

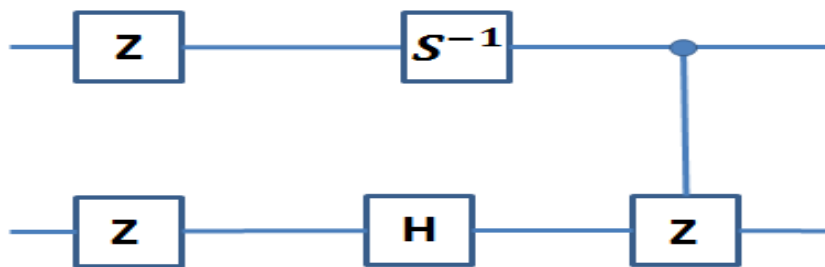
The Mysterious Quantum Code of the Stock Market

When quantum computer simulates the changing prices quotations of stocks in portfolios a remarkable assemble of quantum gates is realized. Joining together the realized quantum gates a *mysterious stock market quantum code is revealed*.

In quantum computation, series of quantum gates have to be arranged in a predefined sequence that led to a quantum circuit in order to solve a particular problem. What if the sequence of quantum gates is known but both the problem to be solved and the outcome of the so defined quantum circuit remain in the shadow? This is the situation of the **stock market**.

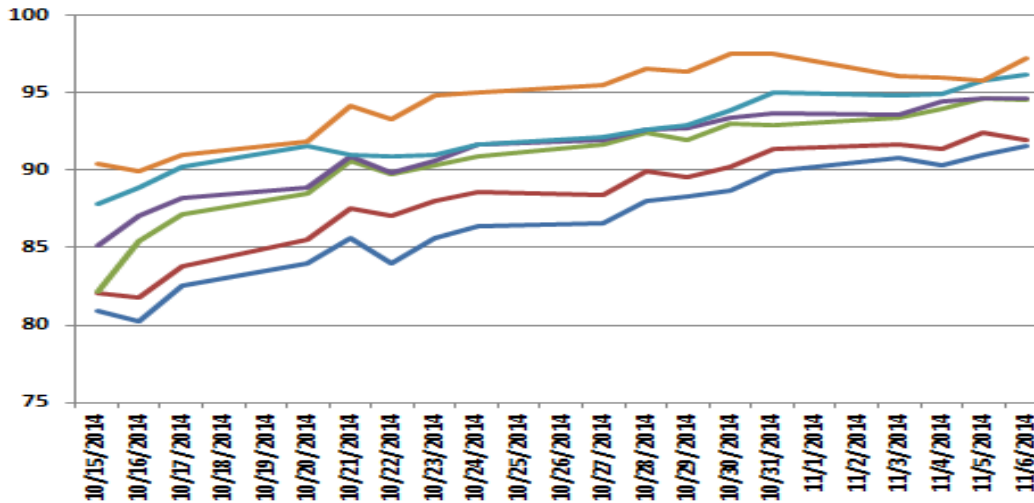
The price time series of a portfolio of stocks are organized in braids that effectively simulate quantum gates in the hypothesis of Ising anyons quantum computational model. Following the prescriptions of Ising anyons model, 1-qubit quantum gates are constructed for portfolio composed of four stocks.

Adding two additional stocks at the initial portfolio result in 2-qubit quantum gates and circuits like the one in the figure below:



Hadamard gate, Pauli gates or controlled-Z gate are some of the elementary quantum gates that are identified in the stock market structure.

It might be hard to imagine but the quantum circuit above is equivalent with the more conventional chart representation of cumulative stocks time series.



Addition of other pairs of stocks, that eventually represent a market index, like *Dow Jones industrial Average*, it results in a sequence of n-qubit quantum gates that form a quantum code. Deciphering this **mysterious quantum code of the stock market** is an issue for future investigations.

Further details: <http://arxiv.org/abs/1507.02310>