

DATA PROCESSING FOR LIMITS MANAGEMENT IN FINANCIAL INSTITUTIONS

FIELD OF THE INVENTION

5 The present invention relates to data processing in financial institutions. More particularly, the invention relates to system and method for AI (artificial intelligence) based data processing for limits management in banks or other financial institutions.

BACKGROUND

10 In financial institutions like banks while onboarding a customer and during subsequent interactions with them multiple factors are assessed to determine risks involved. Multiple parameters are assessed for each type of transaction with a customer. The bank performs multiple checks to ascertain if a customer transaction involves risk based on the internal policy limits of the banks to manage banking accounts in any country.

15 Depending on the customer profile, the nature of transaction, the attributes related to facilities or location, the risk criteria differs across customers as numerous operational and business environments are associated with diverse level of risk. The existing systems for risk assessment, due to stiff approach and coupled with manual interventions, do not accurately handle the dynamism of changes that occur in operation and business. For optimum risk mitigation, the changes in real time environments and their impact on multiple functions are important criteria to determine the risk involved. Moreover, every bank sets the policy limits based on such risk factors and appropriate determination of such risks to assess a required transaction is essential for enabling the bank to function properly.

25 Further, the risk assessment based on policy limits may be a time-consuming exercise which may impact the customer service and thereby lead to loss of customer for the bank. Any banking institute invests lot of time and money in marketing to try and increase the customer base but at the same time, banks need to ensure the risk assessment for every customer is appropriate to avoid losses later. The banks always strive to strike a balance in determining the risks and that too in least possible time to ensure success.

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Manual determination of affected limits for Policy Limits or No Single Constituent Limits is time consuming, non-integrated, prone to factual errors and miss-out parameters or dimensions, lag time in recording and data retrieve in the absence of a common, coherent platform.

- 5 In view of the above, there exists a need of improved systems and methods that overcome the shortcomings associated with existing technologies and prior arts.

SUMMARY OF THE INVENTION

- 10 Accordingly, the present invention provides a data processing method for limit management in a financial institution. The method includes the steps of receiving by a processor at least one entity data attributes; receiving a selection of a facility data attributes based on requirement of at least one entity; analyzing a set of data models stored in a data model database to identify at least one model for processing the received entity data attributes and facility data attributes;
15 processing the received entity data attributes, facility data attributes and a set of associated parameters of the facility data based on the at least one identified data model for determining the requirement of the at least one entity; and AI based processing of a data matrix and the identified data model to determine by a controller at least one limit set for processing the requirement wherein the data matrix includes entity data attributes and facility data attributes.

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- In an embodiment, the present invention provides a system for limit management in financial institution. The system includes an electronic user interface configured for operating on a limit management application, at least one entity database configured for storing a plurality of entity data attributes and a set of associated parameters of the entity data, at least one facility database
25 configured for storing a plurality of facility data attributes and a set of associated parameters of the facility data and a controller encoded with instructions enabling the controller to function as a bot wherein the controller is configured to perform functions of analyzing a set of data models stored in a data model database to identify at least one model for processing the received entity data attributes and facility data attributes; processing the received entity data attributes,
30 facility data attributes and a set of associated parameters of the facility data based on the at least one identified data model for determining the requirement of the at least one entity. The system includes a processor coupled to the controller for AI based processing of a data matrix

and the identified data model to determine at least one limit set for processing the requirement wherein the data matrix includes entity data attributes and facility data attributes.

In an embodiment, the present invention provides a computer-readable non-transitory storage medium storing executable program instructions for data processing for limits management in financial institution by a configurable application which when executed by a computer causes the computer to perform operations as described above.

DESCRIPTION OF THE DRAWINGS

These and other attributes of the present invention are described with respect to the following drawings in which:

Fig. 1 shows a system architecture of data processing for limits management in accordance with an embodiment of the present invention.

Fig. 2 shows a structural layer architecture of the data processing for limits management in financial institutions in accordance with an embodiment of the present invention.

