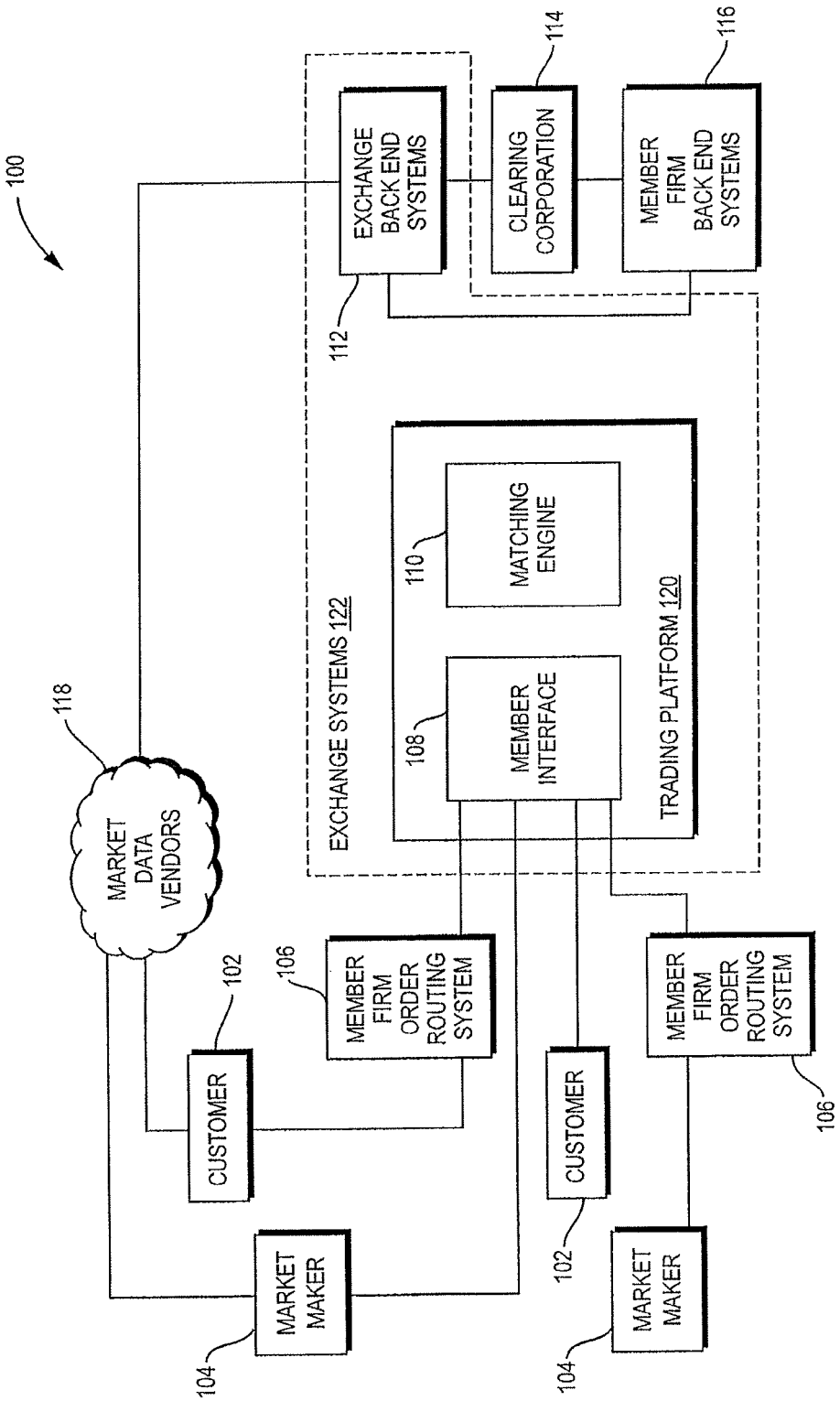

100
EXCHANGE BACK END SYSTEMS
CLEARING CORPORATION
MEMBER FIRM BACK END SYSTEMS
112
114
116
EXCHANGE SYSTEMS 122
TRADING PLATFORM 120
MATCHING ENGINE
MEMBER INTERFACE
110
108
MARKET DATA VENDORS
118
MEMBER FIRM ORDER ROUTING SYSTEM
106
CUSTOMER
102
MARKET MAKER
104

