

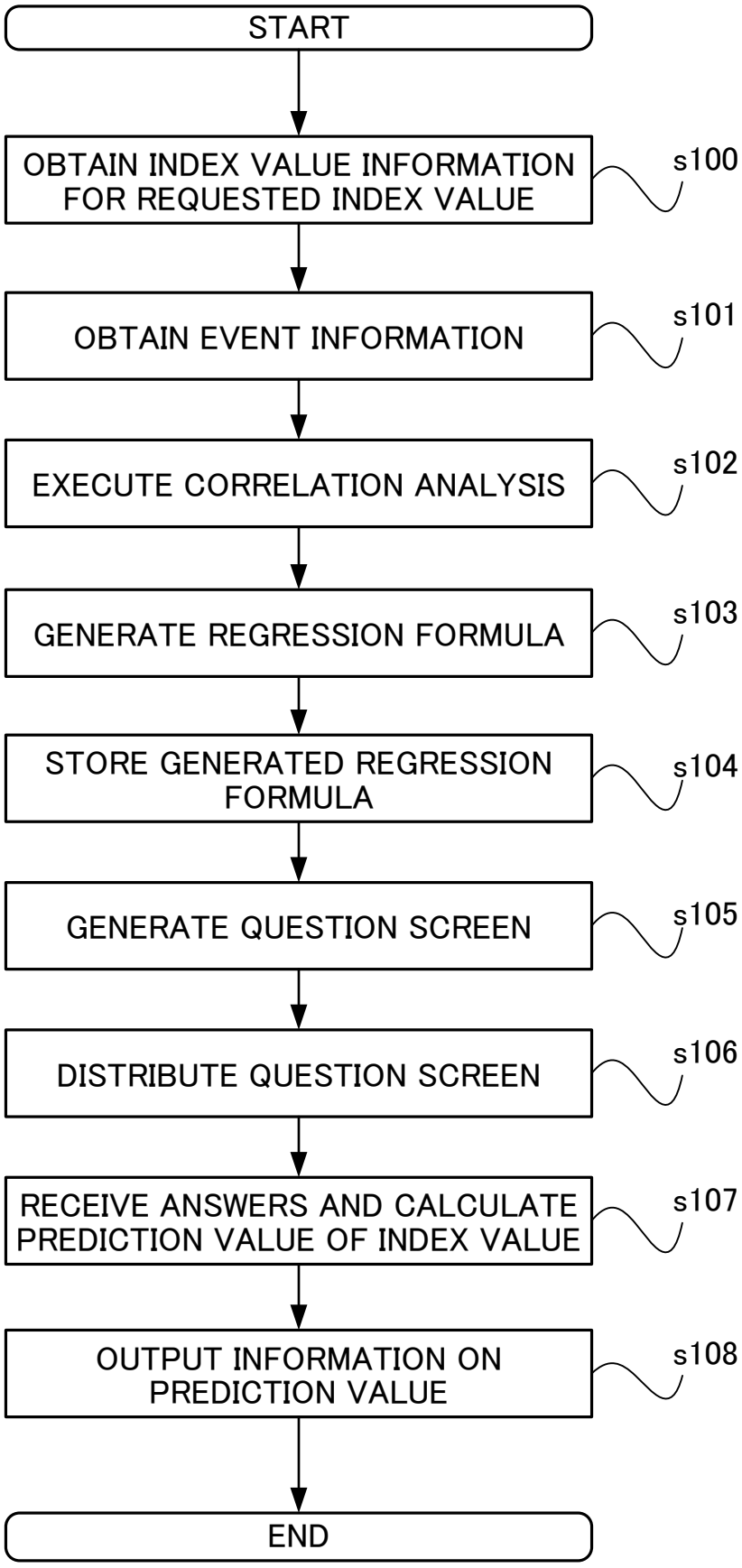

START
OBTAIN INDEX VALUE INFORMATION FOR REQUESTED INDEX VALUE
s100
OBTAIN EVENT INFORMATION
s101
EXECUTE CORRELATION ANALYSIS
s102
GENERATE REGRESSION FORMULA
s103
STORE GENERATED REGRESSION FORMULA
s104
GENERATE QUESTION SCREEN
s105
DISTRIBUTE QUESTION SCREEN
s106
RECEIVE ANSWERS AND CALCULATE PREDICTION VALUE OF INDEX VALUE
s107
OUTPUT INFORMATION ON PREDICTION VALUE
s108
END

FIG.8

1000

RANGE INFORMATION

EVENT	CHOICE	VALUE	VARIABLE
ECONOMIC GROWTH RATE	INCREASE	6% OR MORE	X1
	SLIGHT INCREASE	LESS THAN 6% AND 3% OR MORE	X2
	FLAT	LESS THAN 3% AND 0% OR MORE	X3
	SLIGHT DECREASE	−3% OR MORE AND −6% OR LESS	X4
	DECREASE	−6% OR MORE	X5
PRESENCE OR ABSENCE OF ECONOMIC TURMOIL	PRESENT	1	X6
	ABSENT	0	X7
...	...	...	...