Fig. 3 shows a flowchart depicting a data processing method for limit management in financial institution in accordance with an embodiment of the present invention.

DESCRIPTION OF THE INVENTION

Various embodiment of the present invention provides system and method of data processing for limits management in a financial institution. The following description provides specific details of certain embodiments of the invention illustrated in the drawings to provide a thorough understanding of those embodiments. It should be recognized, however, that the present invention can be reflected in additional embodiments and the invention may be practiced without some of the details in the following description.

The various embodiments including the example embodiments are described more fully with reference to the accompanying drawings, in which the various embodiments of the invention

are shown. The invention may, however, be embodied in different forms and should not be construed as limited to the embodiments set forth herein. Rather, these embodiments are provided so that this disclosure is thorough and complete, and fully conveys the scope of the invention to those skilled in the art. In the drawings, the sizes of components may be exaggerated for clarity.

It should be understood that when an element or layer is referred to as being “on” “connected to” or “coupled to” another element or layer, it can be directly on, connected to, or coupled to the other element or layer or intervening elements or layers that may be present. As used herein, the term “and/or” includes any and all combinations of one or more of the associated listed items.

Spatially relative terms, such as “data attribute,” “facility attribute”, “entity data” and the like, may be used herein for ease of description to describe one element or feature's relationship to another element(s) or feature(s) as illustrated in the figures. It should be understood that the spatially relative terms are intended to encompass different orientations of the structure in use or operation in addition to the orientation depicted in the figures.

Embodiments described herein refer to plan views and/or cross-sectional views by way of ideal schematic views. Accordingly, the views may be modified depending on simplistic assembling or manufacturing technologies and/or tolerances. Therefore, example embodiments are not limited to those shown in the views but include modifications in configurations formed on basis of assembling process. Therefore, regions or regions of elements exemplified in the figures have schematic properties and shapes, and do not limit the various embodiments including the example embodiments.

The subject matter of example embodiments, as disclosed herein, is described with specificity to meet statutory requirements. However, the description itself is not intended to limit the scope of this patent. Rather, the inventors have contemplated that the claimed subject matter might also be embodied in other ways, to include different features or combinations of features similar to the ones described in this document, in conjunction with other technologies. Generally, the various embodiments including the example embodiments relate to system and method of data processing for limits management in financial institutions.

Referring to Fig. 1, a configurable data processing system application architecture 100 for limits management is shown in accordance with an embodiment of the present invention. The system 100 include at least one computing device 110, a server support architecture 120, a data processing and control support architecture/mechanism 130, and a policy limit database 140a. The server support architecture may include server 120a and mainframe 120b. The data processing and control support architecture/mechanism 130 may include a processor 130a and a controller 130b. The system may include a data model database 140b.

In an exemplary embodiment, the application has the list of parameters, its reference values, data attributes related to customer data and facility data, policy data as underlying seeded data in the policy limit database (140a). This is used by the logic of limit management for processing - by mapping the received input values against these seeded policy data. Any addition or change in parameters/reference values/ in database is made by an interface.

In an embodiment, the at least one entity database is configured for storing a plurality of entity data and a set of associated parameters of the entity data including facility data.

In a related embodiment, a seed data model of the application reconfigures an underlining seeded mapping structure of the application in response to determination of a received data as a new or modified policy data.

In an embodiment the controller is encoded with instructions enabling the controller to function as a bot where the controller is configured to perform functions of analyzing a set of data models stored in the data model database to identify at least one affected limits parameter from the received entity data and seeded policy data for processing the received data and AI based processing of a data matrix to determine by the controller at least one affected limit data, factor, component, sequence and protocol of the application.

In an exemplary embodiment, the affected limit data are customer parameters received as an input and used to arrive at risk determination.

In another embodiment, the components are various parts of limits management application wherein the risk is a composite entity. The application has model identification component, policy limits component and affected attribute component.