FIG. 1

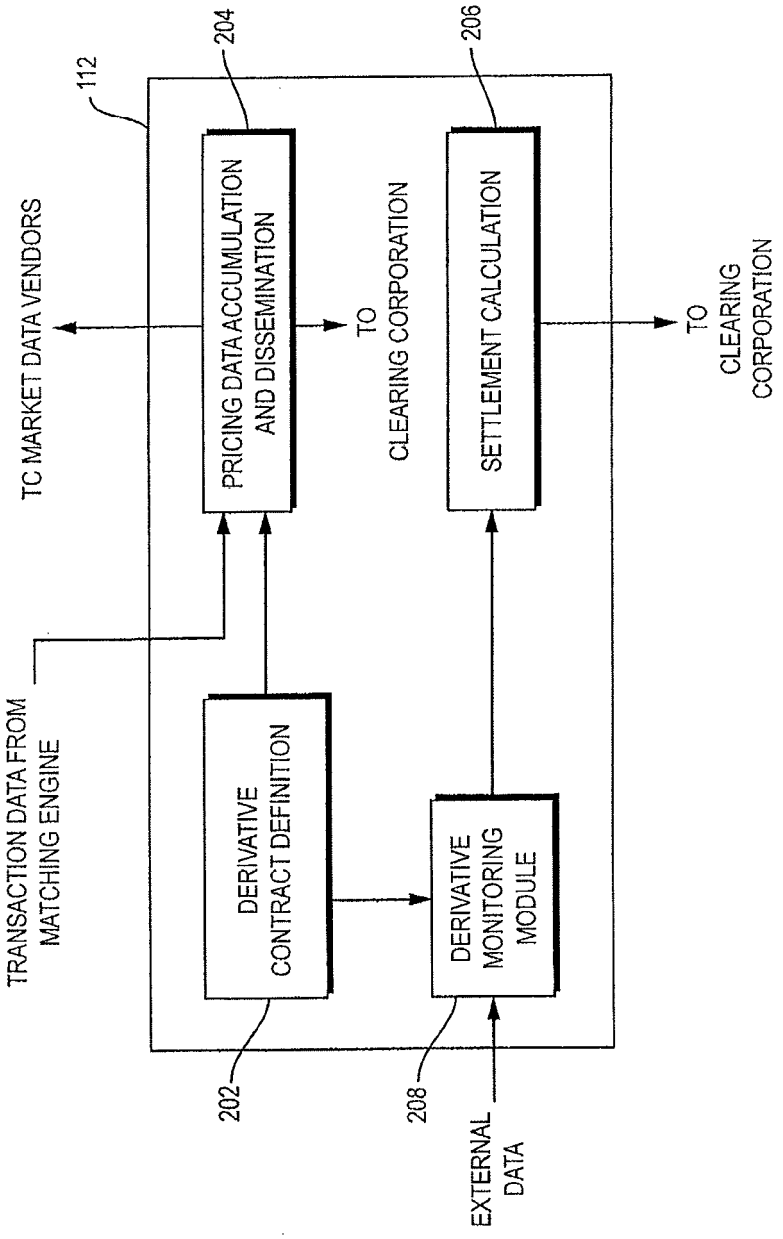

112
204
206
TC MARKET DATA VENDORS
PRICING DATA ACCUMULATION AND DISSEMINATION
TO CLEARING CORPORATION
SETTLEMENT CALCULATION
TO CLEARING CORPORATION
TRANSACTION DATA FROM MATCHING ENGINE
DERIVATIVE CONTRACT DEFINITION
DERIVATIVE MONITORING MODULE
202
208
EXTERNAL DATA