FIG.9

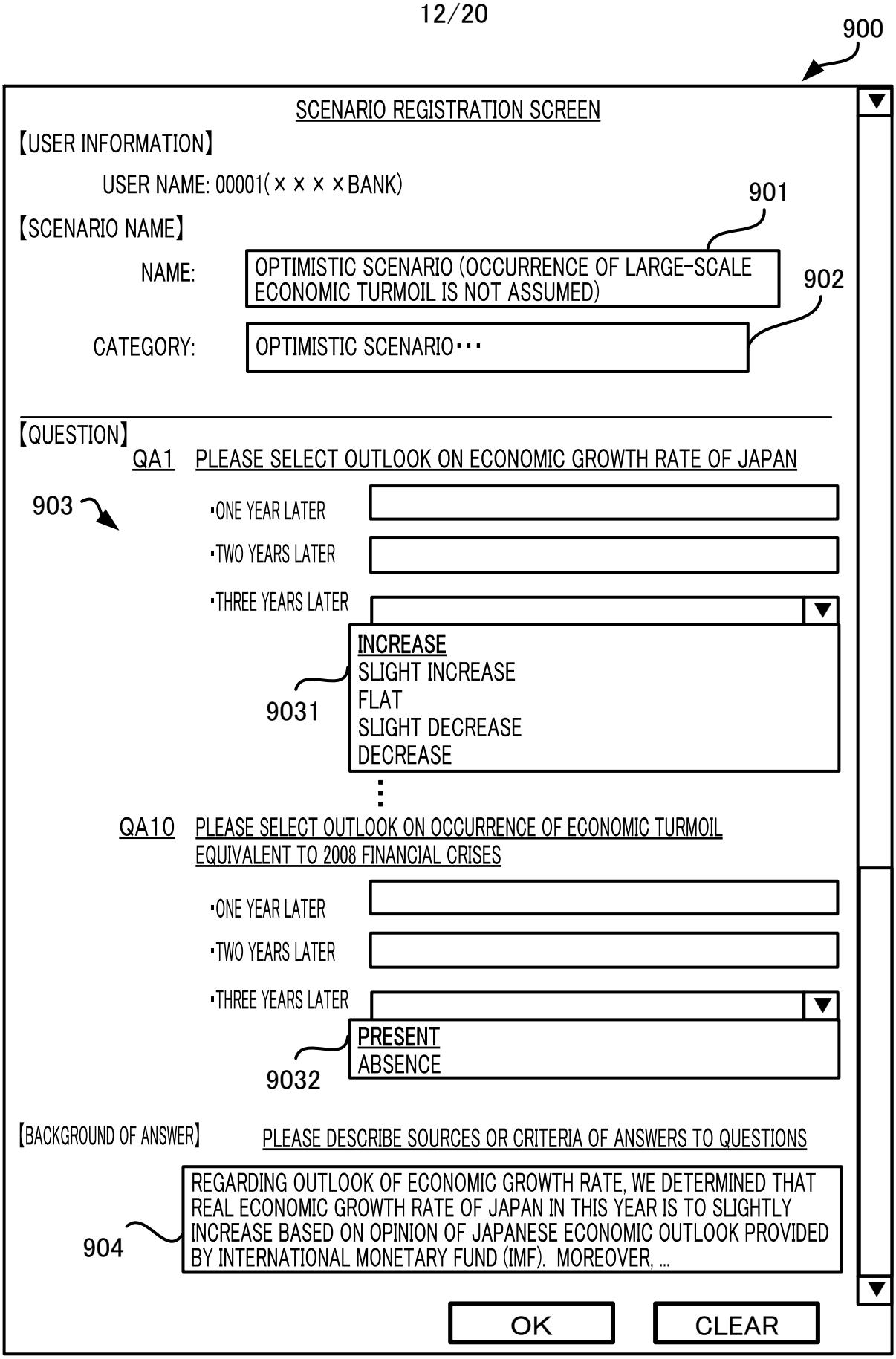

900
SCENARIO REGISTRATION SCREEN
【USER INFORMATION】
USER NAME: 00001(×××× BANK)
901
【SCENARIO NAME】
NAME:
OPTIMISTIC SCENARIO (OCCURRENCE OF LARGE-SCALE ECONOMIC TURMOIL IS NOT ASSUMED)
902
CATEGORY:
OPTIMISTIC SCENARIO・・・
【QUESTION】
QA1 PLEASE SELECT OUTLOOK ON ECONOMIC GROWTH RATE OF JAPAN
903
・ONE YEAR LATER
・TWO YEARS LATER
・THREE YEARS LATER
INCREASE
SLIGHT INCREASE
FLAT
SLIGHT DECREASE
DECREASE
9031
QA10 PLEASE SELECT OUTLOOK ON OCCURRENCE OF ECONOMIC TURMOIL EQUIVALENT TO 2008 FINANCIAL CRISES
・ONE YEAR LATER
・TWO YEARS LATER
・THREE YEARS LATER
PRESENT
ABSENCE
9032
【BACKGROUND OF ANSWER】
PLEASE DESCRIBE SOURCES OR CRITERIA OF ANSWERS TO QUESTIONS
904
REGARDING OUTLOOK OF ECONOMIC GROWTH RATE, WE DETERMINED THAT REAL ECONOMIC GROWTH RATE OF JAPAN IN THIS YEAR IS TO SLIGHTLY INCREASE BASED ON OPINION OF JAPANESE ECONOMIC OUTLOOK PROVIDED BY INTERNATIONAL MONETARY FUND (IMF). MOREOVER, ...
OK
CLEAR

FIG.10

131A

PREDICTED MARKET CONDITION INFORMATION (INTEREST RATE)

SCENARIO ID	MARKET CONDITION INFORMATION CODE	REFERENCE DATE	INTEREST RATE NAME	CATEGORY	CURRENCY	PERIOD	RATE
000100001	10001	2018/1/17	JPY Tibor1M	Tibor	JPY	1M	0.24769
