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(54) **SYSTEM AND METHOD FOR ASSIGNING A LINE OF CREDIT TO A CREDIT CARD ACCOUNT**

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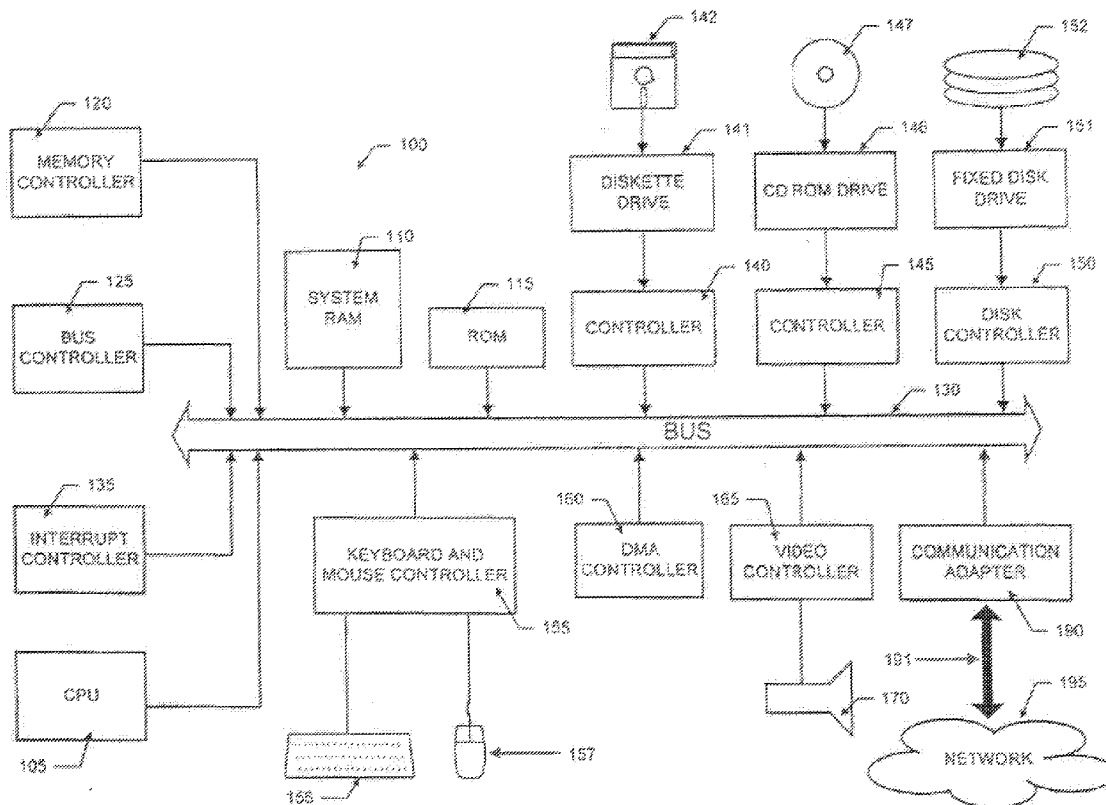(73) Assignee: **CAPITAL ONE FINANCIAL CORPORATION**, McLean, VA (US)

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(57) **ABSTRACT**

A system assigns a credit limit to an account for a credit card of a card holder based on whether the card holder poses an acceptable risk. The system activates an account for the credit card, assigns an initial credit limit well below a tolerance level to the account, develops credit history data based on account activity during predetermined short intervals of time, evaluates the credit history data after each of the predetermined short time intervals, and determines whether to increase the credit limit of the account based on the evaluated credit history.

