SUMMARY

An aspect of the present disclosure provides a system for receiving electronic messages from a financial institution, the system comprising a plurality of switches configured to communicate with one another and to process the received electronic messages, wherein each switch includes processing circuitry that is configured to receive an electronic message that includes a unique identifier and, in dependence upon the unique identifier, either process the electronic message or forward the electronic message to another one of the switches for processing; wherein the plurality of switches comprises a first set of switches connected to a first database and a second set of switches to a second database; wherein in the event that one switch of the first set of switches to which the electronic message is to be forwarded is not operational for processing the electronic message, the receiving switch is configured to either: in preference, forward the electronic message to a second switch of the first set of switches for processing of the electronic message; or process the electronic message.

Advantageously, this arrangement allows the distribution of electronic messages amongst the switches to be controlled, thus allowing the processing load to be distributed more evenly and, in the case of a switch failure, allowing messages to be quickly re-allocated to an appropriate switch. An arrangement for processing electronic transactions with greater resilience and efficiency is therefore achieved.

In an embodiment, the unique identifier uniquely identifies a transaction with which the electronic message is associated.

In an embodiment, the processing circuitry is configured to perform a hashing function on the electronic message, the hashing function using the unique identifier of the electronic message to identify the switch which is to process the electronic message.

In an embodiment, the plurality of switches comprises a first set of switches located at a first location and connected to a first database and a second set of switches located at a second location and connected to a second database.

In an embodiment, in the event that one switch of the first set of switches to which the electronic message is to be forwarded is not operational for processing the electronic message, the receiving switch is configured to either: forward the electronic message to a second switch of the first set of switches for processing of the electronic message; or process the electronic. message.

In an embodiment, in the event that no switch of the first set of switches to which the electronic message is to be forwarded is operational for processing the electronic message, the receiving switch is configured to either: forward the electronic message to a switch of the second set of switches for processing of the electronic message; or process the electronic message.

An aspect of the present disclosure provides a switch for receiving electronic messages from a financial institution comprising processing circuitry configured to receive an electronic message that includes a

unique identifier and, in dependence upon the unique identifier, either process the electronic message or forward the electronic message to another switch for processing; wherein in the event that one switch of the first set of switches to which the electronic message is to be forwarded is not operational for processing the electronic message, the receiving switch is configured to either: in preference, forward the electronic message to a second switch of the first set of switches for processing of the electronic message; or process the electronic message.

An aspect of the present disclosure provides a method for receiving electronic messages from a financial institution in a system that comprises a plurality of switches 1 configured to communicate with one another and to

process the received electronic messages, wherein the method includes the steps of: receiving, at a switch, an electronic message that includes a unique identifier; and, in dependence upon the unique identifier, either processing the electronic message or forwarding the electronic message to another one of the switches for processing; wherein the plurality of switches comprises a first set of switches connected to a first database and a second set of switches to a second database; wherein in the event that one switch of the first set of switches to which the electronic message is to be forwarded is not operational for processing the electronic message, the receiving switch is configured to either: in preference, forward the electronic message to a second switch of the first set of switches for processing of the electronic message; or process the electronic message.

In an embodiment, the unique identifier uniquely identifies a transaction with which the electronic message is associated.

In an embodiment, the method comprises performing a hashing function on the electronic message, the hashing function using the unique identifier of.the electronic message to identify the switch which is to process the electronic message.

In an embodiment, the plurality of switches comprises a first set of switches located at a first location and connected to a first database and a second set of switches located at a second location and connected to a second database.

In an embodiment, in the event that one switch of the first set of switches to which the electronic message is to be forwarded is not operational for processing the electronic message, the method comprises either: forwarding the received electronic message to a second switch of the first set of switches for processing of the electronic message; or processing the electronic message.

In an embodiment, in the event that no switch of the first set of switches to which the electronic message is to be forwarded is operational for processing the electronic message, the method comprises either: forwarding the received electronic message to a switch of the second set of switches for processing of the electronic message; or processing the electronic message.

An aspect of the present disclosure provides a computer program product comprising computer readable instruction which when loaded onto a switch configures the switch to perform the above-mentioned method of the present disclosure.

The foregoing paragraphs have been provided.by way of general introduction, and are not intended to limit the scope of the following claims. The described embodiments, together with further advantages, will be best understood by reference to the following detailed description taken in conjunction with the accompanying Figures.

CLAIMS

1. A system for receiving electronic messages from a financial institution, the system comprising a plurality of switches configured to communicate with one another and to process the received electronic messages, wherein each switch includes processing circuitry that is configured to receive an electronic message that includes a unique identifier and, in dependence upon the unique identifier, either process the electronic message or forward the electronic message to another one of the switches for processing; wherein the plurality of switches comprises a first set of switches connected to a first database and a second set of switches to a second database; wherein in the event that one switch of the first set of switches to which the electronic message is to be forwarded is not operational for processing the electronic message, the receiving switch is configured to either: in preference, forward the electronic message to a second switch of the first set of switches for processing of the electronic message; or process the electronic message .

2. A system according to claim 1, wherein the unique identifier uniquely identifies a transaction with which the electronic message is associated.

3. A system according to claim 2, whereby the processing circuitry is configured to perform a hashing function on the electronic message, the hashing function using the unique identifier of the electronic message to identify the switch which is to process the electronic message.

4. A system according to claim 1, wherein in the event that no switch of the first set of switches to which the electronic message is to be forwarded is operational for processing the electronic message, the receiving switch is configured to either: forward the electronic message to a switch of the second set of switches for processing of the electronic message; or process the electronic message.

5. A switch for receiving electronic messages from a financial institution comprising processing circuitry configured to receive an electronic message that includes a unique identifier and, in dependence upon the unique identifier, either process the electronic message or forward the electronic message to another switch for processing; wherein in the event that one switch of the first set of switches to which the electronic message is to be forwarded is not operational for processing the electronic message, the

receiving switch is configured to either: in preference, forward the electronic message to a second switch of the first set of switches for processing of the electronic message; or process the electronic message.

6. A method for receiving electronic messages from a financial institution in a system that comprises a plurality of switches l configured to communicate with one another and to process the received electronic messages, wherein the method includes the steps of: receiving, at a switch, an electronic message that includes a unique identifier; and, in dependence upon the unique identifier, either processing the electronic message or forwarding the electronic message to another one of the switches for processing; wherein the plurality of switches comprises a first set of switches connected to a first database and a second set of switches to a second database; wherein in the event that one switch of the first set of switches to which the electronic message is to be forwarded is not operational for processing the electronic message, the receiving switch is configured to either: in preference, forward the electronic message to a second switch of the first set of switches for processing of the electronic message; or process the electronic message.

7. A method according to claim 6, wherein the unique identifier uniquely identifies a transaction with which the electronic message is associated.

8. A method according to claim 6, comprising performing a hashing function on the electronic message, the hashing function using the unique identifier of the electronic message to identify the switch which is to process the electronic message.

9. A method according to claim 6, wherein in the event that no switch of the first set of switches to which the electronic message is to be forwarded is operational for processing the electronic message, the method comprises either: forwarding the received electronic message to a switch of the second set of switches for processing of the electronic message; or processing the electronic message.

10. A computer program product comprising computer readable instruction which when loaded onto a switch configures the switch to perform a method according to any one of claims 6 to 9.