Neural networks are widely used for financial time series prediction. However, the future values' prediction has its drawbacks and often cannot be converted to the effective and profitable trading system. In that thesis I will describe several different types of neural networks. Then, I will propose and evaluate on real series data two different approaches based on Kohonen's self-organizing maps and back propagation networks of how to use those networks for creating successful and profitable trading models. Also, I will give a general overview of the Forex market (Foreign exchange market) and neural networks' usage within that market.