

Why MetaTrader 4?

There are many software that you can use to build and implement Trading Robots. For our course, we choose MetaTrader 4. We considered a few other software to use for this course. However, we decided that MT4 is the most suitable for someone new to algorithmic trading.

Advantages

Free

This is the most important reason.

Free data

This is the second most important reason. We can get free live data from the Broker and historical data is available from Metaquotes and online sources like Dukascopy. Many other trading software require us to buy past and live data from either the broker or external vendors. This is not only costly but it is inconvenient (especially when starting out).

Access to different markets

We can test and trade FX, Equities Indices, Equities (Stock), Commodities and Fixed Income. (Other than FX the rest are CFDs)

Ease of learning the coding language

The MQL4 language is similar to C++. There are many libraries and resources available online to guide new coders.

Disadvantages

Lowest bar is 1min

Fortunately with a bit of magic (coding) we can create charts of a lower than 1min timeframe, more on that in the later chapters.

Cannot backtest strategy that trades multiple instruments

If your strategy requires you to fire trades on multiple instrument, it cannot be **backtested** on one EA. However, it can be run **live** using one EA.

Difficulty doing statistical analysis

It is difficult to incorporate statistical elements in the EA. However, we can carry out statistical analysis on the data using excel or other statistical software. Performance analysis can be done using 3rd party software, more on that in the later chapters.

Other possible software

Amibroker
Multicharts
Ninja Trader
TT X Trader
CQG
Trade Station
Quantopian
MATLAB
Excel

Reasons we didn't use these software includes, but is not limited to:

- 1) Cost
- 2) Difficulty of learning the coding language
- 3) Complicated user interface
- 4) Backtester and optimiser not included. Only running of live robots allowed.
- 5) Software not designed for building and trading robots. Need to build the backtester from scratch
- 6) Limited access to markets
- 7) Poor community support and documentation

When you "graduated" from this course, do check out the other software and make a decision on software infrastructure based on your trading goals. Cheers!

Why not MT5?

The main reason we use Metatrader 4 over Metatrader 5 is because most brokers support the former but not the latter.

Some differences between MT4 and MT5:

- 1) Different coding language (MQL4 vs MQL5). MQL5 is more difficult to pick up for beginners
- 2) MT4 has been around longer and has greater online coding support. There are many code libraries, templates and examples for MT4
- 3) MT5 has a more powerful optimisation engine
- 4) MT5 allows peer-to-peer bandwidth sharing for optimisation (meaning you can use other user's PC computing capacity for your optimisation)
- 5) MT5 allows trading of stocks, futures and options
- 6) MT5 does not allow external data import (This is deal breaker as data management is a huge component of backtesting)

Appendix: Why FX?

Convenient

Forex data isn't affected by market variables such as stock splits, futures roll, expiries and dividends etc. These factors will greatly complicate our testing and data cleaning process.

Data is available

Free data everywhere! Data on other instruments is much harder to obtain.

Can modify to fit other instruments

Once we build our robots. We can modify it easily to fit CFDs on other instruments.

Main component traded on MT4

Since it is the main asset traded on MT4, I guess we don't have much of a choice do we?