- 5 In yet another embodiment, the sequence is the order in which these components interact with each other to arrive at limits management requirement. The protocols or rules are instructions to be followed during presence or absence of certain factors/comboination of factors. The modified factors/ rules for model identification and affected limits are updated and configured using the user interface to these components which then follow a sequence to arrive at risks.
- 10 These components consume the inputs so updated or configured without code change, as methods with relevant integrations and configurable dependencies, are embedded within in the application. Hence, the modified or new inputs which are thus configured are auto identified by the components for data processing for limits management.
- 15 In an example embodiment, the application of the present invention is explained in terms of the exposure. Dimensionally, an exposure may be broadly classified into Customer and Facility attributes. This combination may vary from one exposure to the other. For key dimensions/attributes (such as country of exposure, amortization type and so on...) banks define maximum permissible exposures in line with policy and regulatory guidelines. Front-
- 20 end facility originators would specify for every facility a list of such attributes, in other words, Affected Dimensions. For example: for a Term Loan, the affected dimensions may be:
- a. Country of customer incorporation: Malaysia;
 - b. Customer industry: Iron and Steel Manufacturing;
 - 25 c. Country of facility exposure: Malaysia;
 - d. Facility Tenor: 10 year; Amortization type: Balloon payment, etc.

The data processing system and method of the present invention accepts these attributes and compares them with attributes on which bank has set limits on.

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In an exemplary embodiment, the Policy limits may be composed of several levels in a hierarchy (or definition). Assuming there are three Affected Dimensions, an Affected Limits algorithm parses through all combinations to determine list of policy limit definitions which

need to be checked/updated for availability of limits, without any manual intervention. The result of each Affected Limit check would be to state broadly, if limits are available per each Affected Limit to grant new facilities (and update) or not, in record time. To perform the same manual check per facility request at several times a day is time inefficient and prone to errors.

- 5 The Affected Limits Determination algorithm is executed within the limits management application, with the result sent back to the front-end origination system requesting this dynamic, automated check. Such origination systems may need to provide for capability to send attributes and display results through the API built in limits management application.
- 10 In an embodiment of the invention, the processor is coupled to the controller for reconfiguring the set of associated parameters, the set of data models and the data matrix for determination of affected limit of the at least one entity based on the pre-set policy limits of the financial institutions.
- 15 In an embodiment, the system 100 includes an electronic user interface configured for operating the system to determine affected limits.

In an example embodiment the server 120a may include electronic circuitry for enabling execution of various steps by the processor. The electronic circuitry may have various elements including but not limited to a plurality of arithmetic logic units (ALU) and floating-point Units (FPU), and/or the equivalents thereof. The ALU enables processing of binary integers to assist in generating a plurality of data models to be stored in the data model database 140 to identify at least one data model for processing the received entity data and AI based processing of the data matrix and the identified data model to determine affected limits. In an example embodiment the server electronic circuitry, includes at least one arithmetic logic unit, floating point units (FPU), other processors, memory, storage devices, high-speed interfaces connected through buses for connecting to memory and high-speed expansion ports, and a low speed interface connecting to low speed bus and storage device. Each of the components of the electronic circuitry, are interconnected using various busses, and may be mounted on a common motherboard or in other manners as appropriate. The processor can process instructions for execution within the server 120a, including instructions stored in the memory or on the storage devices to display graphical information for a GUI on an external input/output device, such as display coupled to high speed interface. In other implementations, multiple

processors and/or multiple busses may be used, as appropriate, along with multiple memories and types of memory. Also, multiple servers may be connected, with each server providing portions of the necessary operations (e.g., as a server bank, a group of blade servers, or a multi-processor system).

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The Processor 130a may communicate with a user through a control interface and display interface coupled to a display. The display may be, for example, a TFT LCD (Thin-Film-Transistor Liquid Crystal Display) or an OLED (Organic Light Emitting Diode) display, or other appropriate display technology. The display interface may comprise appropriate circuitry for driving the display to present graphical and other information to an entity/user. The control interface may receive commands from a user and convert them for submission to the processor. In addition, an external interface may be provided in communication with processor 130a, so as to enable near area communication of device with other devices. External interface may be suitable, for example, for wired communication in some implementations, or for wireless communication in other implementations, and multiple interfaces may also be used.