FIG. 1

200

ACCOUNT NUMBER 1	212
CREDIT CARD LIMIT	214
CREDIT HISTORY DATA	216
OTHER IDENTIFYING INFO	219

210

| ACCOUNT NUMBER 2 |
| CREDIT CARD LIMIT |
| CREDIT HISTORY DATA |
| OTHER IDENTIFYING INFO |

220

⋮

| ACCOUNT NUMBER N |
| CREDIT CARD LIMIT |
| CREDIT HISTORY DATA |
| OTHER IDENTIFYING INFO |

230

FIG. 2

216

INFORMATION ON USE OF CREDIT LIMIT
TRANSACTION DATA
CASH ADVANCE DATA
PAYMENT INFORMATION

310

320

330

340

FIG. 3

START

ACTIVATE ACCOUNT — 410

ASSIGN INITIAL LOW CREDIT LIMIT — 420

WAIT PREDETERMINED TIME INTERVAL — 430

GENERATE SCORE FROM CREDIT HISTORY DATA — 440

DOES SCORE WARRANT CREDIT INCREASE? — 450   NO

YES

INCREASE CREDIT LIMIT — 460
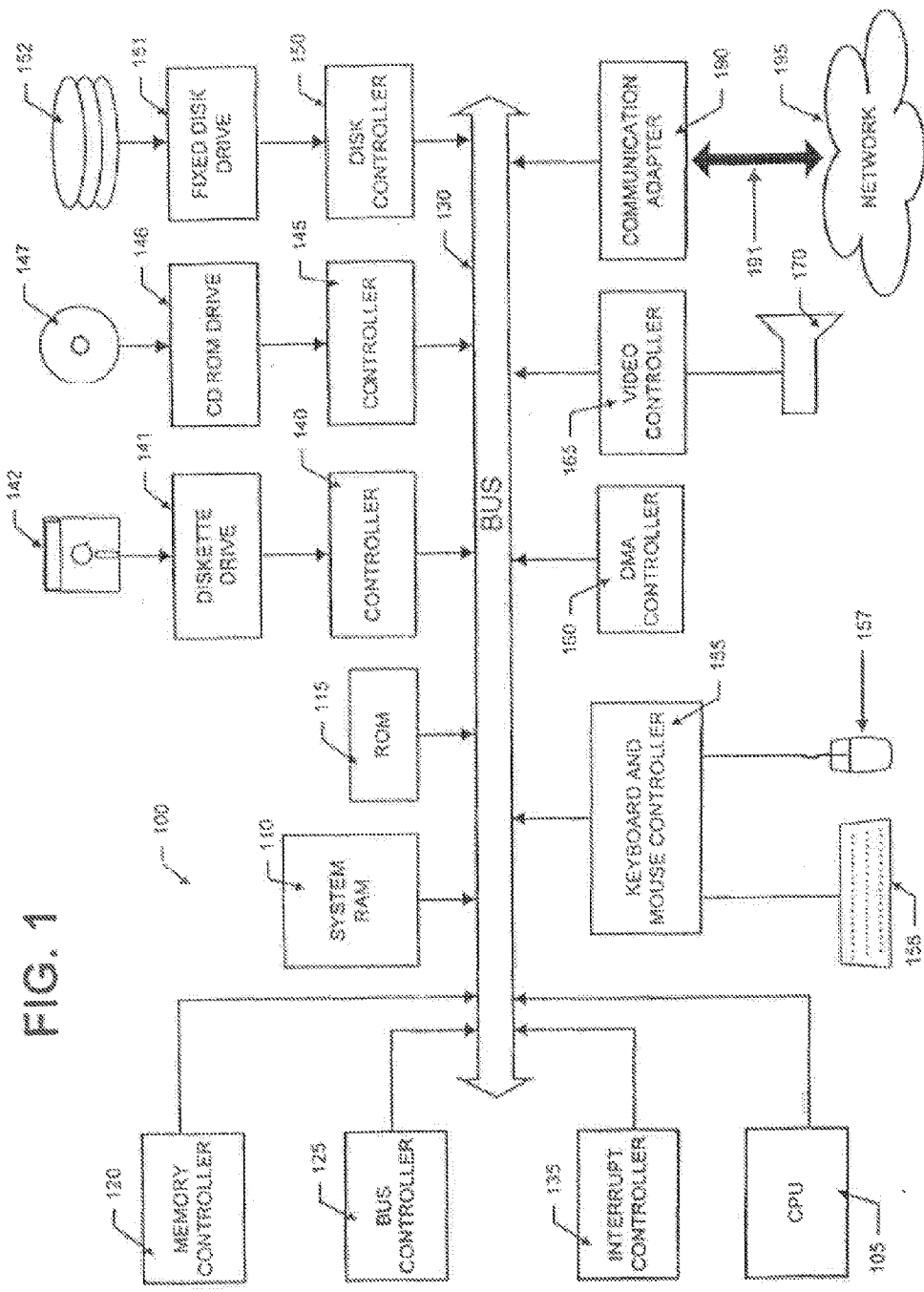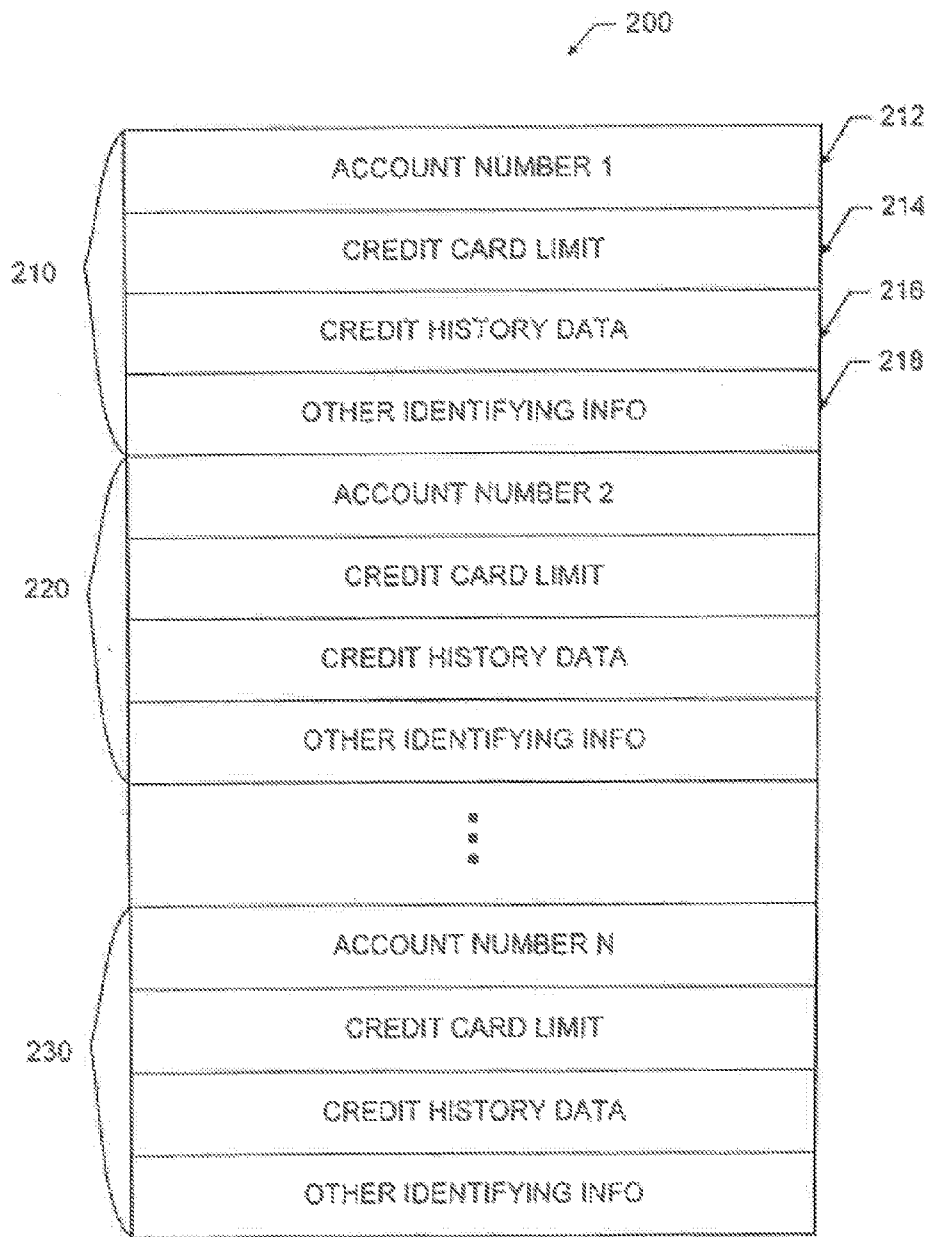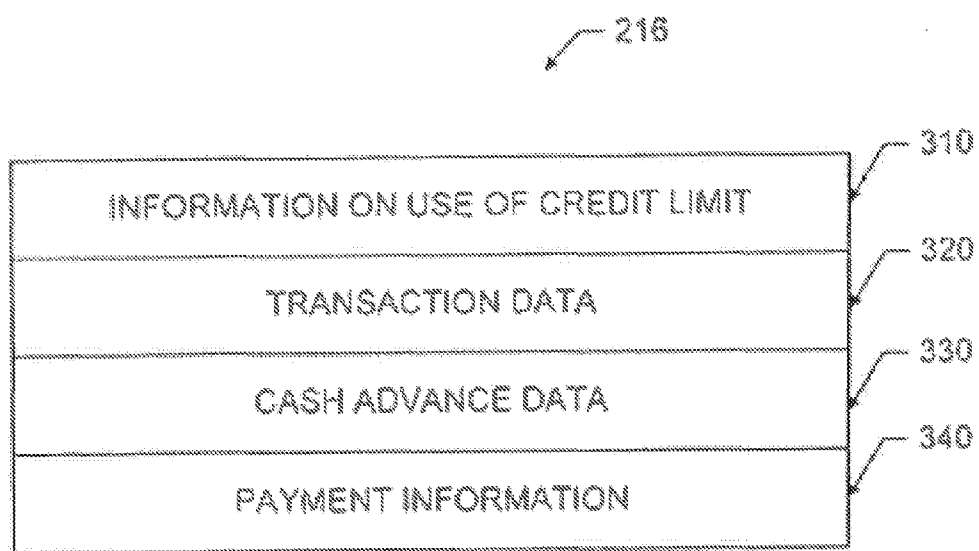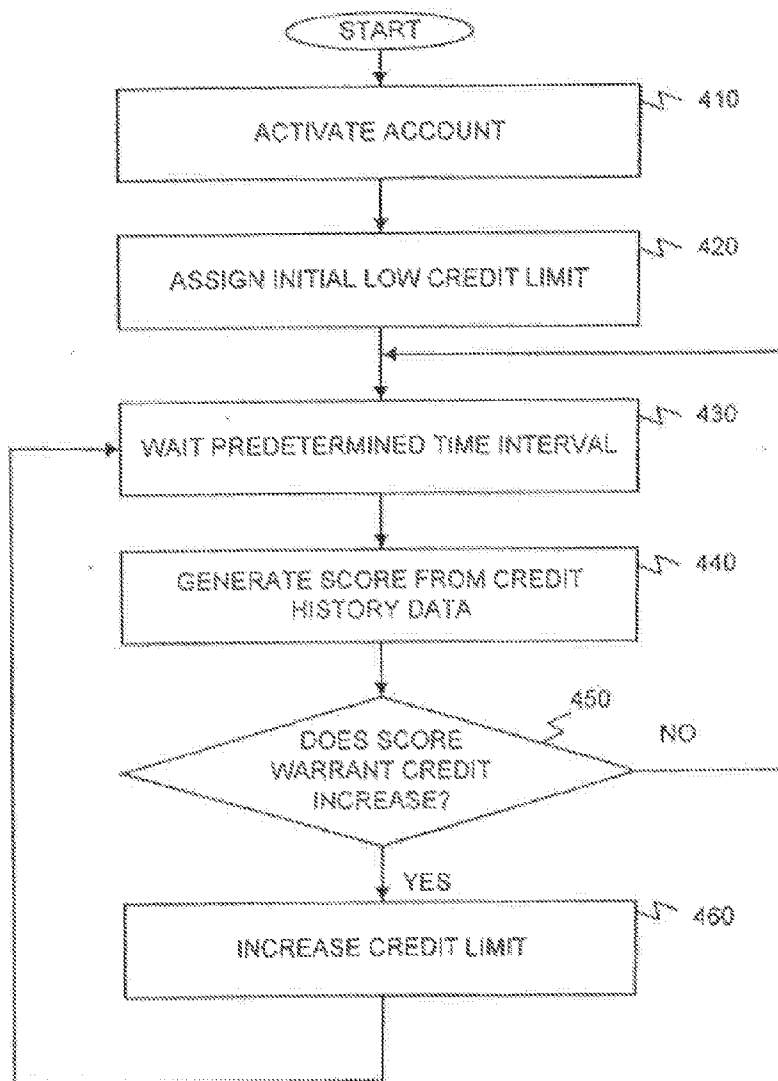
FIG. 4