FIG. 2

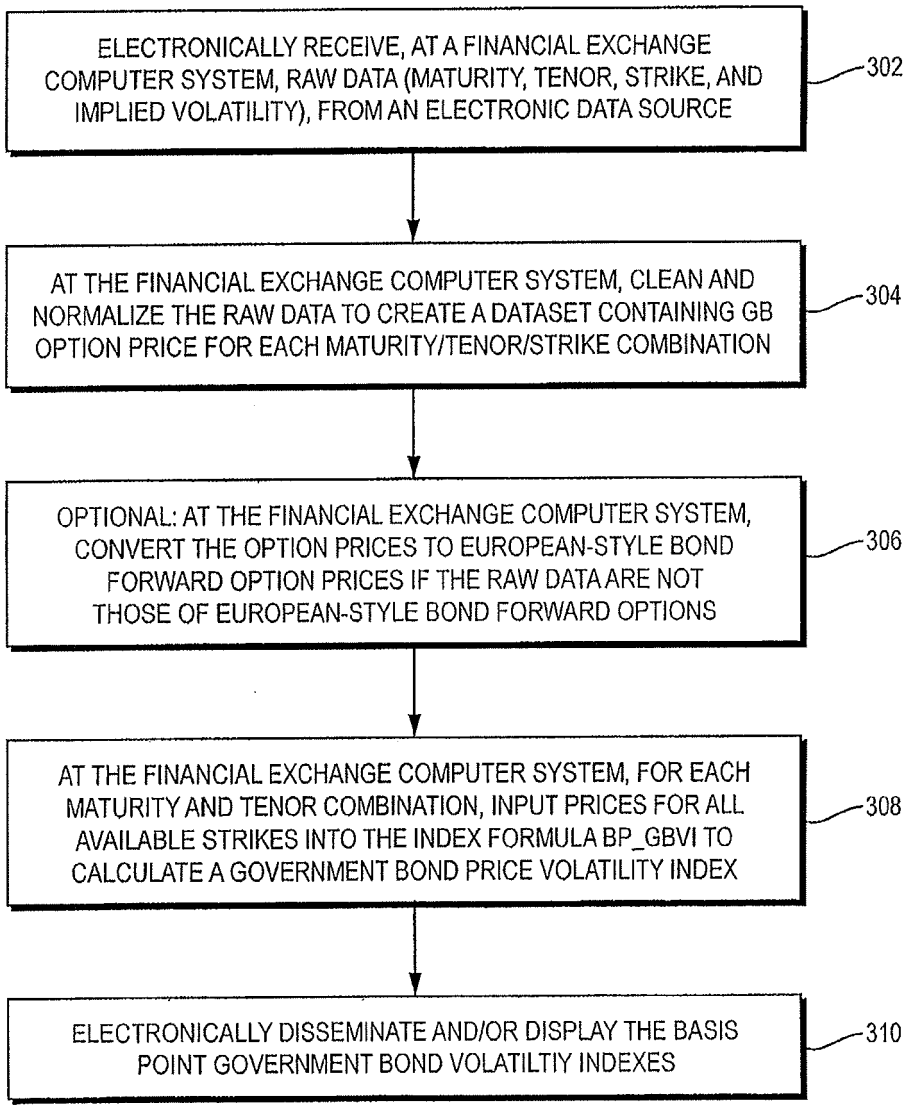

ELECTRONICALLY RECEIVE, AT A FINANCIAL EXCHANGE COMPUTER SYSTEM, RAW DATA (MATURITY, TENOR, STRIKE, AND IMPLIED VOLATILITY), FROM AN ELECTRONIC DATA SOURCE
302
AT THE FINANCIAL EXCHANGE COMPUTER SYSTEM, CLEAN AND NORMALIZE THE RAW DATA TO CREATE A DATASET CONTAINING GB OPTION PRICE FOR EACH MATURITY/TENOR/STRIKE COMBINATION
304
OPTIONAL: AT THE FINANCIAL EXCHANGE COMPUTER SYSTEM, CONVERT THE OPTION PRICES TO EUROPEAN-STYLE BOND FORWARD OPTION PRICES IF THE RAW DATA ARE NOT THOSE OF EUROPEAN-STYLE BOND FORWARD OPTIONS
306
AT THE FINANCIAL EXCHANGE COMPUTER SYSTEM, FOR EACH MATURITY AND TENOR COMBINATION, INPUT PRICES FOR ALL AVAILABLE STRIKES INTO THE INDEX FORMULA BP_GBVI TO CALCULATE A GOVERNMENT BOND PRICE VOLATILITY INDEX
308
ELECTRONICALLY DISSEMINATE AND/OR DISPLAY THE BASIS POINT GOVERNMENT BOND VOLATILTIY INDEXES
310

