

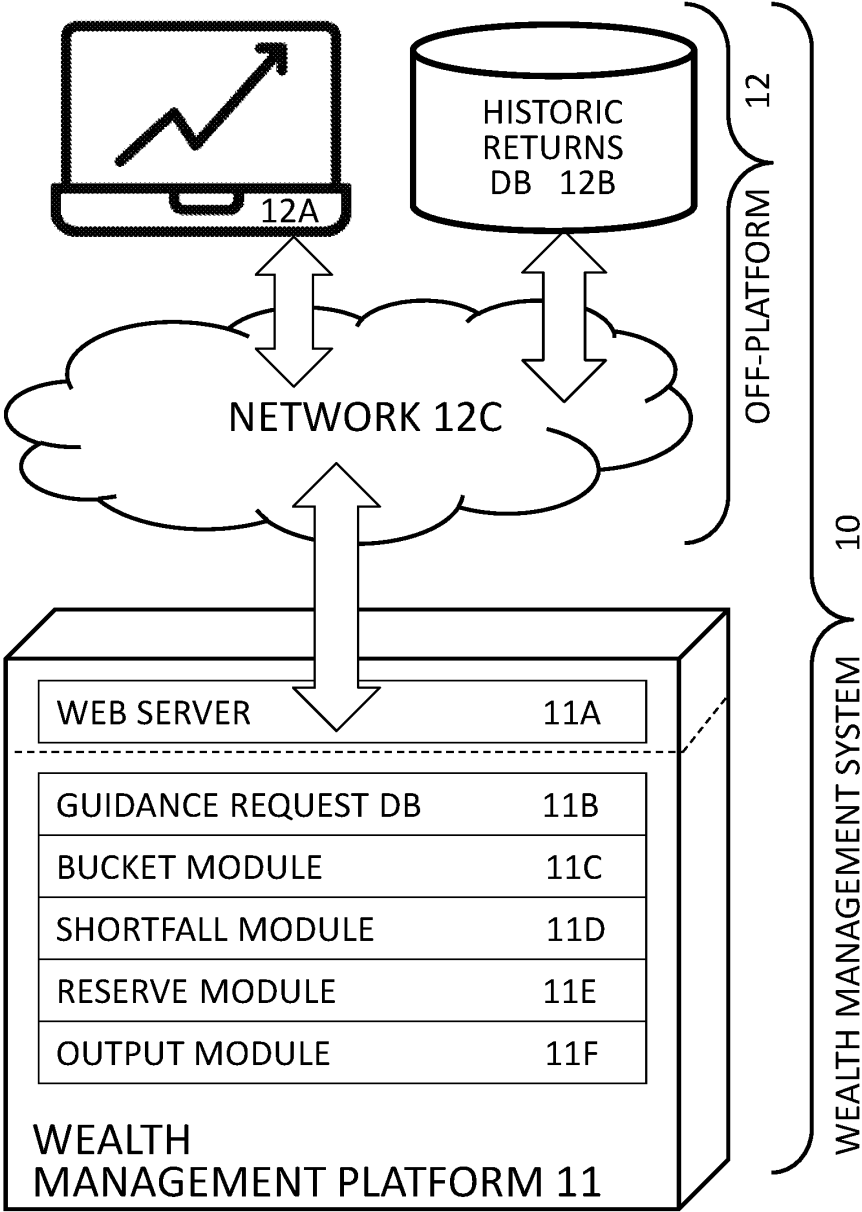


FIG. 1

