09.17.2019 Notes

- Times Analysis
- Stochastic Process
- Theoretical Econometrics
- Differential Equations / Modeling
- Computational Statistics
- Statistical Theory
- Probability Theory

Use prob. to do inference

Talk to Thomas Anastos

Proficient in R
Knowledge of C++

Prof.

In math,

$x^2 + y^2 = 1$
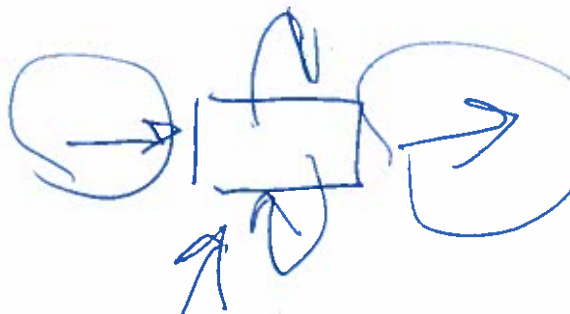
trace

$$\text{model dynamics} \begin{cases} \alpha(t) = (\cos t, \sin t) \\ \beta(t) = (\cos 2\pi t, \sin 2\pi t) \quad 0 \le t \\ \gamma(t) = (\sin t, \cos t) \end{cases}$$
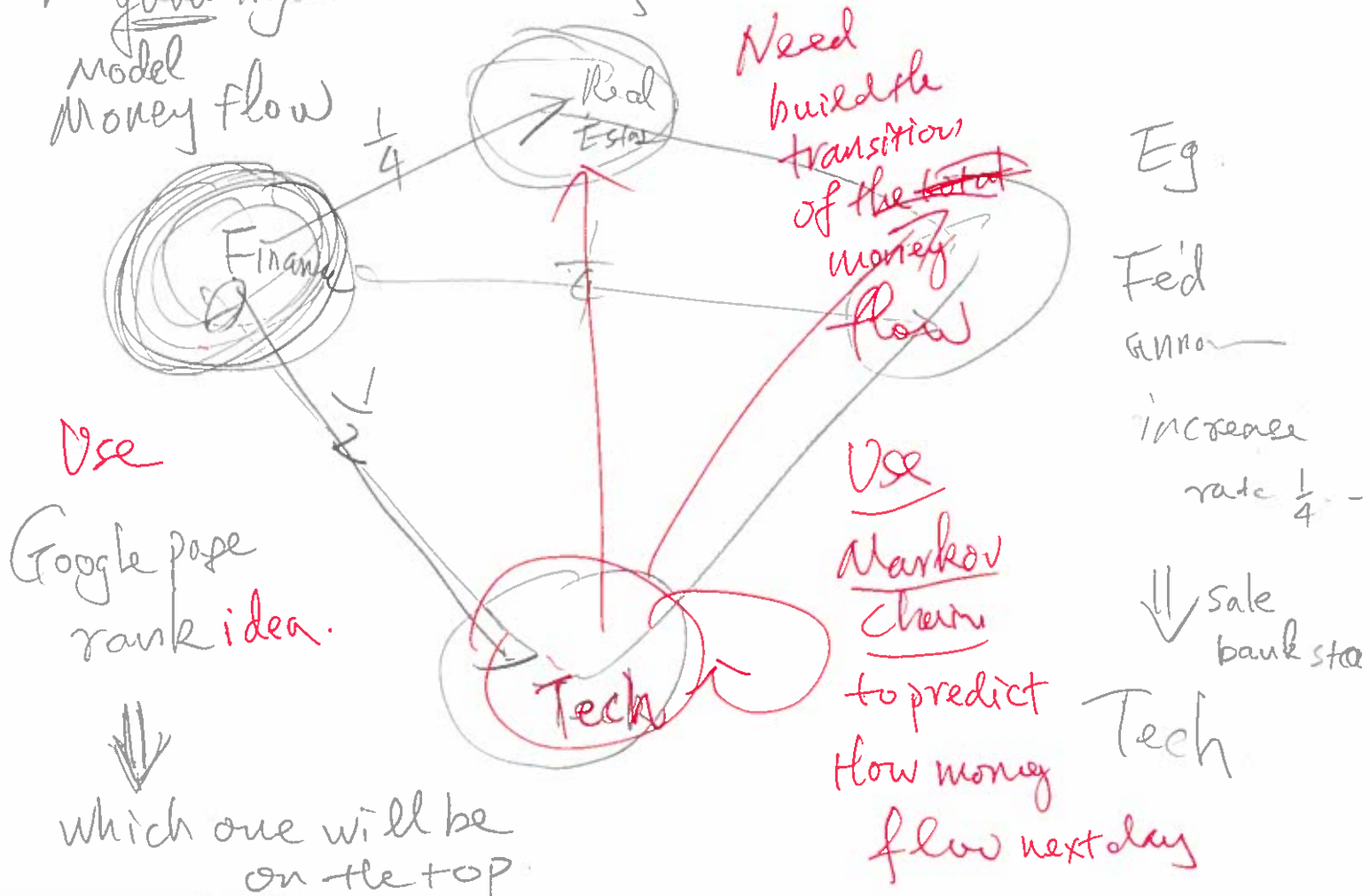
daily data