FIG. 3

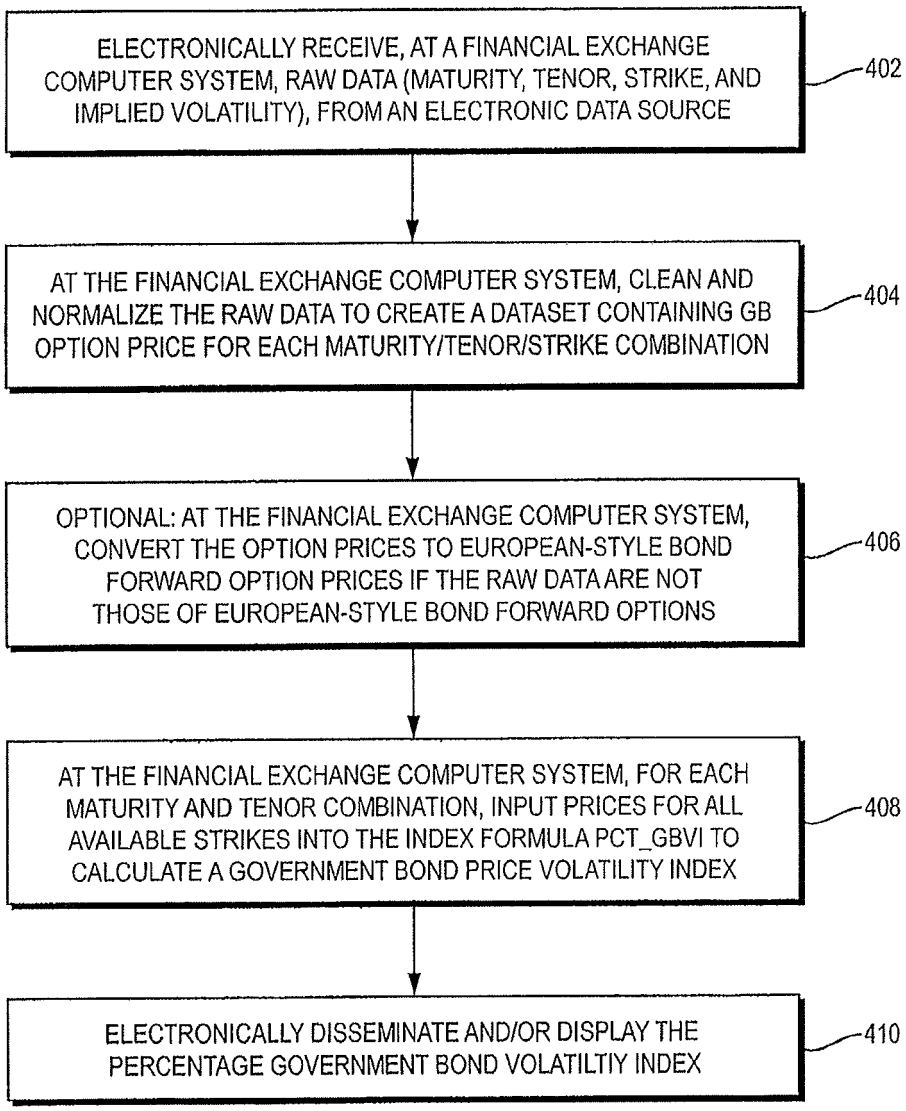

ELECTRONICALLY RECEIVE, AT A FINANCIAL EXCHANGE COMPUTER SYSTEM, RAW DATA (MATURITY, TENOR, STRIKE, AND IMPLIED VOLATILITY), FROM AN ELECTRONIC DATA SOURCE
402
AT THE FINANCIAL EXCHANGE COMPUTER SYSTEM, CLEAN AND NORMALIZE THE RAW DATA TO CREATE A DATASET CONTAINING GB OPTION PRICE FOR EACH MATURITY/TENOR/STRIKE COMBINATION
404
OPTIONAL: AT THE FINANCIAL EXCHANGE COMPUTER SYSTEM, CONVERT THE OPTION PRICES TO EUROPEAN-STYLE BOND FORWARD OPTION PRICES IF THE RAW DATA ARE NOT THOSE OF EUROPEAN-STYLE BOND FORWARD OPTIONS
406
AT THE FINANCIAL EXCHANGE COMPUTER SYSTEM, FOR EACH MATURITY AND TENOR COMBINATION, INPUT PRICES FOR ALL AVAILABLE STRIKES INTO THE INDEX FORMULA PCT_GBVI TO CALCULATE A GOVERNMENT BOND PRICE VOLATILITY INDEX
408
ELECTRONICALLY DISSEMINATE AND/OR DISPLAY THE PERCENTAGE GOVERNMENT BOND VOLATILTIY INDEX
410