000100001	10001	2018/1/18	JPY Tibor1M	Tibor	JPY	1M	0.25769
000100001	10002	2018/1/17	USD Libor1M	Libor	USD	1M	0.25000
000100001	10002	2018/1/18	USD Libor1M	Libor	USD	1M	0.26000
000100001	10003	2018/1/17	USD Libor2M	Libor	USD	2M	0.33091
000100001	10003	2018/1/18	USD Libor2M	Libor	USD	2M	0.34091
...	...	...	...	...	...	...	...

FIG.11A

PREDICTED MARKET CONDITION INFORMATION (STOCK INDEX)

131B

SCENARIO ID	MARKET CONDITION INFORMATION CODE	REFERENCE DATE	STOCK INDEX NAME	RATE
000100001	20001	2018/1/17	NY DOW	25,792.00
000100001	20002	2018/1/17	TOPIX	1,890
000100001	20003	2018/1/17	NASDAQ COMPOSITE INDEX	7,223
000100001	20001	2018/1/18	NY DOW	25,842.00
000100001	20002	2018/1/18	TOPIX	1,940.00
000100001	20003	2018/1/18	NASDAQ COMPOSITE INDEX	7,273.00
...	...	...	...	...

FIG.11B

PREDICTED MARKET CONDITION INFORMATION (EXCHANGE RATE)

131C

SCENARIO ID	MARKET CONDITION INFORMATION CODE	REFERENCE DATE	EXCHANGE RATE NAME	RATE
000100001	30001	2018/1/17	**DOLLAR/YEN**	110.73
000100001	30002	2018/1/17	EURO/YEN	135.19
000100001	30003	2018/1/17	CHINESE YUAN/YEN	17.19
000100001	30001	2018/1/18	DOLLAR/YEN	113.73
000100001	30002	2018/1/18	EURO/YEN	138.19
000100001	30003	2018/1/18	CHINESE YUAN/YEN	20.19
...	...	...	...	...

