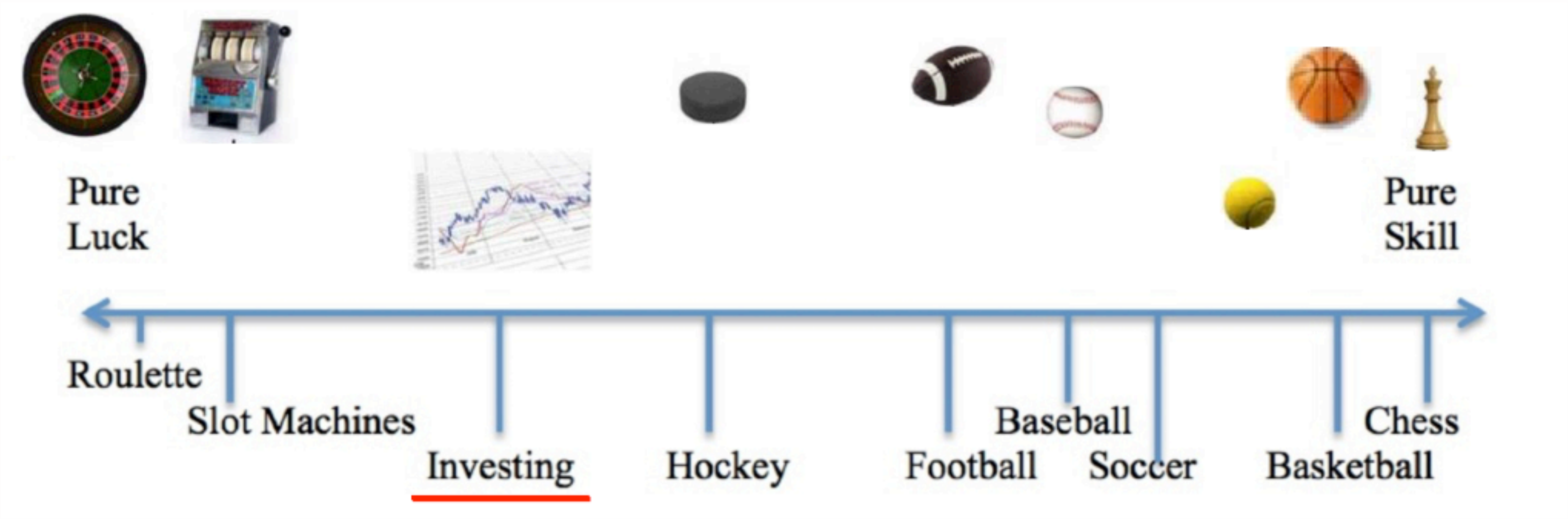
# 0. Clarification




**goal of an investor** is to achieve profits, mitigating risks.

**investment strategy** = a set of rules / algorithms / one undertakes in the investment space in order to achieve profit on a risk-adjusted basis. Systematically involves taking advantage of some known phenomenon in the investment space.

