

Lykke City

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+ New project

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Status: All



High Frequency Trading Risk Management Tools Based on Scaling Law

\$ 2000

INITIATIVE

42 VOTES

Scaling-law has been observed in an extraordinary wide range of natural phenomena, from physics, biology, earth and planetary sciences, economics and finance, computer science, and demography to the social sciences. Scaling-law processes yield...



ANTON GOLUB

In Java

24 ...

Lykke USD, EUR... Coins

\$ 240

COMPETITION REGISTRATION

16 PARTICIPANTS



Exchange Rates are not yet officially recorded on the blockchain. I propose that we launch a service to log exchange rate price information on the blockchain. Lykke can issue colored coins for all the currencies of the world and then record the exchange rate information on a daily basis on the blockchain. The currency converter would use the information recorded on the blockchain.



ANTON GOLUB

In Java

30.05.2016 16 ...

Currency converter

\$ 280

IMPLEMENTATION

12 PARTICIPANTS



Peer to peer exchange

\$ 160

VOTING

8 RESULTS

Ways of use competitions

1. Marketing

2. Finding new people

- smart, experienced, selfmotivated, ready to deliver
- Dema, Arseny, Andrey, Shahpour, Ben

3. Competition based outsource

Competition based outsource

1. We should try to make Competition Platform our main development tool
2. Semi-centralized development flow
 - Centralized – is not scalable
 - Decentralized – is not manageable
3. No such experience
4. This is experiment

Advantages

1. No need to filter out new people
2. No need to invest time in new people
3. No need to motivate people
4. Redundancy – multiple views on the same issue
5. Costs should be the same
6. More or less the same agile methodology – manageable
7. Quality is also manageable

Risks

1. What happens after competition is over
2. Every code has bugs
3. If code has no bugs it means that is not tested well
4. Testing could be more complicated than development

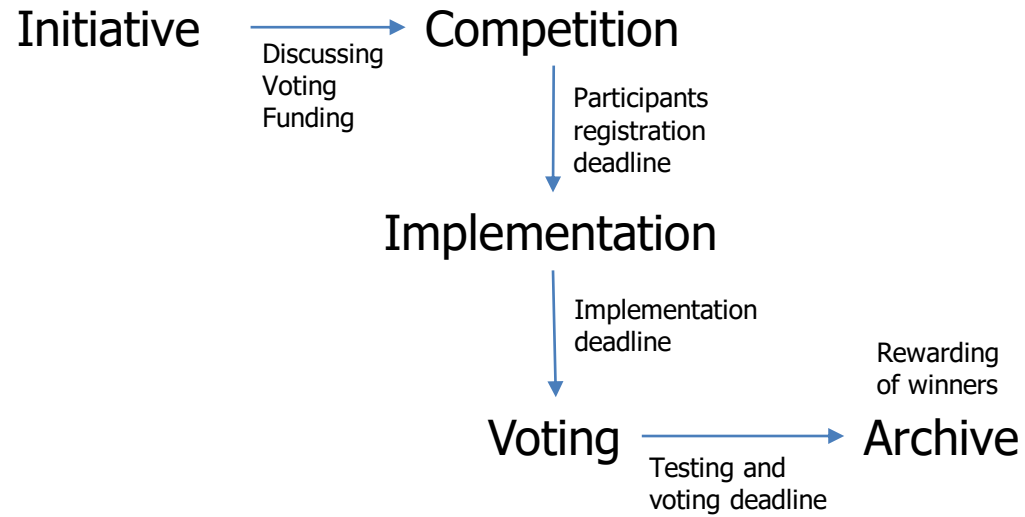
Risks

1. New requirements appears during usage
2. It may happen that we may understand that was already done should work in opposite way
3. 80/20 – solution that provided by a winner may cover 80% but it would require another 80% of time to cover the rest 20%
4. Security issues
5. Supporting, adding new features

How it should work

1. One competition should not cover 100%
2. POC1, POC2... POCn – series of competitions
3. Best POC should be adopted – competition
4. POC should be tested – the final competition
5. To be discussed further details

Project Flow



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High Frequency Trading Risk Management Tools Based on Scaling Law

\$ 2000

1ST PLACE

\$ 1000

2ND, 3^D AND 4TH PLACES



View Project's Wallet

COMPETITION REGISTRATION

7 participants
Apr 30

Info
Participants 7
Comments
Results

Scaling-law has been observed in an extraordinary wide range of natural phenomena, from physics, biology, earth and planetary sciences, economics and finance, computer science, and demography to the social sciences. Scaling-law processes yield scaling properties for a broad range of values, sometimes for many orders of magnitude. Using the event-driven paradigm of directional changes and overshoots to analyse Foreign Exchange (FX) markets, Glattfelder, Dupuis, and Olsen (2011) discovered 12 independent scaling laws in high frequency FX data. In finance, where frames of reference and fixed points are hard to come by and often illusory, these new scaling laws provide a reliable framework for developing risk management tools and represent the foundation of a completely new generation of tools for studying high frequency market volatility. The objective of this project is to study the dynamic behaviour of markets and improve the quality of the inferences and predictions we make about the behaviour of prices. Using high frequency FX dataset, we aim to extract patterns from short-term market activity to infer, measure, and predict volatility over longer time horizons.