FIG.11C

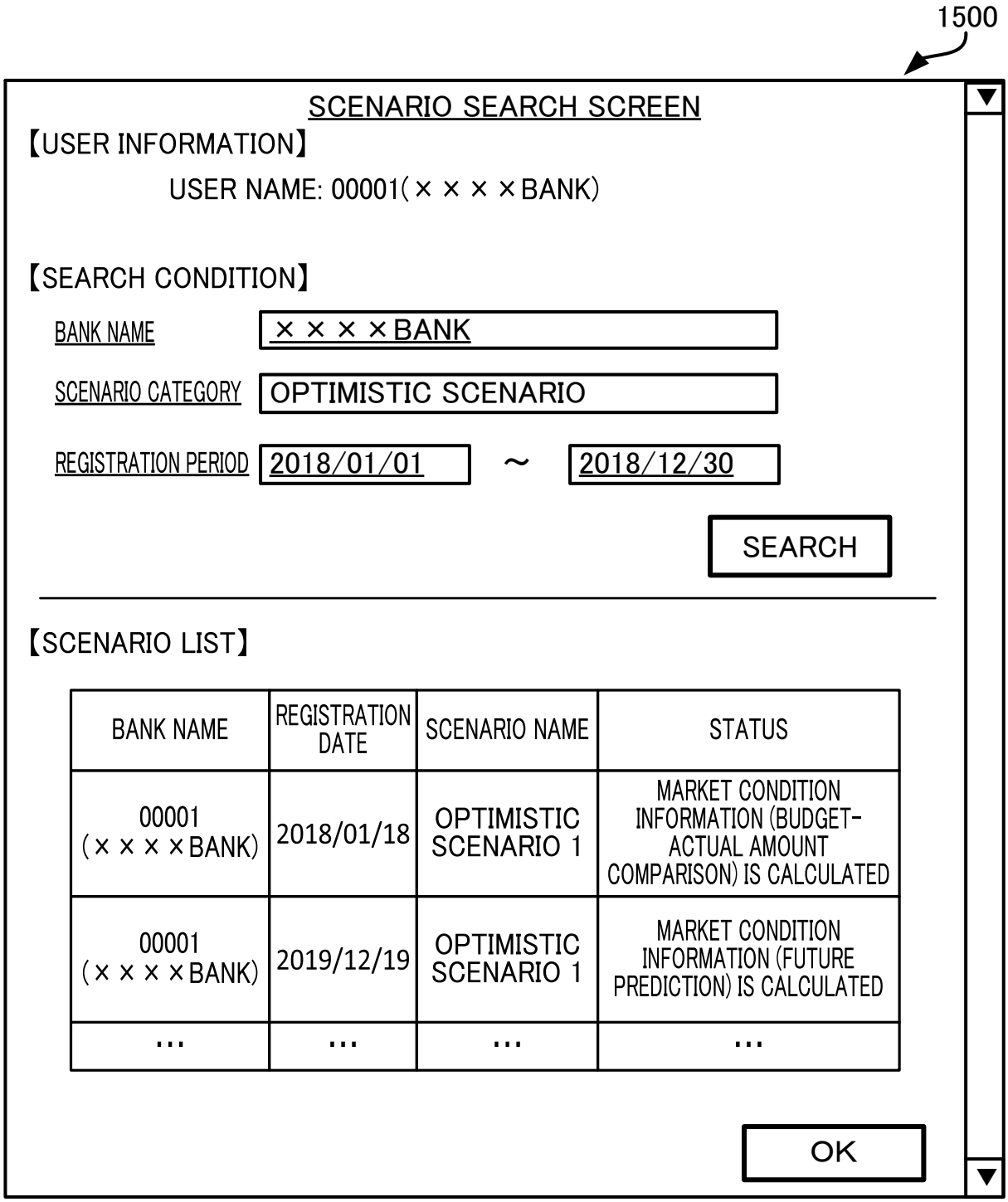

1500
SCENARIO SEARCH SCREEN
【USER INFORMATION】
USER NAME: 00001(×××BANK)
【SEARCH CONDITION】
BANK NAME
×××BANK
SCENARIO CATEGORY
OPTIMISTIC SCENARIO
REGISTRATION PERIOD
2018/01/01
～
2018/12/30
SEARCH
【SCENARIO LIST】
BANK NAME
REGISTRATION DATE
SCENARIO NAME
STATUS
00001 (×××BANK)
2018/01/18
OPTIMISTIC SCENARIO 1
MARKET CONDITION INFORMATION (BUDGET-ACTUAL AMOUNT COMPARISON) IS CALCULATED
00001 (×××BANK)
2019/12/19
OPTIMISTIC SCENARIO 1
MARKET CONDITION INFORMATION (FUTURE PREDICTION) IS CALCULATED
…
…
…
…
OK