FIG. 4

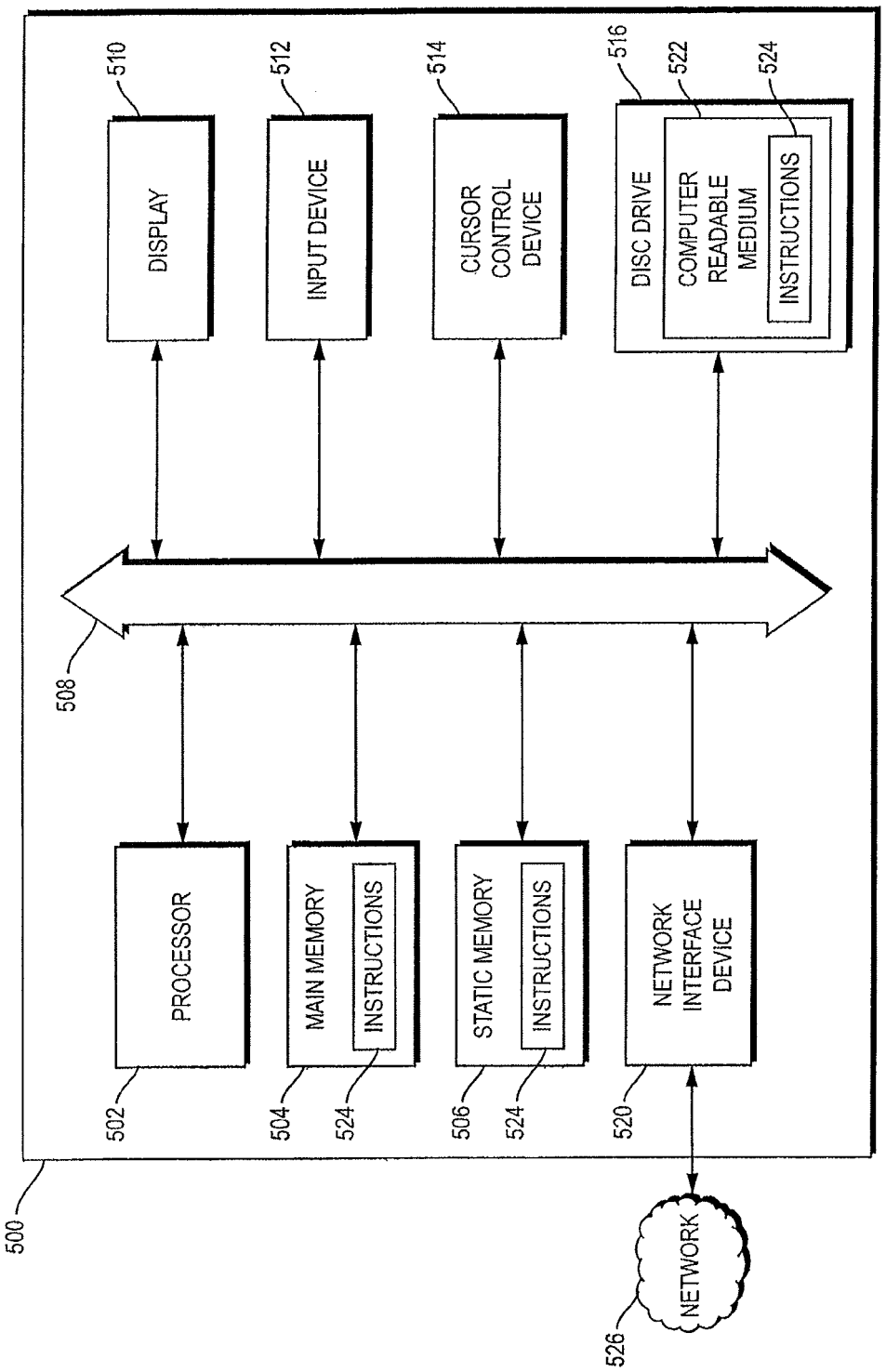

500
510
DISPLAY
512
INPUT DEVICE
514
CURSOR CONTROL DEVICE
516
DISC DRIVE
522
COMPUTER READABLE MEDIUM
524
INSTRUCTIONS
508
502
PROCESSOR
504
MAIN MEMORY
524
INSTRUCTIONS
506
STATIC MEMORY
524
INSTRUCTIONS
520
NETWORK INTERFACE DEVICE
526
NETWORK

