

[CLAIMS]

[Claim 1]

An information providing device comprising:

a storage unit that stores price information on various financial products; and

a calculation unit that performs calculation on an Ising model in which a price increase-decrease event of each financial product on an estimated price determined based on an actual price of the financial product indicated in the price information and a sensitivity of the financial product to another financial product is set as a spin, and in which sensitivities between prices of the financial products are set as strengths of interactions between the spins, wherein

the calculation unit performs calculation on, as the Ising model, an Ising model in which the price increase-decrease event of each financial product included in a set of financial products of the financial products is set as a spin and in which the sensitivity between the prices of the financial products in the set is set as the strength of the interaction between the spins,

the calculation unit outputs, to a specified device, information on the difference between the actual price of one financial product in the set and the estimated price of the one financial product determined based on the sensitivity of the one financial product to the other financial product, and

the information providing device is a CMOS annealing machine that solves a combinatorial optimization problem on the Ising model.

[Claim 2]

An information providing method comprising:

performing, in an information processing device including a storage unit that stores price information on various financial products, calculation on an Ising model in which a price increase-decrease event of each financial product on an estimated price determined based on an actual price of the financial product indicated in the price information and a sensitivity of the financial product to another financial product is set as a spin, and in which sensitivities between prices of the financial products are set as strengths of interactions between the spins;

wherein

the information processing device performs calculation on, as the Ising model, an Ising model in which the price increase-decrease event of each financial product included in a set of financial products of the financial products is set as a spin and in which the sensitivity between the prices of the financial products in the set is set as the strength of the interaction between the spins,

the information processing device outputs, to a specified device, information on the difference between the actual price of one financial product in the set and the estimated price of the one financial product determined based on the sensitivity of the one financial product to the other financial product, and

the information processing device is a CMOS annealing machine that solves a combinatorial optimization problem on the Ising model.