FIG.12

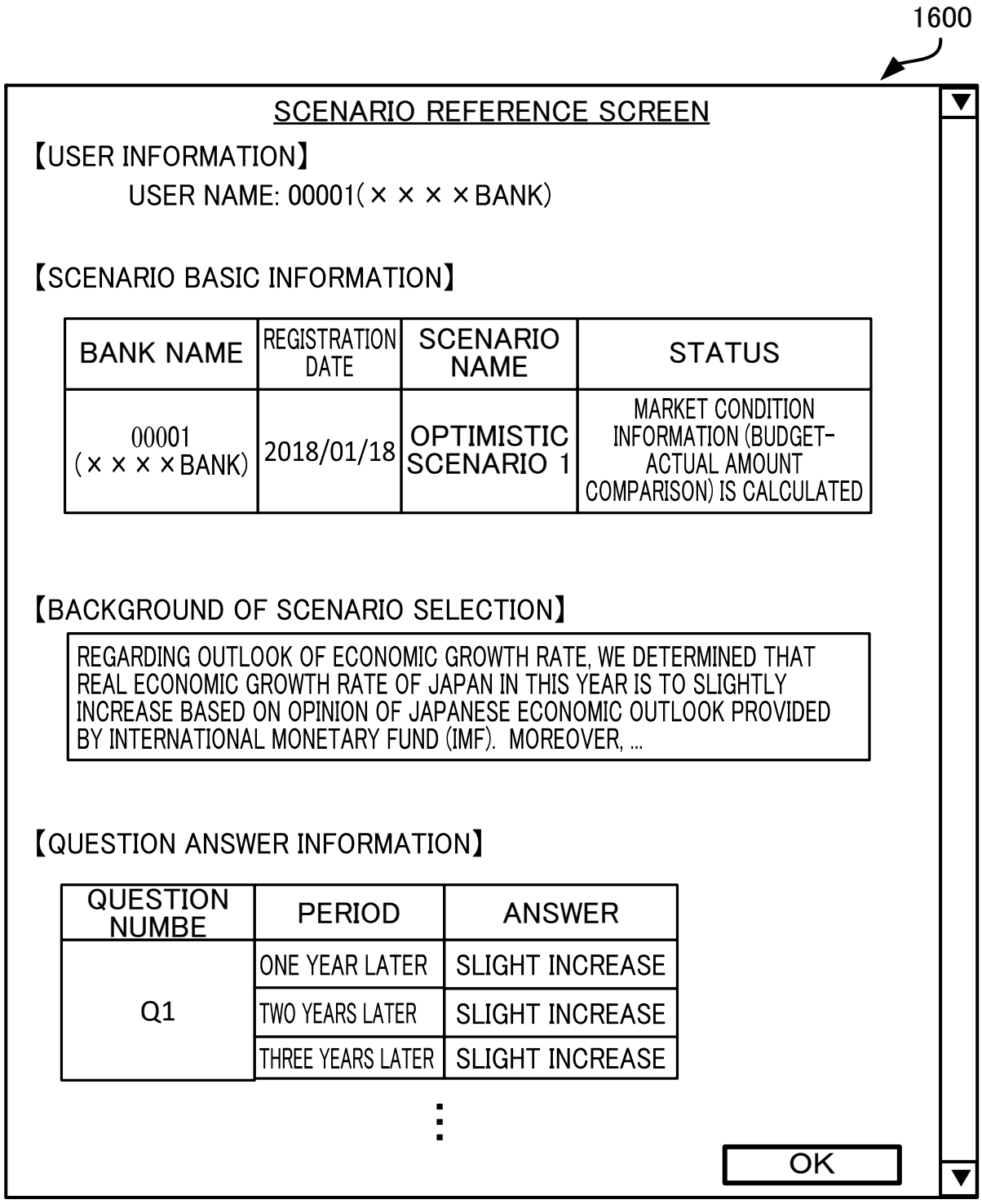

1600
SCENARIO REFERENCE SCREEN
【USER INFORMATION】
USER NAME: 00001(×××BANK)
【SCENARIO BASIC INFORMATION】
BANK NAME
REGISTRATION DATE
SCENARIO NAME
STATUS
00001 (×××BANK)
2018/01/18
OPTIMISTIC SCENARIO 1
MARKET CONDITION INFORMATION (BUDGET-ACTUAL AMOUNT COMPARISON) IS CALCULATED
【BACKGROUND OF SCENARIO SELECTION】
REGARDING OUTLOOK OF ECONOMIC GROWTH RATE, WE DETERMINED THAT REAL ECONOMIC GROWTH RATE OF JAPAN IN THIS YEAR IS TO SLIGHTLY INCREASE BASED ON OPINION OF JAPANESE ECONOMIC OUTLOOK PROVIDED BY INTERNATIONAL MONETARY FUND (IMF). MOREOVER, ...
【QUESTION ANSWER INFORMATION】
QUESTION NUMBE
PERIOD
ANSWER
Q1
ONE YEAR LATER
SLIGHT INCREASE
TWO YEARS LATER
SLIGHT INCREASE
THREE YEARS LATER
SLIGHT INCREASE
OK