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The database 140a is part of a data storage support architecture 140 that may include memory units that may be a volatile, a non-volatile memory or memory may also be another form of computer-readable medium, such as a floppy disk device, a hard disk device, an optical disk device, a tape device, a flash memory or other similar solid state memory device, or an array of devices, including devices in a storage area network or other configurations.

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In an embodiment, the artificial intelligence-based AI engine is configured for processing a plurality of data models associated with the entity data and policy data for determining the affected limits.

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In an embodiment, the system of the present invention includes a natural language processing (NLP) server configured for processing the protocols based on the identified data models to determine the affected limits.

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In an embodiment, the user interface and an underlying logic of the affected limits application is based on the seeded mapping wherein on introduction of the new or modified policy data the system automatically reconfigures the underlining seeded mapping structure of the application

to include the impacted limits factors, the components, the sequence and the protocol for determination of the affected limits for an entity.

In an embodiment, the application functions on seeded data and generates mapping structures or codes on basis of the seeded data thereby enabling real time processing of received entity data within the application upon receipt of new or modified data.

In an embodiment, a limit management algorithm would ascertain the affected dimensions, to then look for limits based on such dimension(s) in a global data repository of limits. Information is readily retrievable and is expected to determine limits position quickly. Algorithm traverses through each of the affected limits to ascertain which limits have to be considered for subsequent actions. Affected Limits are determined based on unique customer and facility attributes. These may vary from regions or systems which originate facilities. Some attributes may change, or new ones may come in over the life of customer's association/facilities with the bank. Since the affected Limit Determination algorithm uses customer and facility attributes, the system parses through a number of predefined limits looking to determine if the list of attributes passed to it are present in each of such limit definitions. Output of this service would be used in subsequent limit management steps.

In an advantageous aspect, the affected Limits Determination algorithm would be highly configurable, callable on demand, scalable, not coded to each source system, country, market or measure. Code would not have to change when attributes are added or changed. The algorithm may be used to prompt additional limit definitions which may also have to be included as part of the determination. This algorithm expedites the retrieve and update capability across all Policy or No Single Constituent Limits.

Referring to Fig. 2, a structural layer diagram 200 depicting a limit determination system is provided in accordance with an embodiment of the present invention. The system layer includes web layer 210, service layer 220 and repository layer 230.

In another embodiment, protocols/rules can be defined by user interface for the rule engine component to consume. The intermediate rules, if any, during computation of affected limits

are executed within the logic of limits calculation. Once the computation based on policy level rules is complete, customer level rules (if any) are executed by rule engine component.

Referring to Fig. 3, a flowchart 300 depicting a data processing method for limit management in financial institution is provided in accordance with an embodiment of the present invention. The method includes the step of (S310) receiving by a processor at least one entity data attributes; (S320) receiving a selection of a facility data attributes based on requirement of at least one entity; (S330) analyzing a set of data models stored in a data model database to identify at least one model for processing the received entity data attributes and facility data attributes; (S340) processing the received entity data attributes, facility data attributes and a set of associated parameters of the facility data based on the at least one identified data model for determining the requirement of the at least one entity; and (S350) AI based processing of a data matrix and the identified data model to determine by a controller at least one limit set for processing the requirement wherein the data matrix includes entity data attributes and facility data attributes.

In an embodiment, a new or modified policy data impacts the assessment based on entity data or new associated parameter of the data.

In an embodiment, the received data and associated parameters are compared with a set of stored policy limits data to determine if the received data to determine risks and decide approval or rejections.

In an embodiment, for determining the data as a new or modified data, the received data is identified, sorted, classified and analyzed as part of comparison with the set of stored Policy data.

In an embodiment, the method of the present invention includes generating the data matrix that enables identification of the affected data, the components, the sequence and triggers the protocols to process the received data for determining the affected limits.