FIG. 5

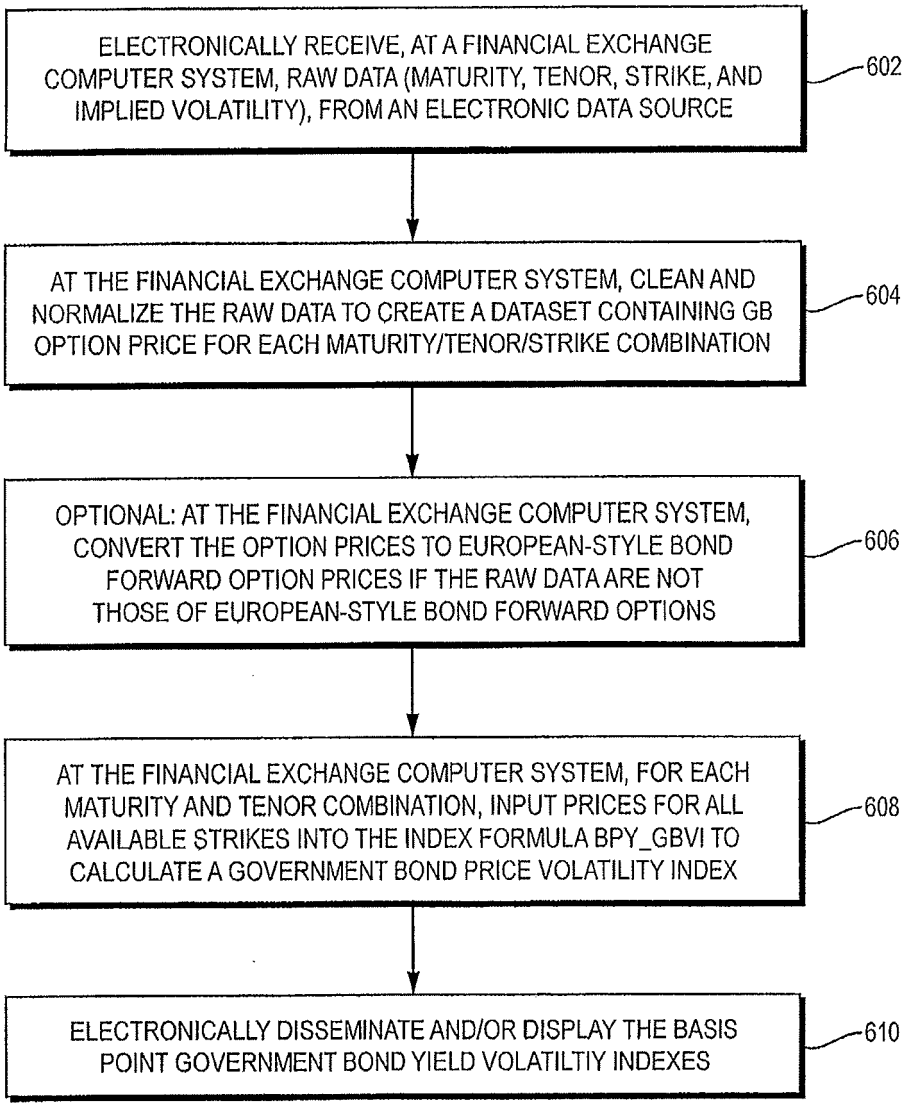
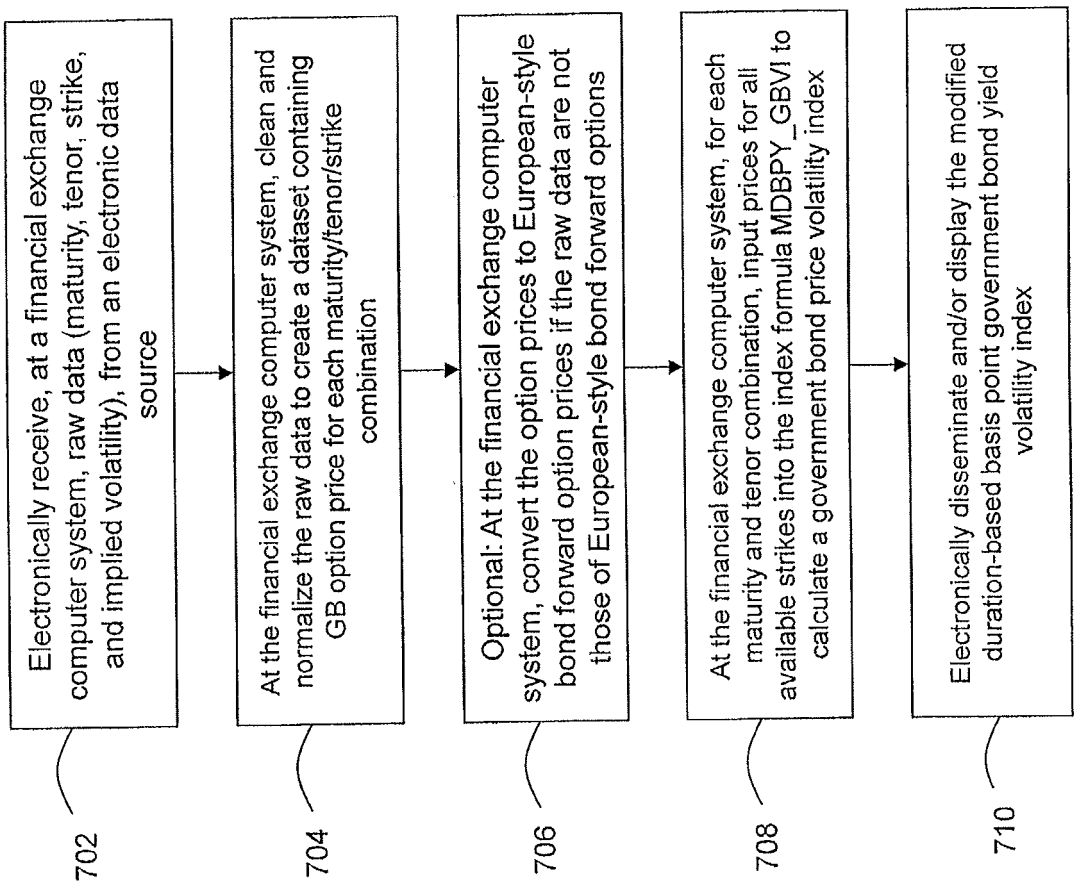