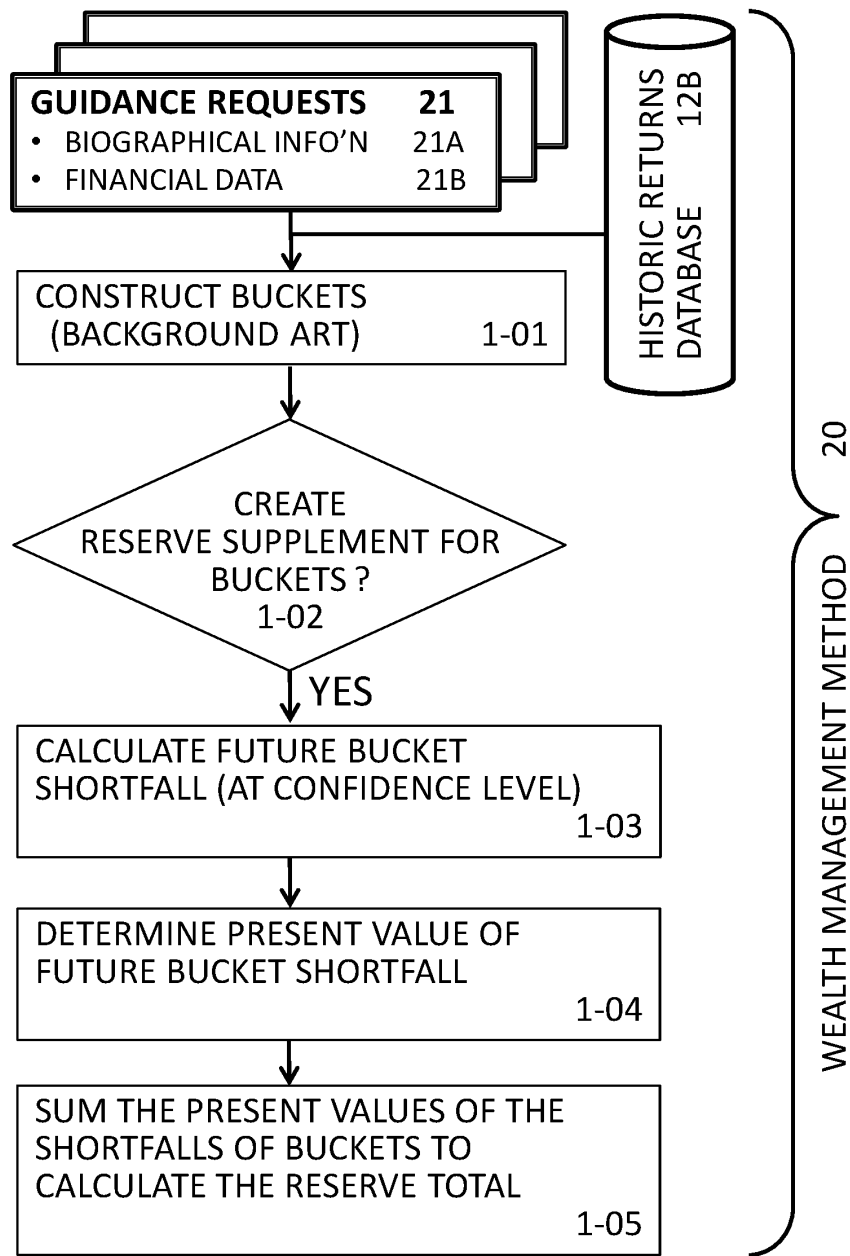


FIG. 2

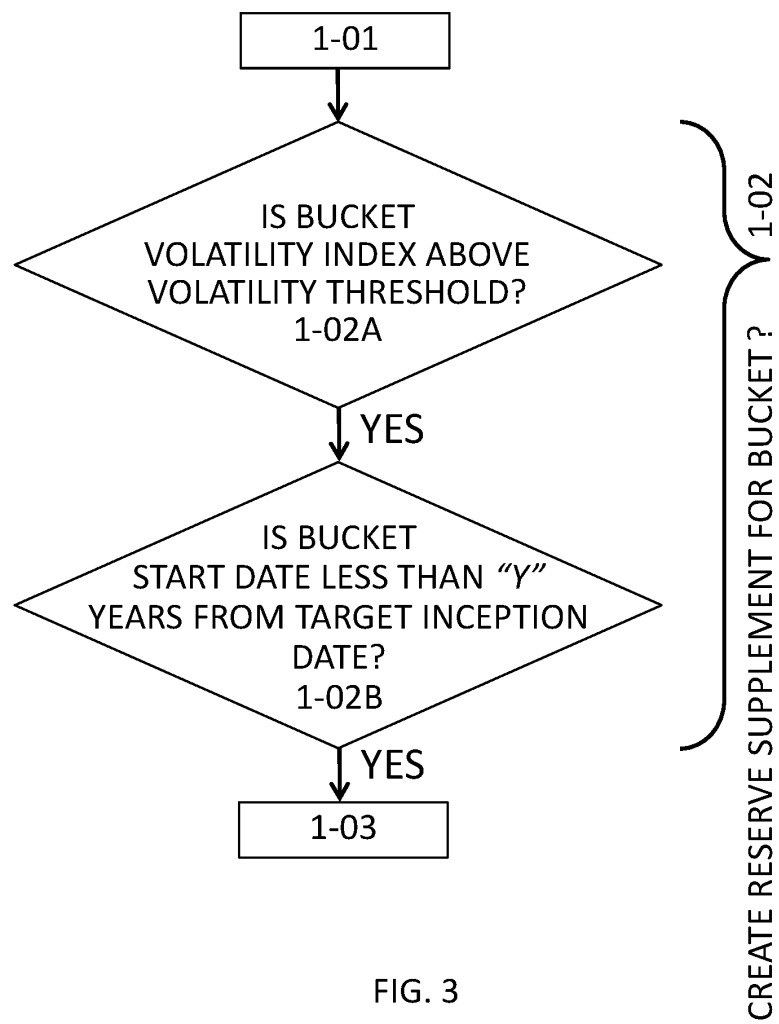