FIG.13

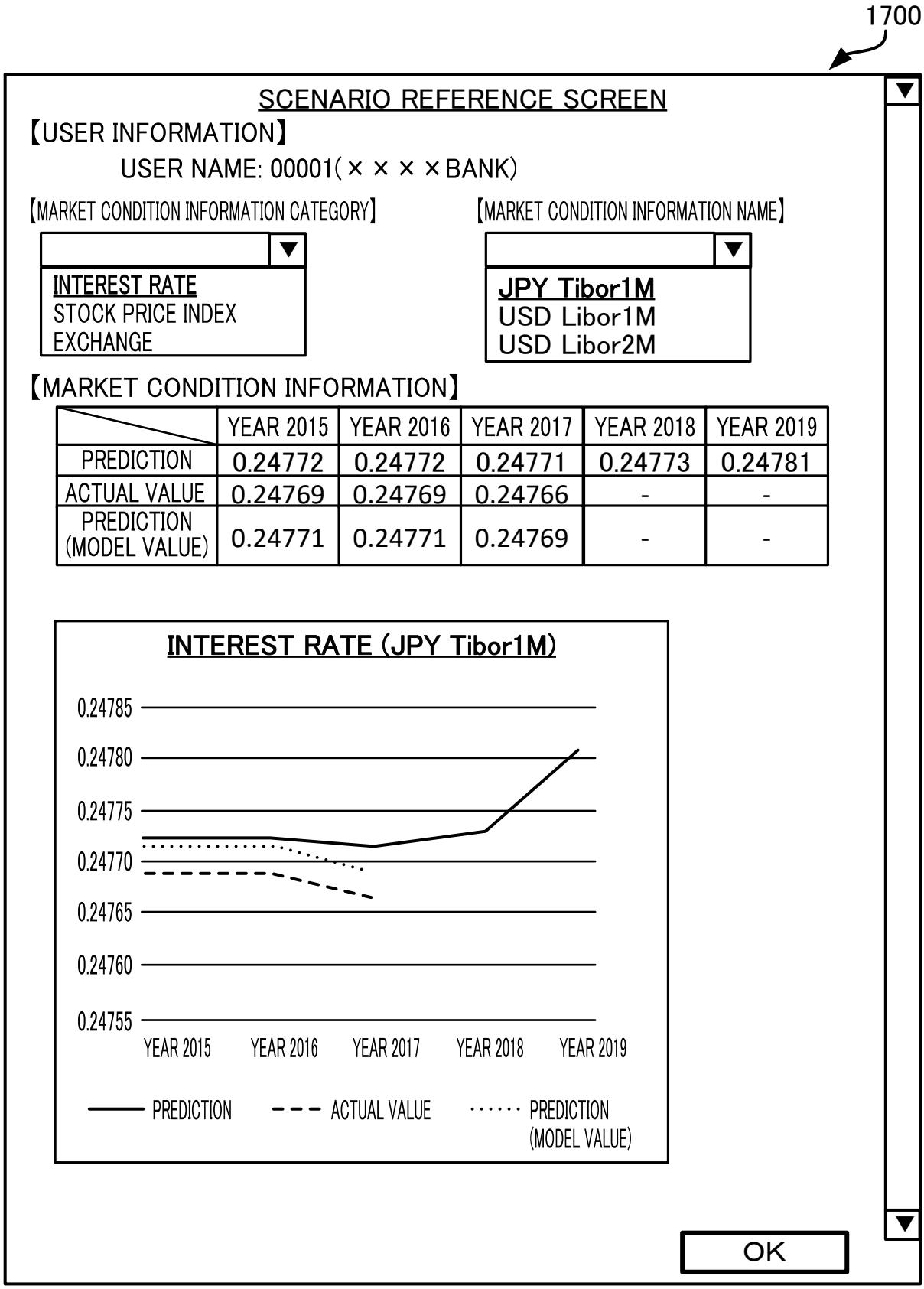

1700
SCENARIO REFERENCE SCREEN
【USER INFORMATION】
USER NAME: 00001(×××BANK)
【MARKET CONDITION INFORMATION CATEGORY】
INTEREST RATE
STOCK PRICE INDEX
EXCHANGE
【MARKET CONDITION INFORMATION NAME】
JPY Tibor1M
USD Libor1M
USD Libor2M
【MARKET CONDITION INFORMATION】
YEAR 2015 YEAR 2016 YEAR 2017 YEAR 2018 YEAR 2019
PREDICTION 0.24772 0.24772 0.24771 0.24773 0.24781
ACTUAL VALUE 0.24769 0.24769 0.24766 - -
PREDICTION (MODEL VALUE) 0.24771 0.24771 0.24769 - -
INTEREST RATE (JPY Tibor1M)
0.24785
0.24780
0.24775
0.24770
0.24765
0.24760
0.24755
YEAR 2015
YEAR 2016
YEAR 2017
YEAR 2018
YEAR 2019
PREDICTION
ACTUAL VALUE
PREDICTION (MODEL VALUE)
OK

