How to Succeed in the Quant Trading Business

Ernest Chan

QTS Capital Management, LLC.

About me

B.Sc. (Physics, U of T)

Ph.D. (Physics, Cornell)

IBM Research (Statistical pattern recognition, NY, 1994)

Morgan Stanley (Data mining, NY, 1997)

Cumulative Profits = N/A

Credit Suisse (Stat Arb, NY, 1998)

Mapleridge Capital (Futures, Toronto, 2002)

Millennium Partners (Stat Arb, NY, 2003)

Maple Securities (Stat Arb, NJ, 2003)

Cumulative Profits ~ –$Millions

E.P. Chan & Associates (Equities, Toronto, 2006)

EXP Capital Management (Equities, Toronto/Chicago, 2008)

QTS Capital Management (Forex, Niagara-on-the-Lake, 2011)

Cumulative Profits ~ $Millions

Along the way …

- Quantitative Trading blog epchan.blogspot.com, 2006.
- "Quantitative Trading" book published by John Wiley & Sons, 2008.
- "Algorithmic Trading" book expected July, 2013.
- Ongoing workshops in London, Hong Kong, Singapore, and elsewhere.

The 10,000-hour rule

"10,000 hours of practice is required to achieve the level of mastery associated with being a world-class expert" – Malcolm Gladwell

2007: after about 10,000 hours of trading research and practice, I finally reached consistent profitability!

Key ingredients

- Learn from others:
  - Blogs, books, papers, magazines, online forums
  - Partners, clients (!), spouse (!)
  - Readers (!)
  - Workshop participants (!)
  - (!) In the business world, we often pay <u>negative</u> tuition to get training/education/information.

- Emotional <u>detachment</u> from daily profits.

Key ingredients

- Look for fundamental principles of financial markets
  - E.g. why does your counterparty need to buy/sell at this instant? (Investors redemptions? Risk management? News?)
  - E.g. Prof. Pauline Shum, *et. al.* "Intraday Share Price Volatility and Leveraged ETF Rebalancing."
- Market knowledge and intuition are paramount.
  - Where to look for good strategies.
  - Why a strategy is failing and when to kill it.

Key ingredients

▸ Most importantly:

"Make things as simple as possible, but not simpler"

-Albert Einstein

◦ Simplicity is not easy to achieve: it requires 10,000 hours of practice!

Non-Key ingredients

- Math/CS skills are of <u>secondary</u> importance, even for quant trading.
- Exceptions:
  - HFT
  - You want to work for someone else.

Working in Institutions

- Institutions can be <u>detrimental</u> to creating your trading style and strategies.
- It can be difficult to learn from colleagues in institutions due to secrecy.
- Some of the greatest traders never worked in financial institutions prior to starting their own funds:
  ◦ Edward Thorp, *(formerly)* Princeton Newport Partners
  ◦ Jim Simons, Renaissance Technologies
  ◦ Kenneth Griffin, Citadel

Working in Institutions

- Question: If Bill Gates, Sergey Brin/Larry Page, Mark Zuckerberg can make it without first toiling in large institutions, why can't you?

Raising capital

- Your own savings should be the seed capital.
  - No pain no gain!
- Friends and family?
  - Would be better if they are familiar with financial markets.
  - I never have much luck with them!
- Proprietary trading firms
  - May impose too many restrictions.
  - May not allow full automation.
  - Some disclosure of trade secrets.
  - Profit share goes from 10%-100%.

Raising Capital

- Starting your own fund.
  - PR is very helpful.
    - I never asked for money from those people who eventually invested in my fund.
    - People I asked for money never invested in my fund.
  - Finding a good & cheap lawyer is important.
  - Institutional investors prefer high Sharpe ratio to high returns (i.e. high statistical significance).
  - Individual investors will prefer high returns.
  - People will always give you a second chance.
        E.g. John Meriwether of LTCM.
        E.g. Me!

Keep in touch!

- Through email: ernest@epchan.com
- Through my blog: epchan.blogspot.com
- Through my website: www.epchan.com