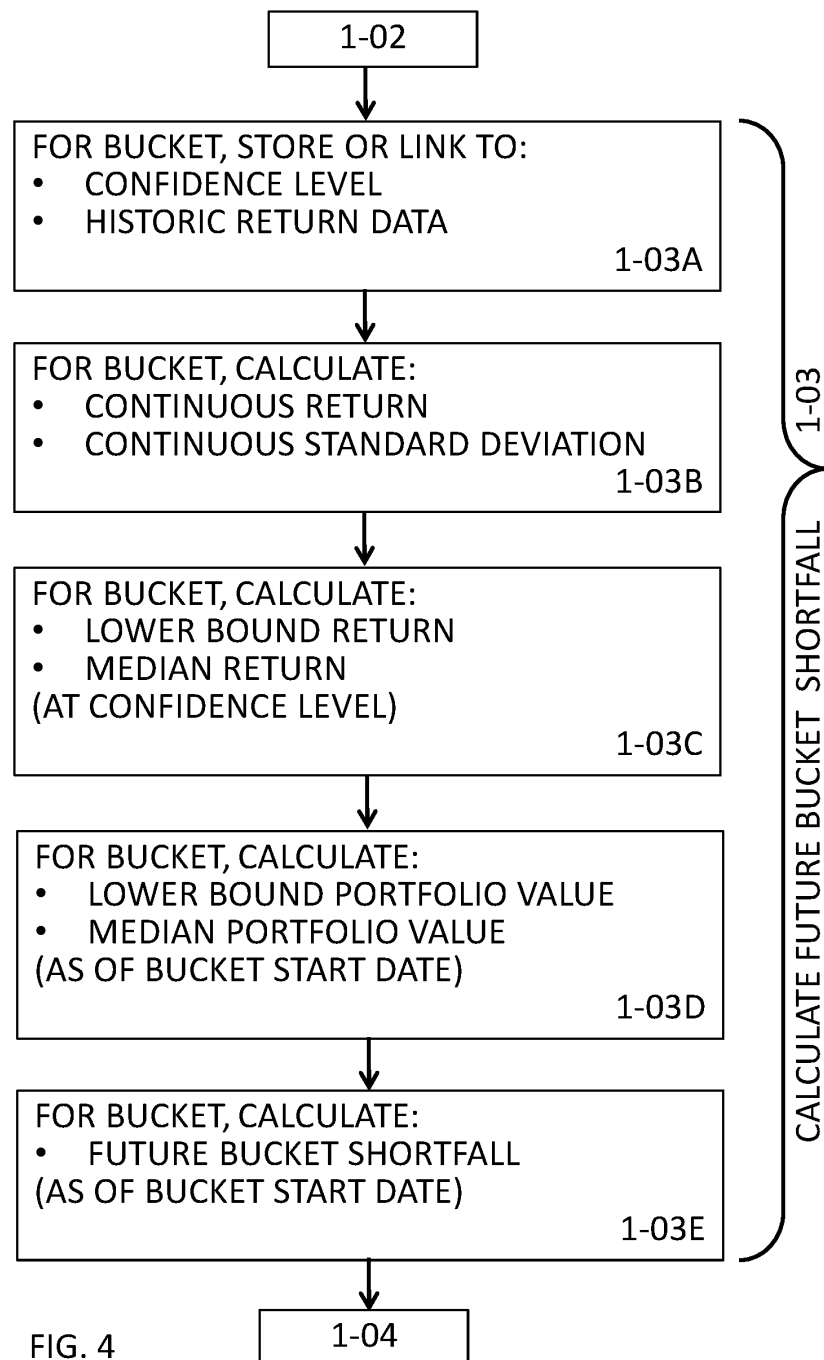


