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MERCHANT TO MERCHANT LENDING

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“MERCHANT TO MERCHANT LENDING”

VISA

INVENTOR:

HARISH MURALI

TECHNICAL FIELD

[0001] The present subject matter is, in general, related to financial transactions, and particularly, to a method and a system for establishing a merchant-to-merchant lending network by ranking the merchants.

BACKGROUND

[0002] On various personal and professional occasions, people use many Peer-to-Peer (P2P) lending solutions available in the market, where a user lends money, and another user borrows and repays the money. In other words, P2P lending is a form of financial technology that allows people to lend or borrow money from one another without going through a bank. P2P lending is an upcoming trend in fintech that is broadly being adopted, mostly by small and medium-scale merchants. For example, CRED[®] mint and so on.

[0003] However, there is no merchant-to-merchant borrowing/lending facility, in which the merchants can refund the money directly from the sales accounted on the Point-of-Sale (PoS) systems itself.

BRIEF DESCRIPTION OF THE DRAWINGS

[0004] The accompanying drawings, which are incorporated in and constitute a part of this disclosure, illustrate exemplary embodiments and, together with the description, explain the disclosed principles. In the figures, the left-most digit(s) of a reference number identifies the figure in which the reference number first appears. The same numbers are used throughout the figures to reference like features and components. Some embodiments of device or system and/or methods in accordance with embodiments of the present subject matter are now described, by way of example only, and with reference to the accompanying figures, in which:

[0005] **Fig. 1** shows a schematic representation of a merchant-to-merchant lending network that implements embodiments consistent with the present disclosure.

[0006] **Figs. 2** shows a flowchart illustrating the proposed merchant-to-merchant lending process in accordance with some embodiments consistent with the present disclosure.

[0007] **Fig. 3** illustrates a block diagram of an exemplary computer system for implementing embodiments consistent with the present disclosure.

[0008] The figures depict embodiments of the disclosure for purposes of illustration only. One skilled in the art will readily recognize from the following description that alternative embodiments of the structures and methods illustrated herein may be employed without departing from the principles of the disclosure described herein.

DESCRIPTION OF THE DISCLOSURE

[0009] In the present document, the word "exemplary" is used herein to mean "serving as an example, instance, or illustration." Any embodiment or implementation of the present subject matter described herein as "exemplary" is not necessarily to be construed as preferred or advantageous over other embodiments.

[0010] While the disclosure is susceptible to various modifications and alternative forms, specific embodiment thereof has been shown by way of example in the drawings and will be described in detail below. It should be understood, however that it is not intended to limit the disclosure to the particular forms disclosed, but on the contrary, the disclosure is to cover all modifications, equivalents, and alternative falling within the spirit and the scope of the disclosure.

[0011] The terms "comprises", "comprising", or any other variations thereof, are intended to cover a non-exclusive inclusion, such that a setup, device or method that comprises a list of components or steps does not include only those components or steps but may include other components or steps not expressly listed or inherent to such setup or device or method. In other words, one or more elements in a device or system or apparatus preceded by "comprises... a" does not, without more constraints, preclude the existence of other elements or additional elements in the device or system or apparatus.

[0012] The terms "an embodiment", "embodiment", "embodiments", "the embodiment", "the embodiments", "one or more embodiments", "some embodiments", and "one embodiment" mean "one or more (but not all) embodiments of the invention(s)" unless expressly specified otherwise.

[0013] The terms "including", "comprising", "having" and variations thereof mean "including but not limited to", unless expressly specified otherwise.

[0014] The present disclosure relates to a method and system for establishing a merchant-to-merchant lending network to facilitate lending and/or borrowing of money among merchants. The proposed method suggests collecting merchant data from all the participating merchants and ranking the merchants based on net sales value from the Point-of-Sales (PoS) systems owned/used by the merchants. Subsequently, a merchant (for example, merchant B2) is allowed to borrow the money from another merchant (for example, merchant A1) based on the ranking of the merchants. In an embodiment, the borrowing and/or lending money requests from the merchants are sent to Visa's request matcher service, which includes an algorithm to match the lending and the borrowing requests of the merchants. The borrowing merchants are allowed to repay the borrowed money on a periodical repayment arrangement based on percentage of the net PoS sales managed by the borrowing merchant. In an embodiment, Visa's payment network may be used to transfer the funds between the borrowing merchant and the lending merchant, based on the repayment choices chosen by both the merchants.