FIG.14

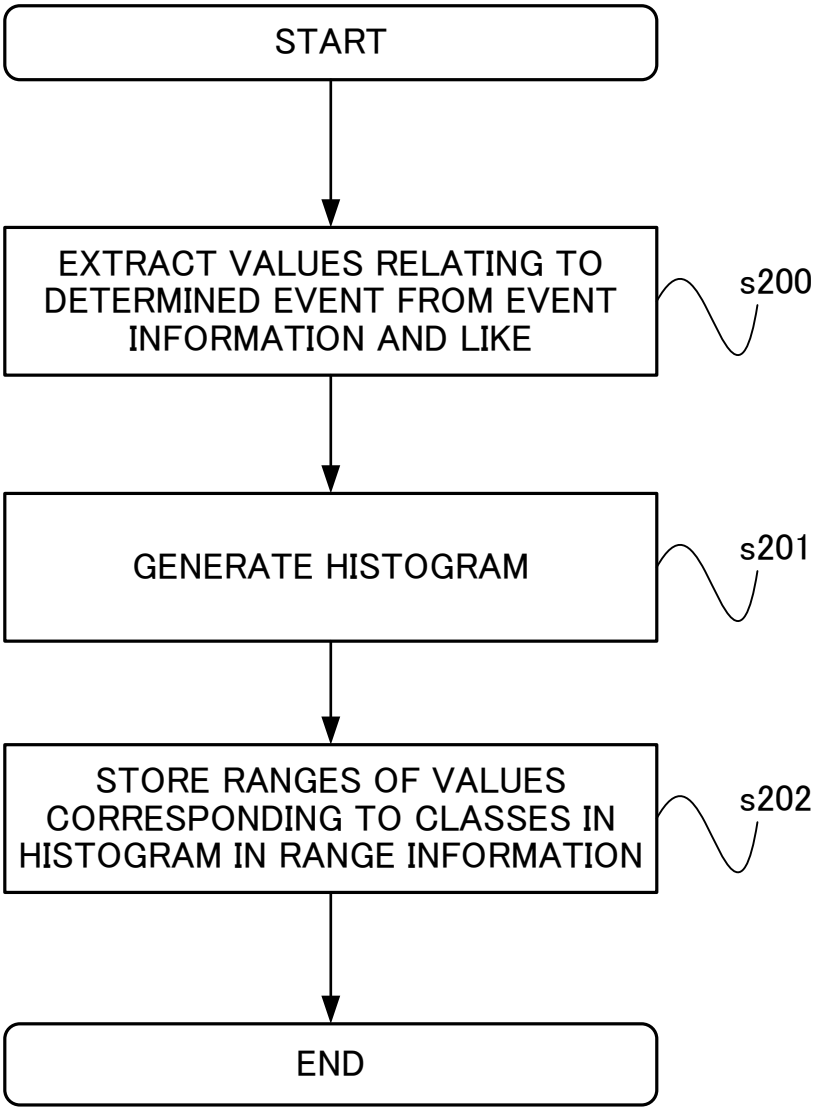

START
EXTRACT VALUES RELATING TO DETERMINED EVENT FROM EVENT INFORMATION AND LIKE
s200
GENERATE HISTOGRAM
s201
STORE RANGES OF VALUES CORRESPONDING TO CLASSES IN HISTOGRAM IN RANGE INFORMATION
s202
END

FIG.15

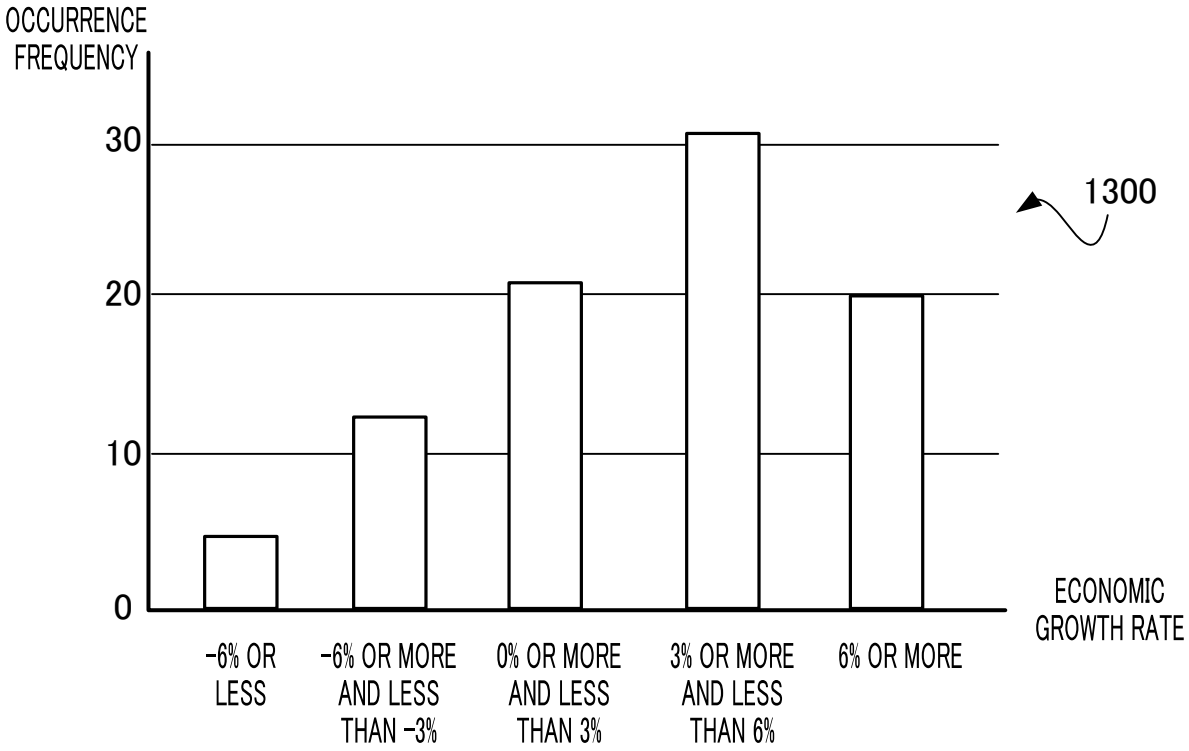

OCCURRENCE FREQUENCY
30
20
10
0
1300
ECONOMIC GROWTH RATE
-6% OR LESS
-6% OR MORE AND LESS THAN -3%
0% OR MORE AND LESS THAN 3%
3% OR MORE AND LESS THAN 6%
6% OR MORE

