5. Use a period of 12 months for the pair formation.
   The trading period starts immediately after the ‘pair formation’ period.
   Make rules for how you are going to trade.

#---

I have my pairs

The smallest historical distance from the main industry that I picked, Software.
(('GOOG', 'GOOGL'), 0.04045301814067839)

The smallest historical distance for main industry (Software) and related industry (Semiconductors) pair is:
(('GOOGL', 'XLNX'), 0.5245130065173396)

Long 'losers' and short 'winners. The intuition behind this strategy is that during the pair formation period,
we see historically that that prices move together. We anticipate that the divergence is a flux and will eventually
return back to equilibrium, with both stock prices moving together.

Entry Rule:
- The trading will open a long-short position when price diverge by more than two historical standard deviations.

Exit Rule:
- We unwind the position at the next crossing of the prices.
- If prices do not cross before the end of the training period, gains or losses are calculated at the end of the
  last trading day of the trading period.
- If stock is delisted from the stock universe, in my case the S&P 500, we close the position in that pair using
  the delisting return or last available price.

Some side notes:
- There is no 'leader'. The 'winner' and 'loser' can alternate. Just long 'losers' and 'short' winners during open
  position.
- There maybe multiple open and close positions during the trading period.
- There maybe never an open period. It never meets creteria of price diverging more than two historical standard deviations.
- We are hoping history repeats itself and prices will converge and the arbitrageur will profit.