Definition of High-Frequency Trading
Also includes the expressions high-rev trading or high-speed trading.

There is no unified definition of high-frequency trading (HFT). Most professional literature agrees that HFT is a sub-category of algorithmic trading, meaning trading at financial markets using algorithms/computers (see the definition **here**). In the case of HFT this is algorithmic decision-making, where the algorithm itself, based on previously programmed instructions and in accordance with a targeted strategy, determines whether a trade will take place. The resulting position of the trader is not known in advance.

A different situation is where the algorithm solely determines, how, when and where the instruction will be performed (algorithmic execution). Here, the resulting position is known in advance, determined by a human (for example we instruct the algorithm to purchase 1,000 shares of Microsoft and will take ownership of this company's 1,000 shares, but for extreme events such as a market crash).

However, we can't claim algorithms in HFT do the trading on their own. They are merely a tool for traders, who constantly monitor them and are thus able to more quickly respond to changes in the market than is possible using the human brain. HFT traders seek certain strategies that, in today's markets, require very fast and very frequent responses.

Most professional literature agrees on several HFT characteristics. These are:

1. High frequency of orders or instructions (messages) sent to the stock exchange – hence the high frequency of trades.
2. Proprietary trading – HFT companies usually do not lease their algorithms.
3. Profit from the purchase and sale as a mediator – an opposite to the long-term speculative possession of assets.
4. Very short time periods for the possession of assets.
5. Necessity of fast reaction to events in the market (low latency) – hence the placing of computer technology directly within the stock exchanges (co-location).
6. Focus on highly liquid (frequently traded) assets.

High frequency of trades, particularly of instructions being sent to the market, may be considered as the most typical characteristic of HFT. That also explains why, to some degree, machines perform the trades on behalf of people.

Other characteristics are either secondary or derived. The rate with which these trades are executed is not sufficient to define their main characteristic, because other very fast algorithms that are not part of HFT also exist.

A question remains, whether we can determine a clear delineation of trades frequency by which we could identify a trader as a high-frequency trader and whether such an attempt would have any benefit other than the purely academic. It makes more sense to discuss the specific trading strategies targeted by high-frequency traders.

The study; *Definition, Benefits and Risks of High-Frequency Trading* (Jakub Kučera, ACTA OECONOMICA PRAGENSIA 5/2013, only in Czech) discusses reasons why the speed of instructions sent to a stock exchange is the most accurate characteristic of HFT.