[0015] **Fig. 1** shows a schematic representation of the proposed merchant-to-merchant lending network that implements embodiments consistent with the present disclosure.

[0016] On various occasions, merchants may wish to lend and/or borrow money in the market. Merchants typically need capital or funding at various times to build, expand, sustain, or save their business. Accordingly, a borrowing merchant may utilize the borrowed money to make purchases and perform other types of financial transactions. In an embodiment, as indicated in the exemplary architecture of Fig. 1, the network may include, without limiting to, a lending merchant 'Merchant 1 101', a borrowing merchant 'Merchant 2 103', a bank associated with the lending merchant 'Bank 1 105', a bank associated with the borrowing merchant 'Bank 2 107', VISA payment server 109, a borrowing request matcher 111 component, a Point-of-Sale (PoS) 113 system associated with the merchants and related PoS sales data 115 and a database that stores merchant profiling 117 information.

[0017] In an embodiment, the banks Bank 1 105 and Bank 2 107 may be part of any financial systems and may, in various embodiments, represent various types of card issuing institutions, such as credit card companies, card sponsoring companies, or third party issuers under contract with financial institutions. The term 'merchant' means any person, entity, distributor system, software and/or hardware that is a provider, broker and/or any other entity in the distribution

chain of goods or services. For example, the merchant may include a grocery store, a retail store, a restaurant, a travel agency, a service provider, an on-line merchant and/or the like.

[0018] In an embodiment, the proposed merchant-to-merchant lending process involves four stages, namely:

Stage 0: Pre-processing (denoted by ‘Yellow’ arrows as shown in Fig. 1)

Stage 1: Request initiation (denoted by ‘Blue’ arrows as shown in Fig. 1)

Stage 2: Matching the request (denoted by ‘Green’ arrows as shown in Fig. 1)

Stage 3: Repayment flow (denoted by ‘Red’ arrows as shown in Fig. 1)

[0019] In an embodiment, in the pre-processing stage (refer stage 0.1 in Fig. 1), every data point of the PoS sale of a merchant is collected by the VISA payment server 109. For example, the Visa payment server 109 may collect data related to the PoS sales of the merchant 2 103 from the PoS 113 associated with the merchant 2 103. Thereafter, the Visa payment server 109 may process the collected data using a data stream processing component. The data may include information such as commands, queries, data files and the like in digital or any other form. After processing the data stream, at stage 0.2, merchant-specific profiles may be generated and stored in the merchant profiling database 117. In an embodiment, the merchant profiles may be used to determine the borrowing capacity of the merchant, that is, how much can a lending merchant lend to the borrowing merchant without any risks. Additionally, the merchant profiles may also comprise information or data about a merchant that indicates, for example, preferences, interests, demographic information, personally identifying information and the like. Once generated, the merchant profiles may be sent to the borrowing request matcher 111 component for matching the merchant requests.

[0020] The request initiation stage, i.e., stage 1, is where the lending merchant 1 101 may approach the bank 1 105 to lend money (stage 1A). The borrowing merchant 2 103, on the other hand, may request the bank 2 107 for a loan (stage 1B). Thereafter, at stage 1A.1, the bank 1 105 makes a request to the Visa payment server 109 to lend money to the lending merchant 1 101. Similarly, at stage 1B.1, the bank 2 107 submits a request to the Visa payment server 109 to borrow money to the borrowing merchant 2 103. Subsequently, the Visa payment server 109 forwards both the requests to the borrowing request matcher 111, which runs a predefined algorithm on the requests to match the lending and borrowing requests (stage

1A.2/1B.2). In an embodiment, the matches may be between multiple merchants i.e., single lender – multiple borrowers, or a cross border transaction.