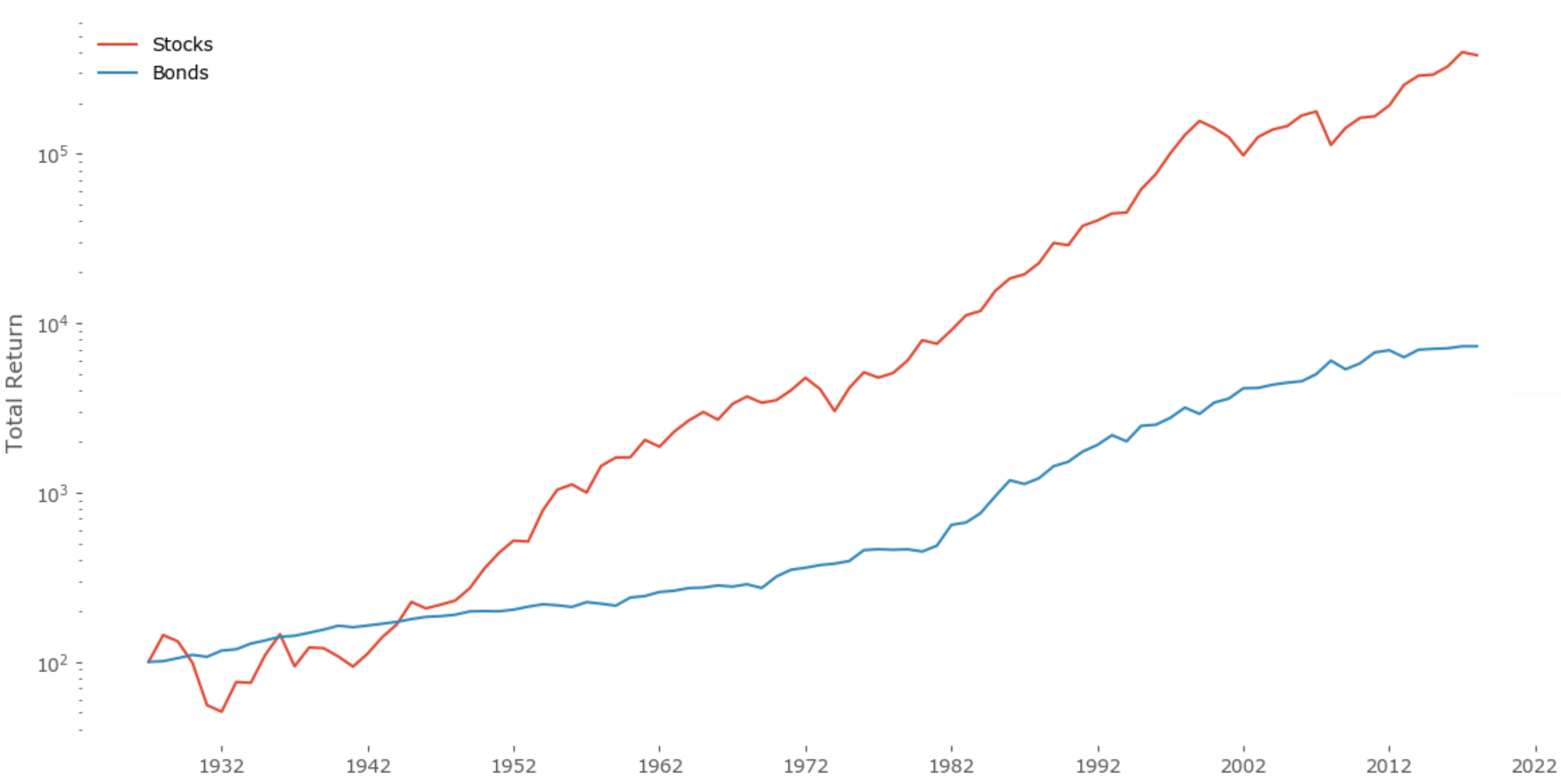
**“working” strategy** = one that completes the above mentioned task

**“unworking” strategy** = one that fails, for example does not return profits above a risk-free rate, or does achieve profits but with oversized risks along the way (not „risk-adjusted” profits).

**a simple example of a strategy** is a passive „buy and hold an index ETF” strategy.

**a more advanced example** is to hold a portfolio of, i.e. 60% stocks, 40% bonds, and rebalance the portfolio once yearly (to correct for the difference in returns through the previous year). A more advanced example is stock-selection.

# 1. A Toy Model: the stock-bond portfolio




source data: http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/histretSP.html

The raw data for treasury bond and bill returns is obtained from the Federal Reserve database in St. Louis (FRED). The return on stocks includes both price appreciation and dividends. The treasury bond is the constant maturity 10-year bond, but the treasury bond return includes coupon and price appreciation.