SYSTEM AND METHOD FOR ASSIGNING A LINE OF CREDIT TO A CREDIT CARD ACCOUNT

FIELD OF THE INVENTION

[0001] The present invention is directed to credit card systems and, more particularly, to systems and methods that reduce the risk to credit card issuers by providing low initial credit limits and frequent evaluations of their credit card holders.

BACKGROUND OF THE INVENTION

[0002] Conventional systems assign credit limits to customers in a two step process. First, a credit card issuer identifies potential customers based on information from credit bureaus, such as past credit history, prior declarations of bankruptcy, and the like. Once the issuer identifies the potential customers, it offers its credit card to them. The credit card offer typically extends high limits with its credit card accounts to the potential customers, such as $10,000-20,000. The issuer usually selects a credit limit equal to a tolerance level (i.e., an amount the issuer can afford to risk on a potential customer). The issuer then issues credit cards to those customers who accept the offer.

[0003] Second, after some long period of time, such as one to two years, the issuer considers whether to increase a customer's credit card limit by studying the customer's past performance. If the customer has made timely payments in the past, for example, the issuer usually increases the credit limit. Otherwise, the issuer holds the credit limit at its current level.

[0004] Two problems exist with the conventional systems. First, the credit card issuer typically grants high initial credit limits based solely on credit bureau information. While not questioning the accuracy of this information, past performance does not dictate future conduct. In other words, even a credit card holder with an exemplary credit record might use all of the initial credit without making any payments. As a result, the issuer would need to take action to recover its money, an act that might be futile if the card holder files for bankruptcy.

[0005] A second problem involves the long time period before granting a credit limit increase. Because the initial credit limit is typically large, credit card issuers usually wait a long period of time before even considering a credit limit increase. This might result in a loss of customers, if customers requests for credit limit increases are denied.

[0006] Therefore, a need exists for assigning credit limits that minimize the risk to credit card issuers and that provide for rapid evaluations and credit limit increases.

SUMMARY OF THE INVENTION

[0007] Systems and methods consistent with the present invention address this need by initially assigning low credit limits to new credit card accounts and by evaluating and increasing the credit limits within relatively short periods of time.

[0008] A system consistent with the present invention assigns a credit limit to a credit card issued to a card holder based on whether the card holder poses an acceptable risk. The system activates an account for the credit card, assigns an initial credit limit well below a tolerance level to the account, develops credit history data based on account activity during predetermined short intervals of time, evaluates the credit history data after each of the predetermined short time intervals, and determines whether to increase the credit limit of the account based on the evaluated credit history.

BRIEF DESCRIPTION OF THE DRAWINGS

[0009] The accompanying drawings, which are incorporated in and constitute a part of this specification, illustrate an embodiment of the invention and, together with the description, explain the invention. In the drawings:

[0010] FIG. 1 is a diagram of a computer system consistent with the present invention;

[0011] FIG. 2 is a diagram of contents of a memory consistent with the present invention;

[0012] FIG. 3 is a diagram of credit history data in the memory of FIG. 2; and

[0013] FIG. 4 is a flowchart of processing for assigning and evaluating a credit limit in a manner consistent with the present invention.