[0021] In the request matching stage, i.e., stage 2, the requests from both the merchants are matched, and the matched results are forwarded back to the Visa payment server 109 (stage 2.1). Thereafter, a request is sent back to the bank 1 105 to complete an authentication of the merchant 1 101 (stage 2.2). A similar authentication may be performed for the merchant 2 103 from the bank 2 107. Upon successful authentication, the Visa payment server 109 may send a request to the bank 2 107 (stage 2.3) to deposit the money to the merchant 2 103.

[0022] In the repayment flow stage, i.e., stage 3, the borrowing merchant 2 103 may configure how much proportion of his/her PoS sales must be utilized for the loan repayment. To enable this, the bank 2 107 may collect the details related to the PoS sales from the PoS 113 associated with the merchant 2 103. As an example, the merchant 2 103 may choose that an amount worth 3% of the net PoS transactions may be repaid to the lending merchant 101. The Visa payment server 109 will make sure these transactions are used for repayment and a minimum amount due is always levied (stage 3.1). Whenever such transactions occur, the Visa payment server 109 moves the money out of the PoS sales of the merchant 2 103 (stage 3.2). The lending merchant 1 101 gets periodic money credited to his/her bank 1 105 (stage 3.3) i.e., as a partial repayment from the borrowing merchant 2 103.

[0023] **Fig. 2** shows a flowchart illustrating the proposed merchant-to-merchant lending process in accordance with some embodiments consistent with the present disclosure. **At block 201**, the method comprises collecting data from all the merchants and ranking the merchants based on the net POS sales value. Subsequently, as indicated in **block 203**, the method comprises allowing a merchant to borrow the required money from another merchant based on the ranking of the merchants. Finally, as indicated in **block 205**, the method allows a borrowing merchant to periodically repay the borrowed money according to a percentage of the net PoS sales of the borrowing merchant.

Advantages of the present invention:

[0024] In an embodiment, the proposed invention provides a simple and user-friendly platform for borrowing/lending money between merchants. Also, the proposed invention assists banks in issuing credit lines to genuine customers based on the PoS sales. Further, the present

invention helps to move money across merchants and facilitates establishing a lending network between the merchants.

General computer system:

[0025] Fig. 3 illustrates a block diagram of an exemplary computer system for implementing embodiments consistent with the present disclosure.

[0026] In an embodiment, the computer system 300 may be used to implement the system. The computer system 300 may include a central processing unit (“CPU” or “processor”) 302. The processor 302 may include at least one data processor developing a common transaction database based on inputs received from a lending merchant 1 101 and a borrowing merchant 2 103 via a network interface 303 and communication network 309. The processor 302 may include specialized processing units such as, integrated system (bus) controllers, memory management control units, floating point units, graphics processing units, digital signal processing units, etc.

[0027] The processor 302 may be disposed in communication with one or more Input/Output (I/O) devices (312 and 313) via I/O interface 301. The I/O interface 301 employ communication protocols/methods such as, without limitation, audio, analog, digital, monoaural, Radio Corporation of America (RCA) connector, stereo, IEEE-1394 high speed serial bus, serial bus, Universal Serial Bus (USB), infrared, Personal System/2 (PS/2) port, Bbayonet Neill-Concelman (BNC) connector, coaxial, component, composite, Digital Visual Interface (DVI), High-Definition Multimedia Interface (HDMI), Radio Frequency (RF) antennas, S-Video, Video Graphics Array (VGA), IEEE 802.11b/g/n/x, Bluetooth, cellular e.g., Code-Division Multiple Access (CDMA), High-Speed Packet Access (HSPA+), Global System for Mobile communications (GSM), Long-Term Evolution (LTE), Worldwide Interoperability for Microwave access (WiMax), or the like, etc.