minute data
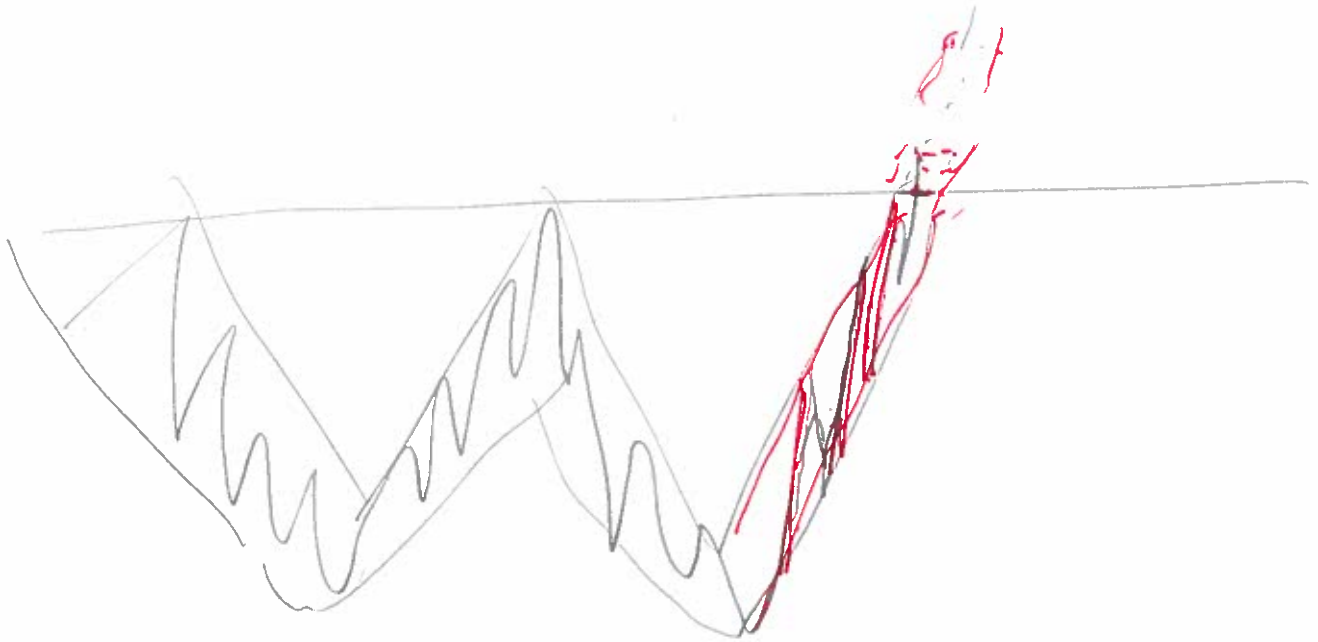
High freq trading
Nanosecond
+ Statistics

} means
millions of money
to buy fast computer

We are doing : Understand the
battle ~~of their~~ based
on statistics.

⭐ Design good Algorithm trading
Model
Money flow

Need
build the
transitions
of the ~~total~~
money
flow

Eg.
Fed
announ
increase
rate $\frac{1}{4}$

Real
Estate

$\frac{1}{4}$

$\frac{1}{4}$

Finance

$\frac{1}{2}$

Use
Google page
rank idea.

⬇

which one will be
on the top

Tech

Use
Markov
Chain
to predict
How money
flow next day

⬇ sale
bank sto

Tech

Eg: Say you predict money will go to
Tech sector ⟹ Then choose (in this sector

the strongest)

⟱

wfld method.

Lit. ~~So~~ search:

① Orderbook abuse by HFTS
② Sector relationships
③ Top down macro to micro trading
④ End of day trading inefficiencies