FIG.16

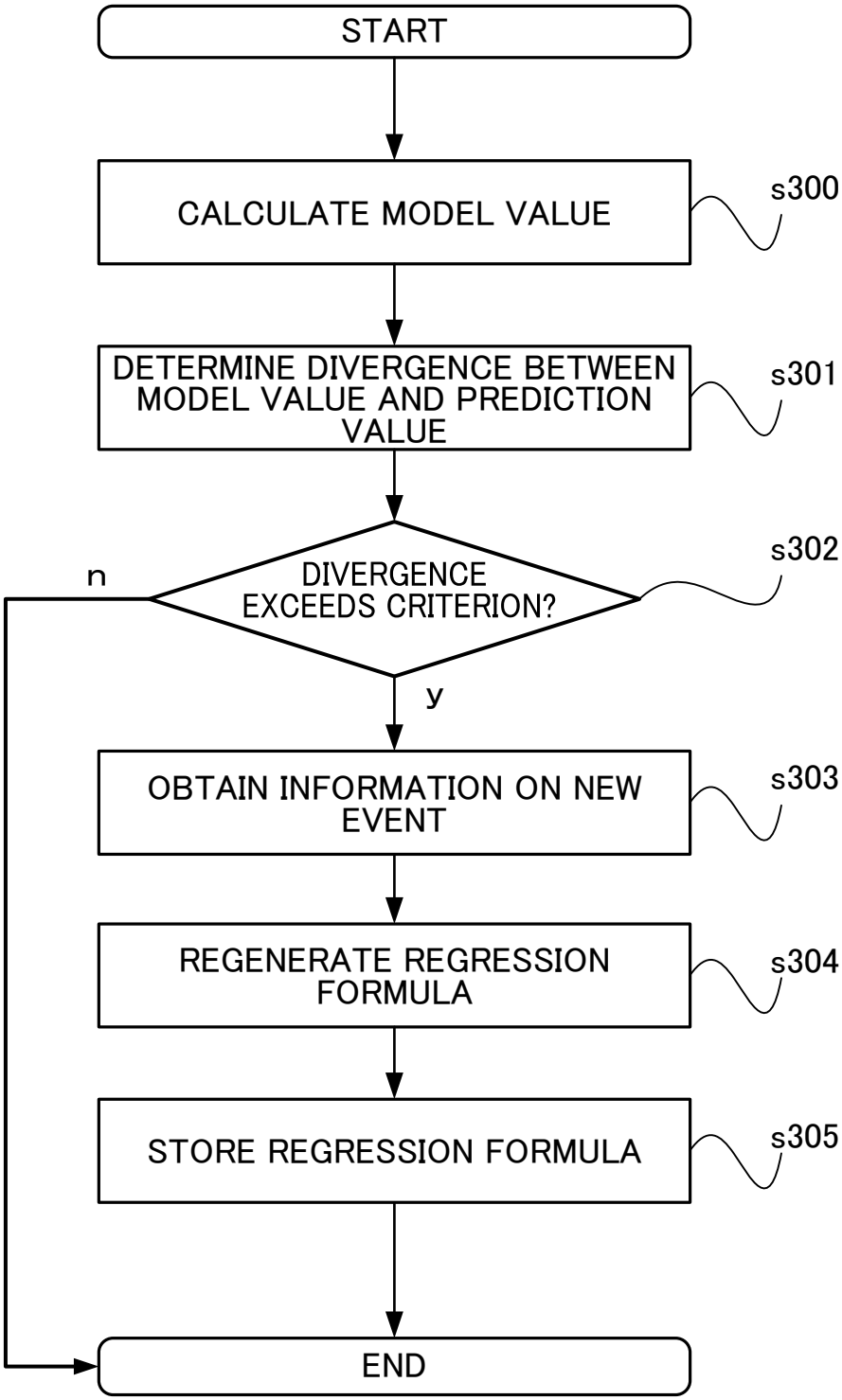

START
CALCULATE MODEL VALUE
s300
DETERMINE DIVERGENCE BETWEEN MODEL VALUE AND PREDICTION VALUE
s301
DIVERGENCE EXCEEDS CRITERION?
s302
n
y
OBTAIN INFORMATION ON NEW EVENT
s303
REGENERATE REGRESSION FORMULA
s304
STORE REGRESSION FORMULA
s305
END

FIG.17