FIG. 3



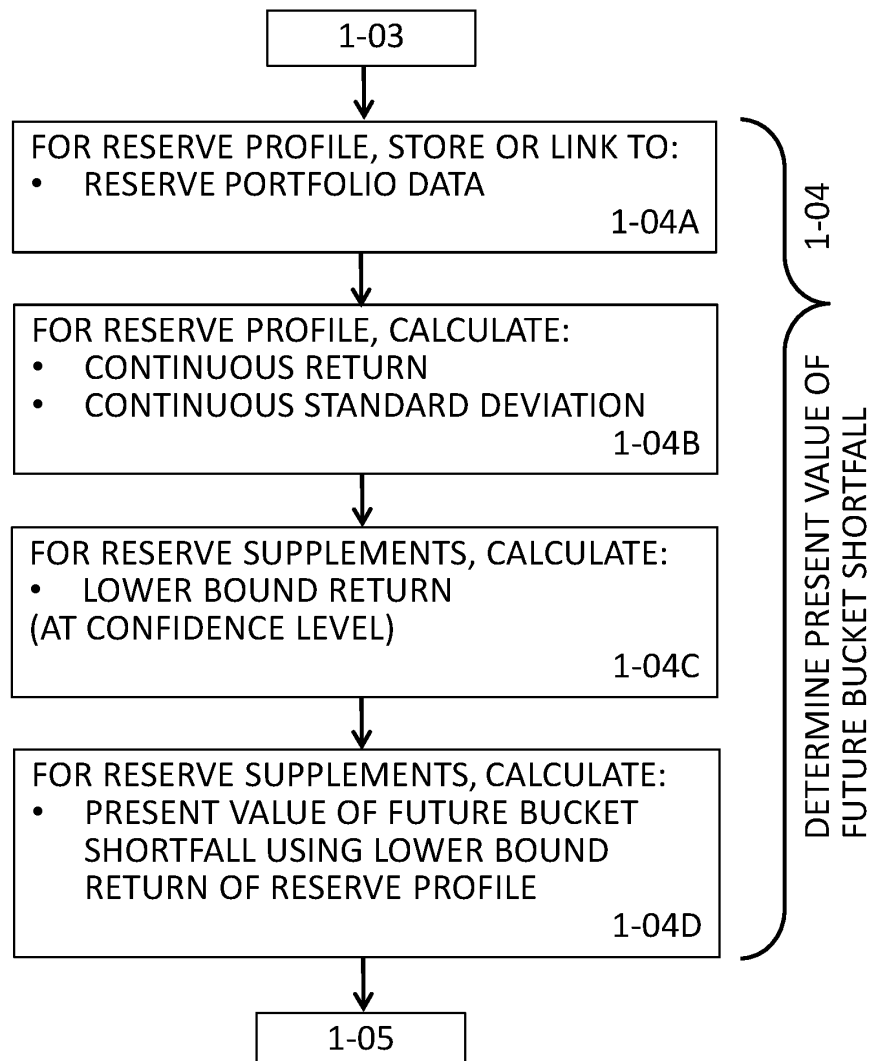


FIG. 5

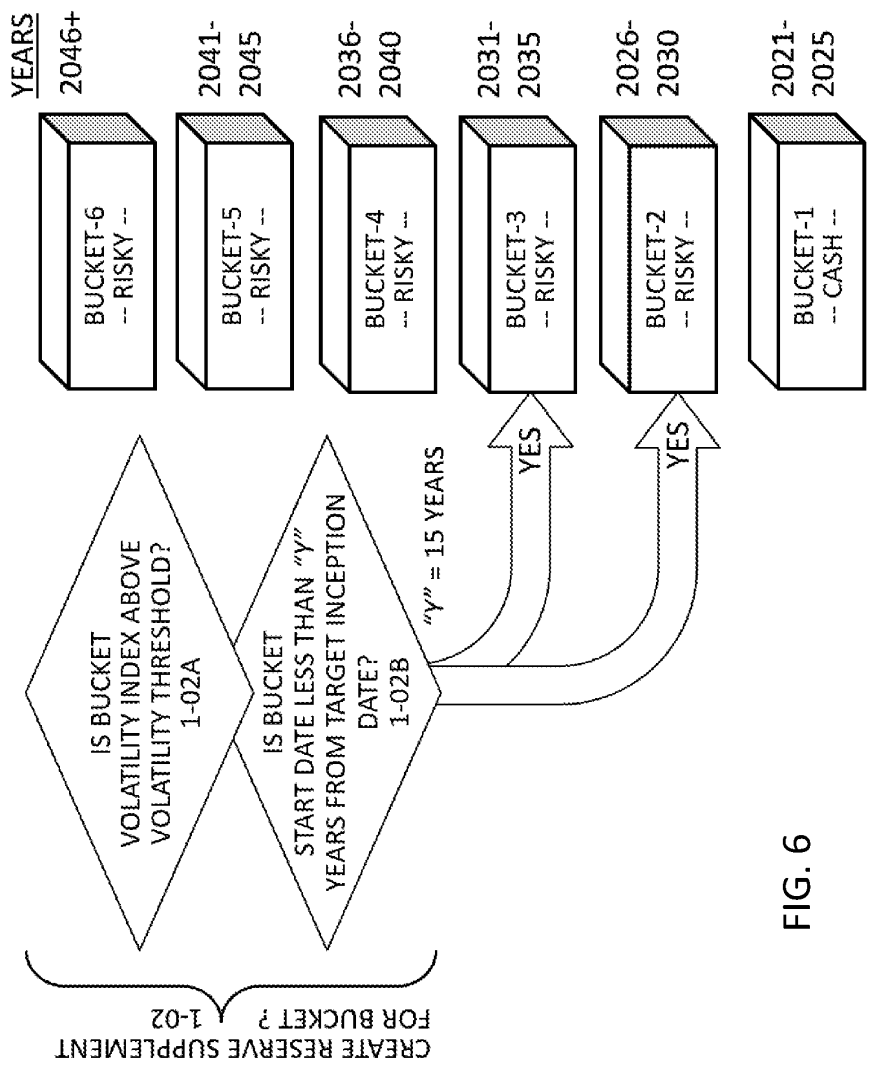


FIG. 6

EQUATION-1A

$$\begin{aligned} & \text{Continuous Return} \\ &= \text{Ln}(1 + \text{Annual Planning Returns: Arithmetic}) \\ & \quad - \frac{\text{Continuous Standard Deviation}^2}{2} \end{aligned}$$

EQUATION-1B

$$\begin{aligned} & \text{Continuous Standard Deviation} \\ &= \text{Ln}\left(1 + \frac{\text{Annual Standard Deviation}^2}{(1 + \text{Annual Planning Returns: Arithmetic})^2}\right) \end{aligned}$$

FIG. 7

EQUATION-2A

$$\sigma^{TAV} = \frac{\text{Continuous Standard Deviation}}{\sqrt{\text{Duration}}}$$

EQUATION-2B

$$\text{Lower Bound Return} = \text{Duration} \sqrt{e^{(\text{Continuous Return} - Z\text{Score} \times \sigma^{TAV}) \times \text{Duration}}} - 1$$

