

**From:** Vincenzo Iozzo <[REDACTED]>  
**To:** "jeffrey E." <jeevacation@gmail.com>  
**Subject:** Re: Taxes  
**Date:** Sun, 17 Aug 2014 13:40:52 +0000

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I guess the bigger question becomes: can the parallel between the two fields bring some insight? Because if I'm just head butting against every trading desk in the world and 50years of research I'm not going to win :)

So for instance montecarlo simulations in my world is called 'fuzzing' - which essentially means that given an application you try to feed it with random input to see if it breaks/crashes

Two known problems of fuzzing are:

- 1) the bigger/more dimensions the input space of the application the less likely it is to find bugs
- 2) almost always fuzzing ends up being a local search - so you need N fuzzers to really try and scratch the input space

Those two reasons btw are why good human bug-finders are a scarce and precious resource

I guess the parallel there is tail risk - Monte Carlo simulations work well assuming you get the distribution right and that you stick to stuff that is say less than say 6sigma away

So two interesting questions become:

- 1) can you improve on that? In my world genetic algorithms are very useful for that for instance
- 2) if you can't - can you trigger events that are past the frontier of what montecarlo simulations can properly assess? If the answer is yes and the cost of doing that is limited than you can make money.

Yeah I'll buy to book, I still have to finish the money biography and Hull's book on derivatives though

Sent from my Iphone

On 17/ago/2014, at 09:09, "jeffrey E." <jeevacation@gmail.com> wrote:

risk tolerance, can be accomplished by derivatives. , arbitrated for mis pricing, risk is never really reduced without a corresponding reward adjustment, howevr, tax allows certain arbitrage, for ex gains at 20 -losses at 30 Percent . review monte carlo simulations, need resource , bank, friction charges. read fooled by randomness.

On Sun, Aug 17, 2014 at 9:02 AM, Vincenzo Iozzo <[REDACTED]> wrote:

Can you let me know if you are? I'd be helpful if we can meet up - I'm trying to look at derivatives through my lens.

What is somewhat striking is that it seems like all they are is a programming language whose goal is to minimize risks (with the side effect of creating arbitrage and speculation opportunities).

What I am is if you interpret trading as an optimization problem of: given a belief(stock X will outperform the market, etc etc) maximize returns and minimize risks. Then all derivatives are is 'functions' to go from a

risky bet to a less risky one - now you can go to riskier ones but that's an 'anomaly'

Anyhow if this parallel somehow holds there are interesting questions that come up, for example: what is a Turing machine in this world? Which would be a fancy way to answer the questions: what derivatives are missing? Also since you can stack up multiple 'functions' (eg: combine a forward with an interest float-to-fixed swap to make a riskless arbitrage) that leads to complexity and hence to bugs

But I'm not sure if this is me going insane/trying to forcefully fit one thing into the other or if there's actually something there

One of the reason why meeting up would be useful :-)

Sent from my Iphone

On 17/ago/2014, at 08:47, "jeffrey E." <[jeevacation@gmail.com](mailto:jeevacation@gmail.com)> wrote:

not sure yet

On Sun, Aug 17, 2014 at 8:36 AM, Vincenzo Iozzo <[REDACTED]> wrote:  
That makes sense - do you happen to be in town any day from today to Wednesday?

Sent from my Iphone

On 16/ago/2014, at 16:41, "jeffrey E." <[jeevacation@gmail.com](mailto:jeevacation@gmail.com)> wrote:

taxes are variable fricton

On Sat, Aug 16, 2014 at 4:36 PM, Vincenzo Iozzo <[REDACTED]> wrote:  
So quick question for you: are taxes a trick?

Here's what I mean, I think (gut feeling - no proof) that there are potentially a number of arbitrage/risk-free opportunities that are not tackled by anybody because when you add in taxes you don't actually make money.

Is 'hacking' taxes a strategy? It seems like all the academic texts leave that part for the reader which makes me think there's something there.

Also I was reading a while ago that rentech was using a weird structure with Credit Suisse (iirc) where they were taxed on their profits as if it was long-term capital gains instead of short-term.

Sent from my Iphone

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