other such mechanism deployed on the venue for that instrument. Alternatively, for simplicity, the maximum such sum across a plurality of instruments on the venue may be used to inform the value of an Ideal Latency Floor, and that maximum sum may reflect the temporal fairness of the venue as a whole.

[016a] In view of the above, according to an aspect, there is provided a method of quantifying temporal fairness on electronic trading venues, the method being implemented on a computer system having one or more physical processors programmed with computer program instructions that, when executed by the one or more physical processors, cause the computer system to perform the method. The method comprises obtaining, by the computer system, market activity information associated with a first market participant and a second market participant; determining, by the computer system, based on the market activity information, a first plurality of time deltas that each indicate an amount of time in which the first market participant has temporally beaten the second market participant with respect to market activity related to an instrument traded on the electronic trading venue; determining, by the computer system, based on the market activity information, a second plurality of time deltas that each indicate an amount of time in which the second market participant has temporally beaten the first market participant with respect to the market activity related to the instrument traded on the electronic trading venue; determining, by the computer system, a quantified level of temporal fairness with respect to the first market participant and the second market participant on the electronic trading venue based on the first plurality of time deltas and the second plurality of time deltas; batching, by the computer system, a set of orders received within a time period determined based on the quantified level of temporal fairness; randomly selecting, by the computer system, an order from the batched set of orders; and processing, by the computer system, the randomly selected order before remaining orders in the batched set of orders; wherein determining the quantified level of temporal fairness comprises: identifying, by the computer system, from among the first plurality of time deltas and the second plurality of time deltas, a minimum time delta upon which the quantified level of temporal fairness is based.

[016b] According to another aspect, there is provided a system of quantifying temporal fairness on electronic trading venues. The system comprises a computer system having one or more physical processors programmed with computer program instructions that, when executed by the one or more physical processors, cause the computer system to: obtain market activity

information associated with a first market participant and a second market participant; determine, based on the market activity information, a first plurality of time deltas that each indicate an amount of time in which the first market participant has temporally beaten the second market participant with respect to market activity related to an instrument traded on the electronic trading venue; determine, based on the market activity information, a second plurality of time deltas that each indicate an amount of time in which the second market participant has temporally beaten the first market participant with respect to the market activity related to the instrument traded on the electronic trading venue; determine a quantified level of temporal fairness with respect to the first market participant and the second market participant on the electronic trading venue based on the first plurality of time deltas and the second plurality of time deltas; batch a set of orders received within a time period determined based on the quantified level of temporal fairness; randomly select an order from the batched set of orders; and process the randomly selected order before remaining orders in the batched set of orders; wherein to determine the quantified level of temporal fairness, the computer system is further programmed to: identify, from among the first plurality of time deltas and the second plurality of time deltas, a minimum time delta upon which the quantified level of temporal fairness is based.

[017] These and other objects, features, and characteristics of the system and/or method disclosed herein, as well as the methods of operation and functions of the related elements of structure and the combination of parts and economies of manufacture, will become more apparent upon consideration of the following description and the appended claims with reference to the accompanying drawings, all of which form a part of this specification, wherein like reference numerals designate corresponding parts in the various figures. It is to be expressly understood, however, that the drawings are for the purpose of illustration and description only and are not intended as a definition of the limits of the invention. As used in the specification and in the claims, the singular form of "a", "an", and "the" include plural referents unless the context clearly dictates otherwise.

BRIEF DESCRIPTION OF THE DRAWINGS

[018] FIG. 1 illustrates an exemplary system for quantifying fairness of an electronic trading venue, according to an implementation of the invention.

[019] FIG. 2 depicts an exemplary temporal fairness analyzer, according to an implementation

of the invention.

[020] FIG. 3 depicts a process for quantifying fairness of an electronic trading venue, according to an implementation of the invention.

[021] FIG. 4 is a schematic diagram that depicts quantifying temporal inter-component and intra-component temporal fairness on an electronic trading venue, according to an implementation of the invention.

DETAILED DESCRIPTION OF THE INVENTION

[022] The invention described herein relates to a system and method for quantifying temporal fairness on an electronic trading venue. From the perspective of causation, an electronic trading venue may be considered to be temporally fair if properties of the components comprising the venue (and therefore under the control or ownership of that venue's operator) do not themselves