# Surveillance Rule

## High Profit

### Version 1.1

## Definition.

A series of trading orders that generate unusually high level of profits.

We consider both realised profits and virtual profits. Virtual profits are for existing positions as measured against the most recent market data. Profits are calculated excluding broker fees and other transaction costs.

There are two ways to measure high profits, relative high profits based off a % of the position and absolute high profits against a given value in a specified currency.

We consider four potential techniques for measuring high profits.

Position profits are measured against an entire position within a time window. All trades into and exiting a position are compared to calculate profits.

Outside pairing where selling securities are assumed to be brought for by the oldest trades within the time frame to buy them when calculating profit.

Inside pairing where selling securities are assumed to be paid for by the most recent trades within the time frame to buy them when calculating profit.

Highest profit pairing where the cheapest securities are compared to the highest sell prices within a position. Once a position has been fully exited the brought securities cannot be used in a subsequent position high profit analysis as they have been traded out of the traders’ portfolio.

## Red Deer Rule Implementation.

Required data.

Orders from the corporate trading system.

Pricing data from exchange.

Rule parameters.

Profit threshold in % return.

Profit threshold in absolute £ value.

Duration of time to apply the high profit rule to.

Selection of which techniques to apply to detect the rule breach.

Rule.

Position profits.

Sum quantity of security by security price for each transaction. Sum transactions by buy/sell. If position was fully closed out by matching security brought/sold number then calculate profit. If position is still live then calculate profit so far and use the latest pricing data to calculate the virtual profit on any securities that remain unsold.

Outside pairing.

Take the oldest security purchase within the time frame and then compare it to the first sale. Evaluate profits. Take the next purchase and iterate through purchases likewise. If a high profit rule is breached at any point in this process raise an alert.

Inside pairing.

Take the most recent security purchase before a sale and evaluate profits. If volumes sold exceed volume brought, than begin searching for the next most recent security purchase. If a high profit rule is breached at any point in this process raise an alert.

Highest profit pairing.

Take the best price buy and compare it to the best price sales. Evaluate high profit rule. If it’s not breached take the next best price buy and compare it to the next best price sale. This will eventually yield the same result as position profits but allows for further analysis within a position.

## Future editions.

Bring in existing portfolio data at the start of the period under consideration rather than just looking at buys/sells in the period the rule is applied to.