

CLAIMS

1. A computer-implemented method for constructing a representation of investment securities in a database, the method comprising:

- electronically storing a set of data entities in a database system, each of the data entities representing an investment security, and each investment security corresponding to an economic entity;

- electronically assigning tags representing attributes of the economic entities to a plurality of the investment securities;

- selecting a plurality of investment securities represented by data entities for inclusion in an index, fund, or portfolio of investment securities;

- stratifying the selected investment securities into at least a first stratified group and a second stratified group based on a first common attribute and a second common attribute, wherein the economic entities represented by investment securities in the first stratified group share the first common attribute, as identified by one or more tags, and the economic entities represented by investment securities in the second stratified group share the second common attribute, as identified by one or more tags;

- selecting a stratified group of investment securities;

- stratifying the selected investment securities into at least a first stratified subgroup and a second stratified subgroup based on a third common attribute and a fourth common attribute, wherein the economic entities represented by investment securities in the first stratified subgroup share the third common attribute, as identified by one or more tags, and the economic entities represented by investment securities in the second stratified subgroup share the fourth common attribute, as identified by one or more tags;

- electronically storing the stratified groups and subgroups in a database as a representation of an index, fund, or portfolio;

- electronically accessing the database representation of the stratified groups or subgroups;

- electronically iterating through the accessed representations to compute a negative or positive weight for one or more of the investment securities based on the one or more groups or subgroups into which the investment securities are stratified; and

assigning and electronically storing the negative or positive weight to the one or more of the investment securities in the database.

2. The method of claim 1, further comprising:

assigning negative or positive weights to the one or more groups of securities, wherein the sum of the weights of the one or more groups equals 1;

assigning negative or positive weights to the one or more subgroups, wherein the sum of the weights of the one or more subgroups of the group equals 1; and

assigning negative or positive weights to the one or more investment securities;

wherein the sum of the weights of the one or more investment securities of the subgroup equals 1; and

assigning a negative or positive weight to an investment security by calculating the weight of the security within its subgroup, the weight of the subgroup within its group, and the weight of the group within the portfolio.

3. The method of claim 2, further comprising:

setting a target weight for a group, subgroup, or investment security; and

periodically rebalancing the group, subgroup, or investment security to its target weight;

and

wherein the weight for the group, subgroup, or investment security is further based on the number or attributes of groups, subgroups, or investment securities into which the portfolio, index or fund is stratified.

4. The method of claim 2, further comprising transmitting, sending, or relaying information regarding one or more data entities and one or more weights to one of more of an exchange, index provider, index calculator, brokerage, asset manager, investment advisor, fund manager, or securities trading platform.

5. The method of claim 4, further comprising using one or more weights to buy, sell, short sell, or execute trades in a security, composite, group, or portfolio.

6. The method of claim 1, wherein one or more securities, subgroups, groups, or portfolios are equities, bonds, derivatives, commodities, funds, or exchange-traded funds.

7. The method of claim 1, wherein the groups, subgroups, and investment securities comprise a stratified portfolio architecture of clustered investment securities; and wherein the database electronically represents the stratified portfolio architecture, thereby enabling a computer processor to cluster the investment securities and assign weights to the investment securities.

8. The method of claim 1, wherein the investment securities are selected from among equities, bonds, derivatives, commodities, funds, or exchange-traded funds.

9. The method of claim 1, wherein the economic entities represented by investment securities are companies, assets, resources, products, or liabilities.

10. The method of claim 9, wherein the common attributes relate to the inputs, outputs, operations, products, suppliers, customers, or customers of customers of the companies, assets, resources, or liabilities that are represented by the investment securities.

11. The method of claim 1, further comprising:

- receiving, as an input, a target performance metric from a user; and
- evaluating a portfolio, group, or subgroup to determine or project whether it meets, or is projected to meet, the performance metric; or
- constructing a portfolio, group, or subgroup so as to achieve the performance metric.

12. The method of claim 11, wherein the performance metric is an expected return, measure of risk, measure of volatility, alpha, beta, or Sharpe ratio.

13. The method of claim 1, wherein a group and its constituent subgroups comprise a stratified composite unit.

14. The method of claim 13, wherein a stratified composite unit is engineered or selected to possess a different risk/return profile than an uncontrolled grouping from the population of underlying securities.