DETAILED DESCRIPTION

[0014] The following detailed description of the invention refers to the accompanying drawings. The same reference numbers in different drawings identify the same or similar elements. Also, the following detailed description does not limit the invention. Instead, the scope of the invention is defined by the appended claims and equivalents.

[0015] Systems and methods consistent with the present invention protect credit card issuers while addressing the needs of its card holders by initially assigning low credit limits to new credit card accounts and evaluating and increasing the limits at regular time intervals. This limits the risk to issuers until such time that they can learn more about the credit card holders while, on the other hand, permitting credit card holders to build a favorable credit history.

System Description

[0016] FIG. 1 is a diagram of a system architecture for a computer system with which the invention may be implemented. The exemplary computer system of FIG. 1 is for descriptive purposes only. Although the description may refer to terms commonly used in describing particular computer systems, such as an IBM PS/2 personal computer, the description and concepts equally apply to other computer systems, such as network computers, workstations, and even mainframe computers having architectures dissimilar to FIG. 1.

[0017] Computer system 100 includes a central processing unit (CPU) 105, which may be implemented with a conventional microprocessor, a random access memory (RAM) 110 for temporary storage of information, and a read only memory (ROM) 115 for permanent storage of information. A memory controller 120 controls the RAM 110.

[0018] A bus 130 interconnects the components of computer system 100. A bus controller 125 controls the bus 130. An interrupt controller 135 receives and processes various interrupt signals from the system components.

[0019] Mass storage may be provided by diskette 142, CD ROM 147, or hard drive 152. Data and software may be exchanged with computer system 100 via removable media such as diskette 142 and CD ROM 147. Diskette 142 inserts into diskette drive 141 which, in turn, connects to bus 130 via a controller 140. Similarly, CD ROM 147 inserts into CD ROM drive 146 which, in turn, connects to bus 130 via con-

2

troller **145**. Hard disk **152** is part of a fixed disk drive **151** that connects to bus **130** by controller **150**.

[0020] User input to computer system **100** may be provided by a number of devices. For example, a keyboard **156** and mouse **157** connect to bus **130** via controller **155**. It will be obvious to those reasonably skilled in the art that other input devices, such as a pen, a tablet, or speech recognition mechanisms, may connect to bus **130** and an appropriate controller and software, as required. A direct memory access (DMA) controller **160** performs direct memory access to RAM **110**. User output may be generated by a video controller **165** that controls video display **170**.

[0021] Computer system **100** also includes a communications adaptor **190** that allows the system to be interconnected to additional computing resources via a local area network (LAN) or a wide area network (WAN), such as the Internet, schematically illustrated by bus **191** and network **195**. Signals traveling through network **195** can generally be referred to as "carrier waves" that transport information. Although aspects of the present invention are described as being stored in memory in the form of instructions, one skilled in the art will appreciate that those aspects may be stored on other computer-readable media, such as secondary storage devices like hard disks, floppy disks, or CD ROM, or other forms of RAM or ROM, or a carrier wave.

[0022] Operation of computer system **100** is generally controlled and coordinated by operating system software. The operating system controls allocation of system resources and performs tasks, such as memory management, process scheduling, networking, and services, among other things.

[0023] FIG. **2** is a diagram of memory **200** consistent with the present invention. Memory **200** may include system RAM **110** (FIG. **1**), but may alternatively include other types of memories including any of the memories shown in FIG. **1**.

[0024] Memory **200** includes a database that stores information regarding several accounts **210**, **220**, and **230**. Account **210**, for example, includes an account number **212**, a credit card limit **214**, credit history data **216**, and other identifying information **21$**. The account number **212** identifies a credit card account of a card holder. The credit card limit **214** identifies the amount of credit extended to the account. The credit history data **216** includes account history information and will be described below with reference to FIG. **3**. The other identifying information **218** includes information regarding the card holder, such as the card holder's name, address, and telephone number, and other similar identifying information.