[0028] Using the I/O interface 301, the computer system 300 may communicate with one or more I/O devices such as input devices 312 and output devices 313. For example, the input devices 312 may be an antenna, keyboard, mouse, joystick, (infrared) remote control, camera, card reader, fax machine, dongle, biometric reader, microphone, touch screen, touchpad, trackball, stylus, scanner, storage device, transceiver, video device/source, etc. The output devices 313 may be a printer, fax machine, video display (e.g., Cathode Ray Tube (CRT)),

Liquid Crystal Display (LCD), Light-Emitting Diode (LED), plasma, Plasma Display Panel (PDP), Organic Light-Emitting Diode display (OLED) or the like), audio speaker, etc.

[0029] In some embodiments, the processor 302 may be disposed in communication with a communication network 309 via a network interface 303. The network interface 303 may communicate with the communication network 309. The network interface 303 may employ connection protocols including, without limitation, direct connect, ethernet (e.g., twisted pair 10/100/1000 Base T), Transmission Control Protocol/Internet Protocol (TCP/IP), token ring, IEEE 802.11a/b/g/n/x, etc. The communication network 309 may include, without limitation, a direct interconnection, Local Area Network (LAN), Wide Area Network (WAN), wireless network (e.g., using Wireless Application Protocol), the Internet, etc. Using the network interface 303 and the communication network 309, the computer system 300 may communicate with a database 314, which may be the enrolled templates database 313. The network interface 303 may employ connection protocols include, but not limited to, direct connect, ethernet (e.g., twisted pair 10/100/1000 Base T), Transmission Control Protocol/Internet Protocol (TCP/IP), token ring, IEEE 802.11a/b/g/n/x, etc.

[0030] The communication network 309 includes, but is not limited to, a direct interconnection, a Peer-to-Peer (P2P) network, Local Area Network (LAN), Wide Area Network (WAN), wireless network (e.g., using Wireless Application Protocol), the Internet, Wi-Fi and such. The communication network 309 may either be a dedicated network or a shared network, which represents an association of the different types of networks that use a variety of protocols, for example, Hypertext Transfer Protocol (HTTP), Transmission Control Protocol/Internet Protocol (TCP/IP), Wireless Application Protocol (WAP), etc., to communicate with each other. Further, the communication network 309 may include a variety of network devices, including routers, bridges, servers, computing devices, storage devices, etc.

[0031] In some embodiments, the processor 302 may be disposed in communication with a memory 305 (e.g., RAM, ROM, etc. not shown in Fig. 3) via a storage interface 304. The storage interface 304 may connect to memory 305 including, without limitation, memory drives, removable disc drives, etc., employing connection protocols such as, Serial Advanced Technology Attachment (SATA), Integrated Drive Electronics (IDE), IEEE-1394, Universal Serial Bus (USB), fiber channel, Small Computer Systems Interface (SCSI), etc. The memory drives may further include a drum, magnetic disc drive, magneto-optical drive, optical drive,

Redundant Array of Independent Discs (RAID), solid-state memory devices, solid-state drives, etc.

[0032] The memory 305 may store a collection of program or database components, including, without limitation, user interface 306, an operating system 307, etc. In some embodiments, computer system 300 may store user/application data, such as, the data, variables, records, etc., as described in this disclosure. Such databases may be implemented as fault-tolerant, relational, scalable, secure databases such as Oracle or Sybase.

[0033] The operating system 307 may facilitate resource management and operation of the computer system 300. Examples of operating systems include, without limitation, Apple™ Macintosh™ OS X™, UNIX™, Unix-like system distributions (e.g., Berkeley Software Distribution (BSD), FreeBSD™, Net BSD™, Open BSD™, etc.), Linux distributions (e.g., Red Hat™, Ubuntu™, K-Ubuntu™, etc.), International Business Machines (IBM™) OS/2™, Microsoft Windows™ (XP™, Vista/7/8, etc.), Apple iOS™, Google Android™, Blackberry™ operating system (OS), or the like.

