

Not Over Thinking

Market Seasonality Effect in World Equity Indexes

Algorithmic Trading Strategy with Full Code

STRATEGY & ECONOMIC RATIONALE

Be invested in global equity markets during November – April period, stay in cash during May-October period (alternatively go long in stocks from countries from northern hemisphere during winter period and long in stocks from countries from southern hemisphere during summer period; alternatively go long in cyclical companies during winter period and short defensive stocks and switch positions during the summer period)

BUY	SELL
cyclical companies during winter period	defensive stocks and switch positions during the summer period

PARAMETER & VARIABLES

PARAMETER	VALUE
MARKETS TRADED	Equity
FINANCIAL INSTRUMENTS	CFDs, ETFs, funds, futures
REGION	Global
PERIOD OF REBALANCING	6 months
NO. OF TRADED INSTRUMENTS	1
WEIGHTING	Equal weighting
LOOKBACK PERIODS	N/A
LONG/SHORT	Long only

ALGORITHM

```
from AlgorithmImports import *

class SeasonalityInEquitiesAlgorithm(QCAlgorithm):

    def Initialize(self):
        self.SetStartDate(1999, 1, 1)
        self.SetCash(100000)

        self.AddEquity("SPY", Resolution.Daily)
        self.AddEquity("SHY", Resolution.Daily)

        self.Schedule.On(self.DateRules.MonthStart("SPY"),
self.TimeRules.AfterMarketOpen("SPY"), self.Rebalance)

    def Rebalance(self):
        if self.Time.month == 5:
            self.Liquidate("SPY")
        if self.Time.month == 11:
            self.SetHoldings("SPY", 1)
```

BACKTESTING PERFORMANCE



Fig 1. Overall Performance

PSR	0.005%	Sharpe Ratio	0.347
Total Trades	47	Average Win	9.36%
Average Loss	-8.58%	Compounding Annual Return	4.820%
Drawdown	36.600%	Expectancy	0.636
Net Profit	212.728%	Loss Rate	22%
Win Rate	78%	Profit-Loss Ratio	1.09
Alpha	0.01	Beta	0.506
Annual Standard Deviation	0.115	Annual Variance	0.013
Information Ratio	-0.178	Tracking Error	0.113
Treynor Ratio	0.079	Total Fees	\$283.08
Estimated Strategy Capacity	\$56000000.00	Lowest Capacity Asset	SPY R735QTJ8XC9X

Fig 2. Performance Metrics

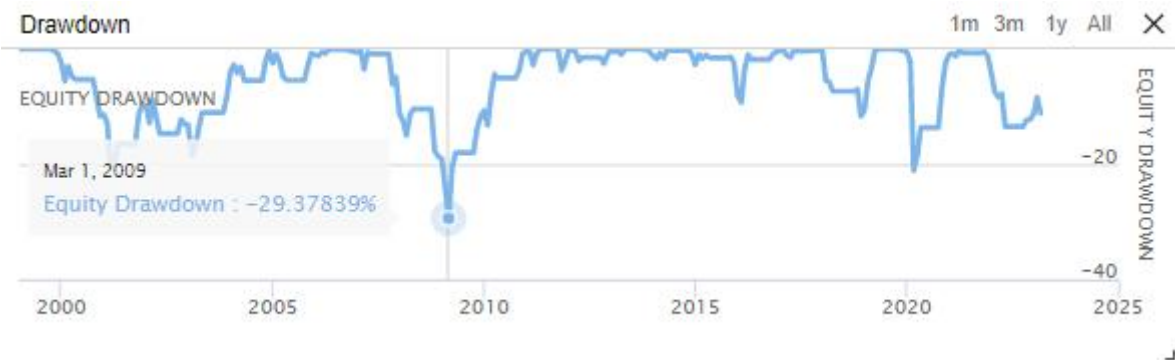


Fig 3. Drawdown