15. The method of claim 1, wherein an index is an uninvested set of investment securities, as represented by data entities, and a portfolio is an invested set of investment securities, as represented by data entities.

16. The method of claim 1, wherein the first and second attributes are different.

17. The method of claim 16, wherein the third and fourth attributes are different from one another and from the first and second attributes.

18. The method of claim 1, further comprising:

identifying additional common attributes as a basis for further stratification into an arbitrary number of strata, wherein each stratum consists of at least two subsets of a set at the higher stratum; and

further stratifying the subgroups based on commonality of attributes.

19. The method of claim 1, wherein the groups or subgroups are stratified to create a more normally distributed performance than a capitalization-weighted, even-weighted, or factor-weighted portfolio, as measured by a commonly accepted statistical test of normality.

20. The method of claim 19, wherein performance is measured by return, expected return, risk, variance, volatility, expected variance, expected volatility, or liquidity.

21. The method of claim 1, wherein the attributes are intrinsic to the underlying economic entity.

22. The method of claim 21, wherein the intrinsic attributes are not factor-based, accounting-based, performance-based, or capital markets-based.

23. The method of claim 21, wherein an intrinsic attribute assigned to a data entity is one that is likely to maintain a constant value over an arbitrary time interval, as validated by a test of statistical significance.

24. The method of claim 1, wherein the intrinsic attribute is associated with the company or issuer's underlying operations, or with a company or issuer in its value chain.

25. The method of claim 24, wherein operations comprise procurement, transportation, storage, research and development, manufacturing, quality control, sales, exchange, banking, investment research, asset management, audit, capital, energy, information, land, real estate, tools, labor, raw materials, simple components, complex components, or other products, final products, resources, assets, liabilities, intermediaries, departments, work groups, suppliers, lenders, investors, stakeholders, customers, customers of customers, counterparties, partners, service providers, inputs, or outputs.

26. The method of claim 24, wherein the underlying operations do not comprise the accounting or capital markets-based representations or metrics of assets, liabilities, inputs, operations, or products of the company or issuer.

27. The method of claim 1, wherein the attributes characterize the roles of each of the economic entities in a process of converting inputs to outputs.

28. The method of claim 27, wherein the attributes are functional.

29. A system for executing a command in a computing environment to construct a representation of investment securities in a database, the system comprising:
a computerized processor configured for:

electronically assigning tags representing attributes of economic entities to a plurality of investment securities;

selecting multiple investment securities represented by data entities for inclusion in an index, fund, or portfolio of investment securities;

stratifying the selected investment securities into at least a first stratified group and a second stratified group based on a first common attribute and a second common attribute, wherein the economic entities represented by investment securities in the first stratified group share the first common attribute, as identified by one or more tags, and the economic entities represented by investment securities in the second stratified group share the second common attribute, as identified by one or more tags;

selecting a stratified group of investment securities;

stratifying the selected investment securities into at least a first stratified subgroup and a second stratified subgroup based on a third common attribute and a fourth common attribute, wherein the economic entities represented by investment securities in the first stratified subgroup share the third common attribute, as identified by one or more tags, and the economic entities represented by investment securities in the second stratified subgroup share the fourth common attribute, as identified by one or more tags;

electronically accessing the representation in the database of the stratified groups or subgroups;

electronically iterating through the accessed representations to compute a negative or positive weight for one or more of the investment securities based on the one or more groups or subgroups into which the investment securities are stratified; and

assigning the negative or positive weight to the one or more of the investment securities in the database; and

an electronic data store configured for:

electronically storing a set of data entities in the database, each of the data entities representing an investment security, the investment security corresponding to an economic entity;

electronically storing the negative or positive weight for the one or more of the investment securities in the database; and

electronically storing stratified groups and subgroups in the database as a representation of an index, fund, or portfolio.

30. The system of claim 29, wherein the computerized processor is further configured for:

 assigning negative or positive weights to the one or more groups of securities, wherein the sum of the weights of the one or more groups equals 1;

 assigning negative or positive weights to the one or more subgroups, wherein the sum of the weights of the one or more subgroups of the group equals 1; and

 assigning negative or positive weights to the one or more investment securities, wherein the sum of the weights of the one or more investment securities of the subgroup equals 1; and

 assigning a negative or positive weight to an investment security by calculating the weight of the security within its subgroup, the weight of the subgroup within its group, and the weight of the group within the portfolio.