Market Regime Detection using Hidden Markov Model

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Chapter 1

Objective

There is always challenge for quantitative trader to find out the frequent behaviour of financial market due to change in government policy,negative news item,regulatory environment and other macroeconomics effects. Such periods are known as Market Regime. These various regimes lead to adjustments of asset returns via shifts in their means, variances, autocorrelation and covariances. This impacts the effectiveness of time series methods that rely on stationarity. There is a clear need to effectively detect these regimes. This aids optimal deployment of quantitative trading strategies and tuning the parameters within them. The modeling task then becomes an attempt to identify when a new regime has occurred adjusting strategy deployment, risk management and position sizing criteria accordingly.

This project is an attempt to find out such market regime and accordingly adjust the strategy. The pricipal method used to detect market regime is known as Hidden Markov Model which is a statistical time series techinique.

Chapter 2

What is Hidden Markov Model?

Chapter 3

About used data

3.1 About Data section

About Data Paragraph