[0034] In some embodiments, the computer system 300 may implement web browser 308 stored program components. Web browser 308 may be a hypertext viewing application, such as Microsoft™ Internet Explorer™, Google Chrome™, Mozilla Firefox™, Apple™ Safari™, etc. Secure web browsing may be provided using secure hypertext transport protocol (HTTPS), Secure Sockets Layer (SSL), Transport Layer Security (TLS), etc. Web browsers 308 may utilize facilities such as AJAX, DHTML, Adobe™ Flash, Javascript, Application Programming Interfaces (APIs), etc. In some embodiments, the computer system 300 may implement a mail server stored program component. The mail server may be an Internet mail server such as Microsoft Exchange, or the like. The mail server may utilize facilities such as ASP, ActiveX, ANSI C++/C#, Microsoft .NET, Common Gateway Interface (CGI) scripts, Java, JavaScript, PERL, PHP, Python, WebObjects, etc. The mail server may utilize communication protocols such as Internet Message Access Protocol (IMAP), Messaging Application Programming Interface (MAPI), Microsoft Exchange, Post Office Protocol (POP), Simple Mail Transfer Protocol (SMTP), or the like.

[0035] In some embodiments, the computer system 300 may implement a mail client stored program component. The mail client may be a mail viewing application, such as Apple Mail, Microsoft Entourage, Microsoft Outlook, Mozilla Thunderbird, etc.

[0036] Furthermore, one or more computer-readable storage media may be utilized in implementing embodiments consistent with the present disclosure. A computer-readable storage medium refers to any type of physical memory on which information or data readable by a processor may be stored. Thus, a computer-readable storage medium may store instructions for execution by one or more processors, including instructions for causing the processor(s) to perform steps or stages consistent with the embodiments described herein. The term “computer-readable medium” should be understood to include tangible items and exclude carrier waves and transient signals, i.e., be non-transitory. Examples include Random Access Memory (RAM), Read-Only Memory (ROM), volatile memory, non-volatile memory, hard drives, Compact Disc (CD) ROMs, DVDs, flash drives, disks, and any other known physical storage media.

[0037] The described operations may be implemented as a method, system or article of manufacture using standard programming and/or engineering techniques to produce software, firmware, hardware, or any combination thereof. The described operations may be implemented as code maintained in a “non-transitory computer readable medium”, where a processor may read and execute the code from the computer readable medium. The processor is at least one of a microprocessor and a processor capable of processing and executing the queries. A non-transitory computer readable medium may include media such as magnetic storage medium (e.g., hard disk drives, floppy disks, tape, etc.), optical storage (CD-ROMs, DVDs, optical disks, etc.), volatile and non-volatile memory devices (e.g., EEPROMs, ROMs, PROMs, RAMs, DRAMs, SRAMs, Flash Memory, firmware, programmable logic, etc.), etc. Further, non-transitory computer-readable media may include all computer-readable media except for a transitory. The code implementing the described operations may further be implemented in hardware logic (e.g., an integrated circuit chip, Programmable Gate Array (PGA), Application Specific Integrated Circuit (ASIC), etc.).

[0038] The illustrated steps are set out to explain the exemplary embodiments shown, and it should be anticipated that ongoing technological development will change the manner in which particular functions are performed. These examples are presented herein for purposes of illustration, and not limitation. Further, the boundaries of the functional building blocks have been arbitrarily defined herein for the convenience of the description. Alternative boundaries can be defined so long as the specified functions and relationships thereof are appropriately performed. Alternatives (including equivalents, extensions, variations, deviations, etc., of those

described herein) will be apparent to persons skilled in the relevant art(s) based on the teachings contained herein. Such alternatives fall within the scope and spirit of the disclosed embodiments. Also, the words "comprising," "having," "containing," and "including," and other similar forms are intended to be equivalent in meaning and be open ended in that an item or items following any one of these words is not meant to be an exhaustive listing of such item or items or meant to be limited to only the listed item or items. It must also be noted that as used herein, the singular forms "a," "an," and "the" include plural references unless the context clearly dictates otherwise.

[0039] Furthermore, one or more computer-readable storage media may be utilized in implementing embodiments consistent with the present disclosure. A computer readable storage medium refers to any type of physical memory on which information or data readable by a processor may be stored. Thus, a computer readable storage medium may store instructions for execution by one or more processors, including instructions for causing the processor(s) to perform steps or stages consistent with the embodiments described herein. The term "computer readable medium" should be understood to include tangible items and exclude carrier waves and transient signals, i.e., are non-transitory. Examples include Random Access Memory (RAM), Read-Only Memory (ROM), volatile memory, non-volatile memory, hard drives, CD ROMs, DVDs, flash drives, disks, and any other known physical storage media.