ELECTRONICALLY RECEIVE, AT A FINANCIAL EXCHANGE COMPUTER SYSTEM, RAW DATA (MATURITY, TENOR, STRIKE, AND IMPLIED VOLATILITY), FROM AN ELECTRONIC DATA SOURCE
602
AT THE FINANCIAL EXCHANGE COMPUTER SYSTEM, CLEAN AND NORMALIZE THE RAW DATA TO CREATE A DATASET CONTAINING GB OPTION PRICE FOR EACH MATURITY/TENOR/STRIKE COMBINATION
604
OPTIONAL: AT THE FINANCIAL EXCHANGE COMPUTER SYSTEM, CONVERT THE OPTION PRICES TO EUROPEAN-STYLE BOND FORWARD OPTION PRICES IF THE RAW DATA ARE NOT THOSE OF EUROPEAN-STYLE BOND FORWARD OPTIONS
606
AT THE FINANCIAL EXCHANGE COMPUTER SYSTEM, FOR EACH MATURITY AND TENOR COMBINATION, INPUT PRICES FOR ALL AVAILABLE STRIKES INTO THE INDEX FORMULA BPY_GBVI TO CALCULATE A GOVERNMENT BOND PRICE VOLATILITY INDEX
608
ELECTRONICALLY DISSEMINATE AND/OR DISPLAY THE BASIS POINT GOVERNMENT BOND YIELD VOLATILTIY INDEXES
610

FIG. 6

FIG. 7


Electronically receive, at a financial exchange computer system, raw data (maturity, tenor, strike, and implied volatility), from an electronic data source
At the financial exchange computer system, clean and normalize the raw data to create a dataset containing GB option price for each maturity/tenor/strike combination
Optional: At the financial exchange computer system, convert the option prices to European-style bond forward option prices if the raw data are not those of European-style bond forward options
At the financial exchange computer system, for each maturity and tenor combination, input prices for all available strikes into the index formula MDBPY_GBVI to calculate a government bond price volatility index
Electronically disseminate and/or display the modified duration-based basis point government bond yield volatility index
702
704
706
708
710