EQUATION-2C

$$\text{Median Return} = \text{Duration} \sqrt{e^{(\text{Continuous Return} \times \text{Duration})}} - 1$$

FIG. 8

EQUATION-3A

$$\begin{aligned} &\text{Lower Bound Portfolio Value at Bucket Start Date} \\ &= \text{Bucket Present Value at Target Inception Date} \\ &\times (1 + \text{Lower Bound Return})^{\text{Duration}} \end{aligned}$$

EQUATION-3B

$$\begin{aligned} &\text{Median Portfolio Value at Bucket Start Date} \\ &= \text{Bucket Present Value at Target Inception Date} \\ &\times (1 + \text{Median Return})^{\text{Duration}} \end{aligned}$$

FIG. 9

EQUATION-4

Future Bucket Shortfall
= Median Portfolio Value – Lower Bound Portfolio Value

EQUATION-5

Present Value of Future Bucket Shortfall
= PV(Lower Bound Return, Duration, Future Bucket Shortfall)

FIG. 10

BUCKET DETAILS		BUCKET-1	BUCKET-2	BUCKET-3	BUCKET-4	BUCKET-5	BUCKET-6	RESERVE
BUCKET START DATE (YEAR)		2021	2026	2031	2036	2041	2046	
END DATE (YEAR) OF BUCKET		2025	2030	2035	2040	2045	2060	
TIME WINDOW (YEARS)		1-5	6-10	11-15	16-20	21-25	26+	
YEARS IN BUCKET		5	5	5	5	5	15	
DURATION OF BUCKET		0	5	10	15	20	25	
CASH OR RISKY?		CASH	RISKY	RISKY	RISKY	RISKY	RISKY	
RESERVE SUPPLEMENT NEEDED?		NO	YES	YES	NO	NO	NO	
CONTINUOUS STANDARD DEVIATION		0.00%	6.33%	9.34%	12.43%	15.21%	15.21%	9.34%
CONTINUOUS HISTORICAL RETURN		0.00%	3.45%	4.43%	5.41%	6.41%	6.41%	4.43%
σTAV		0.00%	2.83%	2.95%	3.21%	3.40%	3.04%	
CONFIDENCE LEVEL (ZSCORE)		0.524	0.524	0.524	0.524	0.524	0.524	
ANNUAL RETURNS OF BUCKETS								
LOWER BOUND RETURN		0.00%	1.98%	2.92%	3.80%	4.74%	4.94%	
MEDIAN BOUND RETURN		0.00%	3.51%	4.53%	5.56%	6.62%	6.62%	
UPPER BOUND RETURN		0.00%	5.05%	6.16%	7.35%	8.54%	8.33%	
RETURNS AND SHORTFALLS								
LOWER BOUND RETURN (OF \$1.00)		\$1.00000	\$1.10300	\$1.33400	\$1.75000	\$2.52400	\$3.33400	
MEDIAN RETURN (OF \$1.00)		\$1.00000	\$1.18800	\$1.55700	\$2.25200	\$3.60500	\$4.96700	
FUTURE BUCKET SHORTFALL (OF \$1.00)		\$0.00000	\$0.08500	\$0.22300	\$0.50200	\$1.08100	\$1.63200	
FUTURE BUCKET SHORTFALL (\$ TOTAL)			\$51,200.71	\$95,714.90				
RESERVE CALCULATIONS (BY BUCKET)								
σTAV		0.00%	4.18%	2.95%	2.41%	2.09%	1.87%	
LOWER BOUND RETURNS		0.00%	2.26%	2.92%	3.21%	3.39%	3.51%	
PRESENT VALUE RESERVE (OF \$1.00)			\$0.07591648	\$0.16733445				Reserve
PRESENT VALUE RESERVE (\$ TOTAL)			\$45,729.15	\$71,822.42				Total
FUNDING AT TARGET INCEPTION DATE (\$)		\$729,612.62	\$602,361.28	\$429,214.80	\$332,892.77	\$198,961.60	\$257,985.50	\$117,551.57
TOTAL FUNDING:		\$2,668,580.14						

FIG. 11

11-00