[0040] Finally, the language used in the specification has been principally selected for readability and instructional purposes, and it may not have been selected to delineate or circumscribe the inventive subject matter. Accordingly, the disclosure of the embodiments of the disclosure is intended to be illustrative, but not limiting, of the scope of the disclosure.

[0041] With respect to the use of substantially any plural and/or singular terms herein, those having skill in the art can translate from the plural to the singular and/or from the singular to the plural as is appropriate to the context and/or application. The various singular/plural permutations may be expressly set forth herein for sake of clarity.

“MERCHANT TO MERCHANT LENDING”

ABSTRACT

The present disclosure relates to a method and system for establishing a merchant-to-merchant lending network to process lending and/or borrowing of money between merchants. The present disclosure suggests collecting various data related to the merchants, and ranking the merchants based on their net POS sales value. Thereafter, a merchant is allowed to borrow the money from another merchant based on the ranking of the merchants. Subsequently, the lending money requests and borrowing money requests are matched to facilitate the lending/borrowing of the money. The borrowing merchant is allowed to repay the borrowed money on a periodical repayment schedule based on the percentage of the net POS sales of the borrowing merchant.

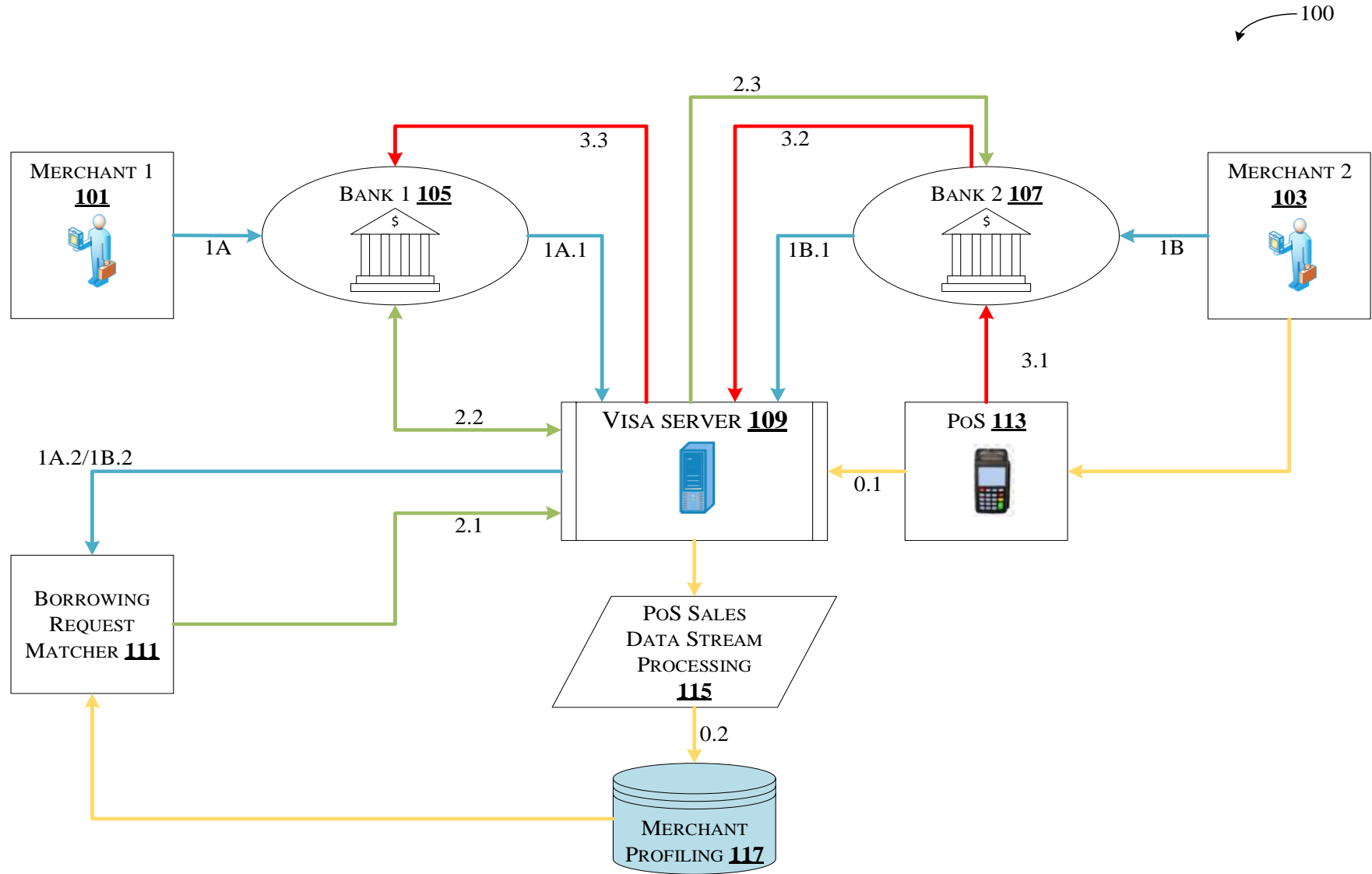


Fig. 1

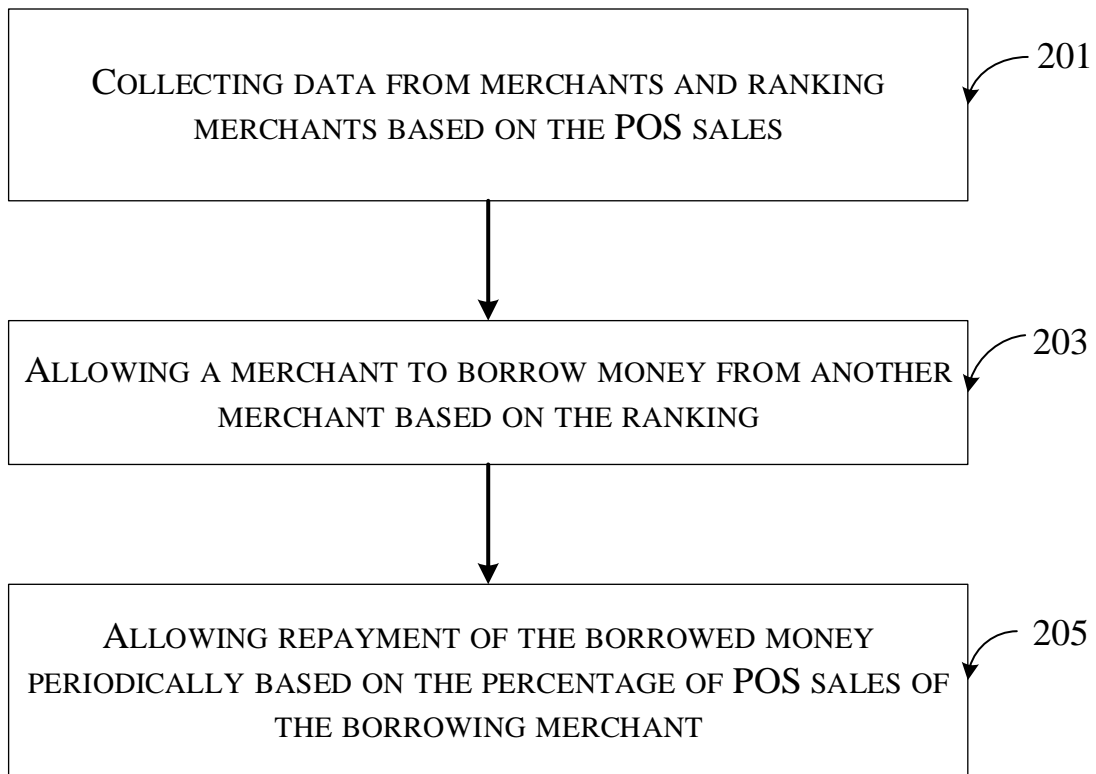


Fig. 2

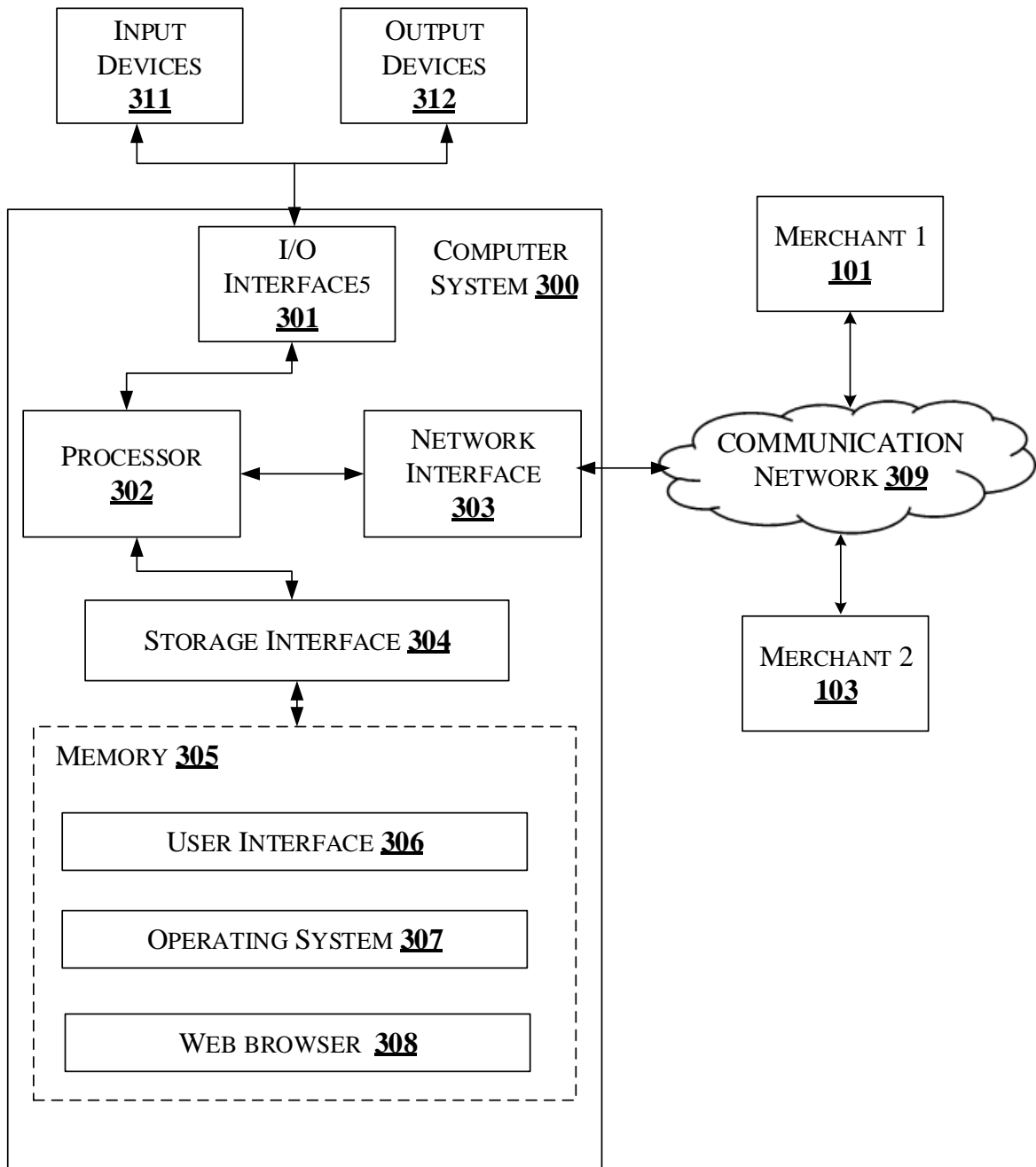


Fig. 3