In an embodiment, the method of the invention includes storing a set of rules or protocols in a memory to be executed by an AI engine coupled to a processor for generating a plurality of

data models associated with the entity data to identify the at least one model for limit management.

In some implementations, the machine learning data model is configured to map entity data and data models with data processing protocol to compute affected limits. For example, output generated over the model may provide an indication of whether a particular object or class of objects is present, and optionally user instructions. In some implementations, the machine learning model is configured to map new or modified Policy data for determining limits. Accordingly, in those implementations a single pass over a single machine learning model may be utilized to detect whether each of multiple objects is present.

It should be apparent that different aspects of the description provided above may be implemented in many different forms of software, firmware, and hardware in the implementations illustrated in the figures. The actual software code or specialized control hardware used to implement these aspects is not limiting of the invention. Thus, the operation and behavior of these aspects were described without reference to the specific software code—it being understood that software and control hardware can be designed to implement these aspects based on the description herein.

In one example embodiment, the customer parameters with facility values are the data fed to the application, which then utilizes this input data to arrive at an appropriate data model to assess affected limit management. The processor further filters these input data according to the data dependencies of the identified model and arrives at the results for the factors based on the seeded mapping in data base. The method for limit management for the entity is as per the mathematical expressions linked to the model, factors and groups of factors, which can involve data received in multiple layers. The methods are designed to handle input data received in various granularity as well. Multi-level rule engine integration utilizes the required input data to handle specific scenarios. Model level configuration of seeded data for values in case of exceptional scenarios is provided along with relevant dependencies. Assimilation of these components in sequence succors to arrive at output of the application, which is risk rating of the customer. The input, processing and output data is further stored in database. The system determination of entity data as an input is processed with policy limit levels and threshold to arrive at affected limits.

In an exemplary embodiment, the system and method computes affected limits for a customer based on definable factors. It considers multiple parameters and their interdependencies for computation. Various protocols are imbibed in the process to arrive at the affected limits. Thus, multiple parameters of varied customers are factored-in, thereby catering to diverse requests to arrive at affected limits. This allows the bank to determine the level of risk they expose themselves to by arriving at affected limits with no manual intervention. The parameters, rules and dependencies considered for this computation are fully definable. Any future change of these underlying factors and rules used for computation can be absorbed by this service without code change. The invention provides flexibility and ease of use of the application coupled with a design which reflects risk in its entirety.

In an advantageous aspect, the system and method of the present invention is robust to absorb multiple real time changes and function without interruptions in case of update of factors as well as their interdependencies. The real time changes are due to modification in external factors or regulatory requirements. Moreover, the interdependencies of the entity parameters considered for determination of affected limits are also subject to change, leading to an expected variation in the limits.

The invention provides a configurable application, which allows configuration of multiple models of affected limits. The variation of interdependencies and its effect on the limits is handled by protocols. New models and the protocols are configured at any juncture, thereby allowing addition or update of entity customer parameters and its interdependencies dynamically.

Further, certain portions of the invention may be implemented as a “component” or “system” that performs one or more functions. These components/systems may include hardware, such as a processor, an ASIC (Application Specific Integrated Circuit), or a FPGA (Field Programmable Gate Array), or a combination of hardware and software.

The word “exemplary” is used herein to mean “serving as an example.” Any embodiment or implementation described as “exemplary” is not necessarily to be construed as preferred or advantageous over other embodiments or implementations.

No element, act, or instruction used in the present application should be construed as critical or essential to the invention unless explicitly described as such. Also, as used herein, the article “a” and “one of” is intended to include one or more items. Further, the phrase “based on” is
5 intended to mean “based, at least in part, on” unless explicitly stated otherwise.

