CLAIMS:

1. A computer-implemented method for determining a cash flow forecast for an entity, the method comprising:

providing an accounting system in a cloud computing environment, the cloud computing environment providing the accounting system by a primary data center in an online state and comprising one or more pods, each pod comprising processor hardware and memory hardware and including one or more application server virtual machines that are specific to the pod, and in case of a fault in the primary data center, the cloud computing environment providing the accounting system by a secondary data center in an online state, the secondary data center comprising one or more pods to which the one or more pods of the primary data center are replicated, respectively;

in response to the primary data center developing a fault, changing a state of the secondary data center from the offline state to an online state in which the secondary data center is providing the platform in the cloud computing environment, and changing a state of the primary data center to an offline state;

presenting a user interface via a display device corresponding to a user account of the accounting system, the user interface comprising a forecast period selection element and a cash flow display element;

receiving, via the user interface and based on a user interaction with the forecast period selection element, a forecast period;

accessing, by one or more pods of the cloud computing environment and via a network connection, accounting data stored on a database;

determining, from the accounting data, a dataset of transactions occurring during a first time period;

determining a subset of related transactions from the dataset of transactions, where each transaction in the subset of related transactions shares at least one common attribute;

filtering the subset of related transactions based on at least one filtering criteria;

selecting a first transaction interval pattern the first transaction interval pattern defining a first time interval between transaction dates;

selecting a first clustering criteria;

based on the first transaction interval pattern and the first clustering criteria, identifying a first cluster of transactions from the subset of related transactions;

performing a viability check on the first cluster, wherein the viability check determines whether the transactions making up the first cluster are likely to be recurring transactions having the first transaction interval pattern;

determining that the first cluster passes the viability check;

in response to the first cluster passing the viability check, determining a first viable cluster;

selecting one or more of:

a second clustering criteria, the second clustering criteria being more lenient than the first clustering criteria; and

a second transaction interval pattern, the second transaction interval pattern defining a second time interval between transaction dates being longer in duration than the first time interval;

based on (i) the first transaction interval pattern and the second clustering criteria and/or (ii) the second transaction interval pattern and the first clustering criteria,

identifying a second cluster of transactions from the subset of related transactions that have not already been determined to make up a viable cluster;

performing a viability check on the second cluster, wherein the viability check determines whether the transactions making up the second cluster are likely to be recurring transactions having the transaction interval pattern used to identify the second cluster of transactions;

wherein performing a viability check on the first cluster and/or the second cluster comprises one or more of: checking a recency of a latest transaction in the cluster, checking an extent to which individual transaction intervals of the cluster match a determined pattern, checking a number of unique transactions in the cluster; and performing an interval check;

determining that the second cluster passes the viability check;

in response to the second cluster passing the viability check, determining a second viable cluster;

generating a model of periodic transactions based on the first viable cluster and the second viable cluster, the model including: (i) a first interval related to the first transaction interval pattern or (ii) the first interval and a second interval related to the second transaction interval pattern, and and a common attribute based on the at least one common attribute;

using the model of periodic transactions to predict at least one future recurring transaction having an interval related to the first or second transaction interval pattern and a common attribute based on the at least one common attribute;

based at least on the predicted at least one future recurring transaction, determining a cash flow forecast for the entity over the forecast period; and

presenting, via the cash flow display element of the user interface, a graphical representation of the cash flow forecast for the entity over the forecast period.

2. The method of claim 1, further comprising marking the transactions of the cluster as used.

3. The method of any one of claims 1 or 2, further comprising, prior to performing the clustering step, filtering the subset of related transactions based on at least one filtering criteria.

4. The method of claim 3, where the filtering criteria is a minimum transaction amount.

5. The method of any one of the preceding claims, wherein checking the recency of the latest transaction in the cluster comprises determining the latest transaction in the cluster, determining the difference between the date of the latest transaction and the current date, and determining if the difference is less than a predetermined threshold, wherein where the difference is more than the predetermined threshold the cluster is determined to be unviable.

6. The method of claim 5, wherein checking the extent to which the individual transaction intervals of the cluster match a determined pattern comprises determining a median transaction interval, and comparing the median transaction interval with the interval related to the selected transaction interval pattern; wherein where the median transaction interval does not match the selected transaction interval pattern, the cluster is determined to be unviable.

7. The method of claim 6, wherein the median transaction interval is a binned median transaction interval, and wherein the binned median transaction interval is calculated by determining individual transaction intervals by calculating the difference between each transaction and a next occurring transaction; rounding each individual transaction interval to the nearest multiple of the selected transaction interval pattern; counting the number of instances of each rounded transaction interval; and determining the binned median transaction interval to be the rounded transaction interval with the highest count.

8. The method of any one of the preceding claims, wherein checking the number of unique transactions in the cluster comprises determining whether the number of transactions in the cluster is more than a predetermined threshold, wherein where the difference is less than the predetermined threshold the cluster is determined to be unviable.

9. The method of any one of the preceding claims, wherein performing a viability check on the cluster comprises performing an interval check, and wherein performing the interval check comprises: determining individual transaction intervals by calculating the difference between each transaction and a next occurring transaction; and determining whether less than half of the individual transaction intervals are zero; wherein if more than half of the rounded individual transaction intervals are zero the cluster is determined to be unviable.

10. The method of claim 9, further comprising rounding each individual transaction interval to the nearest multiple of the selected transaction interval pattern before determining whether less than half of the individual transaction intervals are zero.

11. The method of any one of the preceding claims, wherein the common attribute is at least one of a common transacting entity; a common bank account name, number or type; a common transaction amount; a common contact name or contact identifier such as business registration number, and/or a common contact address.

12. The method of any one of the preceding claims, wherein the interval pattern is selected from the group: weekly, fortnightly, monthly, quarterly and yearly.

13. The method of any one of the preceding claims, wherein the clustering criteria comprises at least one of a deviation from the selected interval pattern, a difference in transaction amount, and a minimum number of transactions to be clustered.

14. The method of any one of the preceding claims, wherein identifying a cluster of transactions from the subset of related transactions based on the first transaction interval pattern comprises calculating an interval difference between at least one pair of transactions in the subset of related transactions.

15. The method of claim 14, wherein calculating an interval difference comprises determining a difference in the day of the month on which the pair of transactions took place.

16. The method of claim 15, wherein determining a difference comprises mapping the days to a circle and determining the shortest number of steps between the days corresponding to the pair of transactions.

17. The method of claim 14, wherein calculating an interval difference comprises mapping the date of the transaction to a trigonometric function, and determining a difference in the trigonometric value corresponding to the dates on which the pair of transactions took place.

18. A computer-readable medium storing executable instructions which, when executed by a processor, perform the method of any one of claims 1 to 17.

19. The computer-readable medium of claim 18, wherein the computer-readable medium is a non-transient computer-readable medium.

20. A computing device comprising:

the computer-readable medium of claim 17 or 18; and

a processor configured to access and execute the instructions stored on the computer-readable medium.