This project is part of the EU commission funded BigDataFinance project (2015–2019) that provides doctoral training and research in sophisticated data-driven risk management and research at the crossroads of Finance and Big Data. The project will be lead by Professor Stefano Battiston of University of Zurich and the research fellow will be actively mentored by Richard Olsen.

The project will provide robust risk management tools for the high frequency trading (HFT) community and advance a theoretical and empirical explanation for the occurrence of scaling law for both canonical models (Brownian Motion, Levy processes etc.) and high frequency FX data. The risk management tool will be extended to a multi-asset case and tested and validated with empirical data (FX rates).

PDF

Brief and concept.pdf

24.8MB
Download

To participate in the contest with the prize, you must be registered in the competition. Registration can be completed at any time.

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Created
Apr 25, 2016 · 14 days ago

Updated
Apr 28, 2016 · yesterday

TAGS

Java

Futures

Lending

Margin trading

Swaps

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Crypto-exchanges

\$ 120 · 4 members

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High Frequency Trading Risk Management Tools Based on Scaling Law

\$ 2000

1ST PLACE

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2ND, 3^D AND 4TH PLACES



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COMPETITION

1ST

1ST PLACE:

19ZKM6JFvCiBQbqqHPzRDLGHpN6wkQnXDs

\$ 2000



Apr 30

2ND

2ND PLACE:

19ZKM6JFvCiBQbqqHPzRDLGHpN6wkQnXDs

\$ 1000

3^D

3^D PLACE:

19ZKM6JFvCiBQbqqHPzRDLGHpN6wkQnXDs

\$ 1000

4TH

4TH PLACE:

19ZKM6JFvCiBQbqqHPzRDLGHpN6wkQnXDs

\$ 1000

Scaling-law has been observed in many fields, from physics, biology, and social sciences to economics. It is a broad range of values that can be used to describe a wide range of directional changes.

Dupuis, and Olsen (2011) discovered 12 independent scaling laws in high frequency FX data. In finance, where frames of reference and fixed points are hard to come by and often illusory, these new scaling laws provide a reliable framework for developing risk management tools and represent the foundation of a completely new generation of tools for studying high frequency market volatility. The objective of this project is to study the dynamic behaviour of markets and improve the quality of the inferences and predictions we make about the behaviour of prices. Using high frequency FX dataset, we aim to extract patterns from short-term market activity to infer, measure, and predict volatility over longer time horizons.

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View Project's Wallet

IMPLEMENTATION

 May 5

Info **Participants 7** Comments 36 Results 4

USERNAME	REGISTRATION DATE	RESULT
 Kaylee Harper	Apr 25, 2016 06:37	
 Leroy Cox	Apr 25, 2016 06:53	
 Ricardo Rodriguez	Apr 25, 2016 07:20	
 Dustin James	Apr 25, 2016 07:33	
 Scott Akerman	Apr 25, 2016 08:04	
 Mark Harris	Apr 25, 2016 09:36	
 Paul Graham	Apr 25, 2016 21:35	

The contest began. You can not be a participant in the competition, but will be able to evaluate the results of the participants after 5 May.

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High Frequency Trading Risk Management Tools Based on Scaling Law

\$ 2000 
1ST PLACE: MARK HARRIS

\$ 1000   
2ND, 3^D AND 4TH PLACES

ARCHIVE

Info

Participants 7

Comments 36

Results

\$ 4000
Prize fund

7
Participants

25
Days of the contest

6
Results

4
Winners

1ST



MARK HARRIS

Score: 100/100 · 15 votes

\$ 2000

2ND



Kaylee Harper

Score: 50/100 · 7 votes

\$ 1000

3^D



Leroy Cox

Score: 35/100 · 5 votes

\$ 1000

4TH



Dustin James

Score: 20/100 · 3 votes

\$ 1000

The competition and voting completed.
Winners were determined by the citizens
Lykke City.



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VOTING

 May 25

Info

Participants ⁷

Comments ³⁶

Results ⁶

HELP US DETERMINE THE WINNER!

Check the completed task, participants of the contest and choose the best result. To get an honest vote and the winner was awarded for their work and their time – you have only *one* vote.



USERNAME	REG. AND SUBM. DATE	RESULT	SCORE	VOTE
 Kaylee Harper	Apr 25 – May 5, 2016	View	50/100	7 
 Leroy Cox	Apr 25 – May 15, 2016	View	35/100	5 
 Dustin James	Apr 25 – May 12, 2016	View	20/100	3 
 Mark Harris	Apr 25 – May 10, 2016	View	100/100	14 
 Paul Graham	Apr 25 – May 4, 2016	View	25/100	2 

The contest is finished. You can help us to determine the winners. Voting ends on May 25.

 Vote/test

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