Exemplary Credit History Data

[0025] FIG. **3** is a diagram of credit history data **216** consistent with the present invention. The credit history data **216** includes information on the use of the extended credit limit **310**, transaction data **320**, cash advance data **330**, and payment information **340**. Of course, the account data may include additional information regarding the credit history of the card holder.

[0026] The information on the use of the extended credit limit **310** includes data regarding the manner in which the card holder has used the given credit limit, such as whether the card holder used all or most of the credit limit and how quickly the card holder did this after receiving the credit card. A card holder that quickly uses most of the extended credit limit may pose a greater credit risk than a card holder that uses only a portion of the extended credit limit. The transaction

data **320** includes data regarding the types of transactions for which the credit card was used by the card holder. Certain types of transactions may indicate that the card holder poses a credit risk.

[0027] The cash advance data **330** includes data regarding the frequency of any cash advances obtained using the credit card. A large number of cash advances by a card holder may indicate that the card holder poses a credit risk. The payment information **340** includes data regarding the number of late or missed payments by the card holder and the amount of initial payments by the card holder. A card holder that routinely pays late or misses payment poses a credit risk. Also, a card holder that makes only minimum payments also poses a credit risk.

[0028] The credit card issuer uses the credit history data **216** to determine whether to increase a credit limit of an account in a manner described below.

System Operation

[0029] FIG. **4** is a flowchart of processing for assigning a credit limit in a manner consistent with the present invention. The credit card issuer selects potential customers in a manner similar to the way conventional systems make the selection. That is, the issuer identifies potential customers that pose a reasonable risk based on information provided by a credit bureau. For example, the issuer identifies potential customers based on their past credit history, prior declarations of bankruptcy, etc. The issuer then offers its credit card to the potential customers.

[0030] For those customers that accept the offer, the issuer activates new accounts for them [step **410**]. The issuer initially assigns a low credit limit, such as a $1,000 limit, to each account [step **420**]. Unlike the high credit limit assigned by conventional systems, the low credit limit is well below a degree of tolerance (i.e., an amount the issuer can afford to risk on a customer) to minimize the issuer's risk.

[0031] The issuer then waits a predetermined short time interval, such as a two month interval, to collect credit history data corresponding to the accounts [step **430**]. After the predetermined short time interval, the issuer, without human intervention, evaluates the credit history data for each account to generate a score for the account [step **440**]. The issuer generates the score based on one or more of the following information: (1) the manner in which the customer used the given credit limit; (2) the types of transactions for which the customer used the credit card; (3) whether the customer made any cash advances; (4) the number of late or missed payments by the customer; (5) the amount of the initial payments by the customer; (6) credit bureau information; etc.

[0032] From the generated score, the issuer determines whether to increase the credit limit assigned to an account [step **450**]. If the score is above some predetermined threshold, the issuer increases the credit limit assigned to the account by a determined amount [step **460**]. The issuer then waits for another time interval to lapse [step **430**] before it reevaluates the credit history data for each account [step **440**]. If the score is below the predetermined threshold, the issuer denies the credit limit increase and waits for another time interval to lapse [step **430**] before reevaluating the credit history data for each account [step **440**].

[0033] In this manner, the credit card issuer minimizes its risk by keeping the credit limit low until it has time to learn more about the spending habits of the card holder. If the card

holder poses an acceptable risk, as determined at regular intervals, the issuer quickly increases the card holder's credit limit.

[0034] The foregoing description of preferred embodiments of the present invention provides illustration and description, but is not intended to be exhaustive or to limit the invention to the precise form disclosed. Modifications and variations are possible in light of the above teachings or may be acquired from practice of the invention. The scope of the invention is defined by the claims and their equivalents.

1-33. (canceled)

34. A computer-implemented method for managing a credit limit for a credit card issued to a card holder, comprising:

    initiating activation of an account for the credit card;

    assigning an initial credit limit to the account, the initial credit limit being below a tolerance level for the card holder;

    developing credit history data based on the card holder's use of the account during respective predetermined intervals of time, wherein the card holder's use of the account reflects whether the card holder used all or most of the initial credit limit and how quickly the card holder used all or most of the initial credit limit;

    evaluating, by a computer, the developed credit history data after each of the predetermined time intervals; and

    determining, by the computer, whether to increase the credit limit of the account based on the evaluation.