Each of the above identified processes corresponds to a set of instructions for performing a function described above. The above identified programs or sets of instructions need not be implemented as separate software programs, procedures or modules, and thus various subsets
10 of these modules may be combined or otherwise re-arranged in various embodiments. For example, embodiments may be constructed in which steps are performed in an order different than illustrated, steps are combined, or steps are performed simultaneously, even though shown as sequential steps in illustrative embodiments. Also, the terminology used herein is for the purpose of description and should not be regarded as limiting. The use of “including,”
15 “comprising,” “having,” “containing” and variations thereof herein, is meant to encompass the items listed thereafter and equivalents thereof as well as additional items.

The above-described embodiments of the present invention may be implemented in any of numerous ways. For example, the embodiments may be implemented using various
20 combinations of hardware and software and communication protocol(s). Any standard communication or network protocol may be used and more than one protocol may be utilized. For the portion implemented in software, the software code may be executed on any suitable processor or collection of processors, whether provided in a single computer or distributed among multiple computers. Such processors may be implemented as integrated circuits, with
25 one or more processors in an integrated circuit component, or any other suitable circuitry. Further, it should be appreciated that a computer may be embodied in any of a number of forms, such as a rack-mounted computer, a desktop computer, a laptop computer, single board computer, micro-computer, or a tablet computer. Additionally, a computer may be embedded in a device not generally regarded as a computer but with suitable processing capabilities,
30 including a Personal Digital Assistant (PDA), a smart phone or any other suitable portable or fixed electronic device.

Also, the various methods or processes outlined herein may be coded as software that is executable on one or more processors that employ any one of a variety of operating systems or platforms. Additionally, such software may be written using any of a number of suitable programming languages and/or programming or scripting tools or a combination of programming languages, and also may be compiled as executable machine language code or intermediate code that is executed on a framework or a virtual machine. In this respect, the invention may be embodied as a computer readable storage medium (or multiple computer readable media) (e.g., a computer memory, one or more floppy discs, compact discs (CD), optical discs, digital video disks (DVD), magnetic tapes, flash memories, circuit configurations in Field Programmable Gate Arrays or other semiconductor devices, or other tangible computer storage medium) encoded with one or more programs that, when executed on one or more computers or other processors, perform methods that implement the various embodiments of the invention discussed above. As is apparent from the foregoing examples, a computer readable storage medium may retain information for a sufficient time to provide computer-executable instructions in a non-transitory form.

The terms “program” or “software” are used herein in a generic sense to refer to any type of computer code or set of computer-executable instructions that may be employed to program a computer or other processor to implement various aspects of the present invention as discussed above. Additionally, it should be appreciated that according to one aspect of this embodiment, one or more computer programs that when executed perform methods of the present invention need not reside on a single computer or processor but may be distributed in a modular fashion amongst a number of different computers or processors to implement various aspects of the present invention. Computer-executable instructions may be in many forms, such as program modules, executed by one or more computers or other devices. Also, data structures may be stored in computer-readable media in any suitable form. Any suitable mechanism may be used to establish a relationship between information in fields of a data structure, including the use of pointers, tags, or other mechanisms that establish relationship between data elements.

It is to be understood that the above-described embodiments are only illustrative of the application of the principles of the present invention. The illustrative discussions above are not intended to be exhaustive or to limit the invention to the precise forms disclosed. Various modifications and alternative applications may be devised by those skilled in the art in view of

the above teachings and without departing from the spirit and scope of the present invention and the following claims are intended to cover such modifications, applications, and embodiments.

CLAIMS

1. A data processing method for limit management in a financial institution, the method comprises:

5 receiving by a processor at least one entity data attributes;
 receiving a selection of a facility data attributes based on requirement of at least one entity;

 analyzing a set of data models stored in a data model database to identify at least one model for processing the received entity data attributes and facility data attributes;

10 processing the received entity data attributes, facility data attributes and a set of associated parameters of the facility data based on the at least one identified data model for determining the requirement of the at least one entity;

 AI based processing of a data matrix and the identified data model to determine by a controller at least one limit set for processing the requirement wherein the data matrix
15 includes entity data attributes and facility data attributes; and

 functioning a limit management application, on a seeded data and generating mapping structures or codes on basis of the seeded data thereby enabling real time processing of the received entity data attributes within the limit management application upon receipt of new or modified policy data.