35. The method of claim 34, further comprising:

    obtaining information from a credit bureau regarding the card holder.

36. The method of claim 35, wherein the information from the credit bureau relates to at least one prior declaration of bankruptcy by the card holder.

37. The method of claim 34, wherein the predetermined intervals of time cover a predetermined number of payment cycles reflecting less than one year of the card holder's use of the account.

38. The method of claim 34, wherein the tolerance level is based on an industry standard level of risk associated with the card holder.

39. The method of claim 34, wherein the tolerance level is based on the card holder's credit history.

40. The method of claim 34, wherein a financial service provider issues the credit card and develops the credit history.

41. The method of claim 34, wherein the card holder's use of the account further reflects at least one of: late or missing payments made by the card holder, cash advances requested by the card holder, types of purchase transactions made by the card holder, and the amount of initial payments made by the card holder to the account.

42. The method of claim 34, wherein the card holder's use of the account comprises each transaction made by the card holder with the credit card during the respective predetermined interval of time.

43. The method of claim 34, wherein evaluating the developed credit history data further comprises generating a score based on the card holder's use of the account over each respective predetermined time interval.

44. The method of claim 43, wherein the decision to increase the credit limit of the account is based on the score generated from evaluating the developed credit history.

45. The method of claim 41, wherein the card holder's use of the account further reflects making only minimum payments to the account.

46. A system for managing a credit limit for a credit card issued to a card holder, comprising:

    a memory storing instructions; and

    a processor configured to execute the instructions to:

        initiate activation of an account for the credit card;

        assign an initial credit limit to the account, the initial credit limit being below a tolerance level for the card holder;

        developing credit history data based on the card holder's use of the account during respective predetermined intervals of time, wherein the card holder's use of the account reflects whether the card holder used all or most of the initial credit limit and how quickly the card holder used all or most of the initial credit limit;

        evaluating the developed credit history data after each of the predetermined time intervals; and

        determining whether to increase the credit limit of the account based on the evaluation.

47. The system of claim 46, wherein the card holder's use of the account further reflects at least one of: late or missing payments made by the card holder, cash advances requested by the card holder, types of purchase transactions made by the card holder, and the amount of initial payments made by the card holder to the account.

48. The system of claim 47, wherein the card holder's use of the account is based on each transaction made by the card holder with the credit card during the respective predetermined short interval of time.

49. The system of claim 47, wherein the processor is further configured to:

    evaluate the developed credit history data by generating a score based on the card holder's use of the account over each respective predetermined short time interval; and

    determine whether to increase the credit limit of the account based on the generated score.

50. A non-transitory computer readable medium for managing a credit limit for a credit card issued to a card holder, the medium comprising instructions that, when executed by a processor, cause the processor to perform operations comprising:

    initiating activation of an account for the credit card;

    assigning an initial credit limit to the account, the initial credit limit being below a tolerance level for the card holder;

    developing credit history data based on the card holder's use of the account during respective predetermined intervals of time, wherein the card holder's use of the account reflects whether the card holder used all or most of the initial credit limit and how quickly the card holder used all or most of the initial credit limit;

    evaluating the developed credit history data after each of the predetermined time intervals; and

    determining whether to increase the credit limit of the account based on the evaluation.

51. The non-transitory computer readable medium of claim 50, wherein the card holder's use of the account further reflects at least one of: late or missing payments made by the card holder, cash advances requested by the card holder, types of purchase transactions made by the card holder, and the amount of initial payments made by the card holder to the account.

52. The non-transitory computer readable medium of claim **50**, wherein the card holder's use of the account is based on each transaction made by the card holder with the credit card during the respective predetermined short interval of time.

53. The non-transitory computer readable medium of claim **50**, wherein the processor further generates a score based on the card holder's use of the account over each respective predetermined short time interval, and determines whether to increase the credit limit of the account based on the generated score.

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