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2. The method of claim 1 wherein the entity data attributes includes location of entity, business or profession of entity and age of entity.

3. The method of claim 1 wherein the facility data attributes includes data related to the
25 requirement of the entity like for term loan facility the data attributes are location, facility tenor and amortization type.

4. The method of claim 1 wherein the received entity data attributes, facility data attributes and associated parameters are compared with a set of limit data stored in a limit database
30 to process the requirement.

5. The method of claim 3 wherein for processing the requirement, the received entity data attribute, facility data attribute is identified, sorted, classified and analyzed as part of comparison with the set of stored limit data.
- 5 6. The method of claim 1 further comprises the step of generating the data matrix that enables identification of the limit data to process the requirement.
7. The method of claim 1 further comprises storing a set of rules or protocols in a memory to be executed by an AI engine coupled to a processor for generating a plurality of data models associated with the entity data to identify the at least one model.
- 10 8. A data processing system for limit management in a financial institution, the system comprises:
- an electronic user interface configured for operating on a limit management application;
- 15 at least one entity database configured for storing a plurality of entity data attributes and a set of associated parameters of the entity data;
- at least one facility database configured for storing a plurality of facility data attributes and a set of associated parameters of the facility data;
- 20 a controller encoded with instructions enabling the controller to function as a bot wherein the controller is configured to perform functions of:
- analyzing a set of data models stored in a data model database to identify at least one model for processing the received entity data attributes and facility data attributes;
- 25 processing the received entity data attributes, facility data attributes and a set of associated parameters of the facility data based on the at least one identified data model for determining the requirement of the at least one entity; and
- a processor coupled to the controller for AI based processing of a data matrix and the identified data model to determine at least one limit set for processing the requirement wherein the data matrix includes entity data attributes and facility data attributes;
- 30 characterized in that

the limit management application functions on a seeded data and generates mapping structures or codes on basis of the seeded data thereby enabling real time processing of the received entity data attributes within the limit management application upon receipt of new or modified policy data.

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9. The system of claim 8 wherein the artificial intelligence-based AI engine is configured for processing a plurality of data models associated with the entity data for identifying a data model to process the requirement based on the data matrix.

10 10. The system of claim 8 further comprises a natural language processing (NLP) server configured for processing protocols based on the identified data models to determine the limit.

11 11. The system of claim 8 wherein the user interface and an underlying logic of the limit management application is based on the seeded mapping wherein on introduction of any new or modified data the system automatically reconfigures the underlining seeded mapping structure of the application.

12 12. The system of claim 8 wherein the data matrix enables identification of the limit data to process the requirement.

13 13. The system of claim 8 wherein a set of rules or protocols is stored in a memory to be executed by the AI engine coupled to a processor for generating a plurality of data models associated with the entity data to identify the at least one model.

14 14. A computer-readable non-transitory storage medium storing executable program instructions for data processing for limit management in a financial institution which when executed by a computer cause the computer to perform operations comprising:
30 receiving by a processor at least one entity data attributes;
receiving a selection of a facility data attributes based on requirement of at least one entity;

analyzing a set of data models stored in a data model database to identify at least one model for processing the received entity data attributes and facility data attributes;

processing the received entity data attributes, facility data attributes and a set of associated parameters of the facility data based on the at least one identified data model for determining the requirement of the at least one entity;

AI based processing of a data matrix and the identified data model to determine by a controller at least one limit set for processing the requirement wherein the data matrix includes entity data attributes and facility data attributes; and

functioning a limit management application, on a seeded data and generating mapping structures or codes on basis of the seeded data thereby enabling real time processing of the received entity data attributes within the limit management application upon receipt of new or modified policy data.

15. The computer-readable storage medium of claim 14 further comprises executable program instructions in a memory to be executed for generating a plurality of data models.

16. The computer-readable storage medium of claim 15 further storing instructions that cause the processor to automatically add storage for storing the data models.