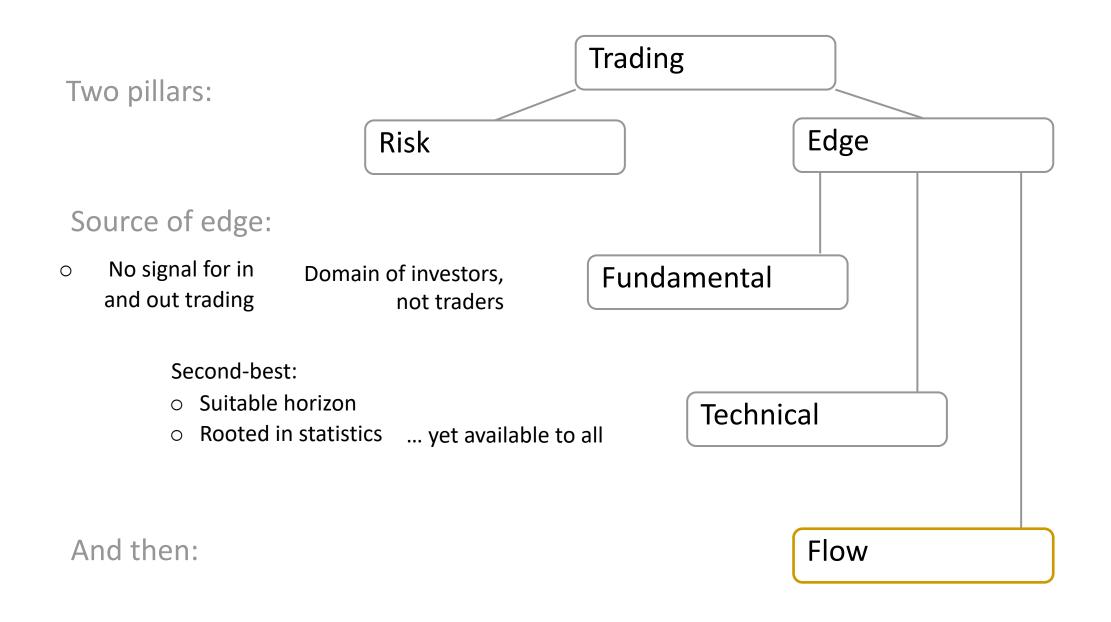
Re-thinking bank client trading

Taking lead from data-driven technology sector

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Background



Flow: best source of edge for a bank

- Best fit in terms of horizon/frequency: best predictor of imbalances over several days for FX, several weeks for rates ones bank traders are supposed to capture
 - Supported by market microstructure research
- Inaccessible to other players unique to banks

Where does your bank stands?

Do you press this edge hard enough?



Efficiency metrics

55/45 + 55/45 + 55/45 + 55/45 ... Robust advantage Each signal relatively small ...yet added on top of each other

Direct utilisation



For a given instrument, have you checked all patterns / combinations for:

- biggest clients
- most frequent ones
- where see biggest share of business
- most informed (funds)
- distinct groups (of smaller ones)

Indirect – related



RUB example for reference:

- OFZ, Russia Eurobonds etc in Russia complex
- MXN, PLN etc in EM complex

Data-within-reach analysis



- Who is most missing puzzle within easy reach?
 - Could be toxic OR
 - Needs tailored effort to access

Some competitors more advanced
Beating them = being best per unit of resources spent

Idea

Solution: internal price mechanism for flow information

Price – best invention of markets

- regulating, everything falls into perfect order
- starts a "beating heart" for any system

In concrete terms: group within trading that will operate the following loop:

First iteration – going over all existing flow data

• maxing out the metrics – every bit that tips the scale

Next – run systematic model to take advantage of AND expand the edge

• pricing as key component: the more some input helps P&L of such model, the more the group pays

Drawing parallels with: treasury departments

- sets transfer pricing for liquidity depending on how much use
- same logic for information "Information Treasury" within markets departments

Pioneering approach: leaders, not followers

Pricing model perspective

As a general rule, higher price if:

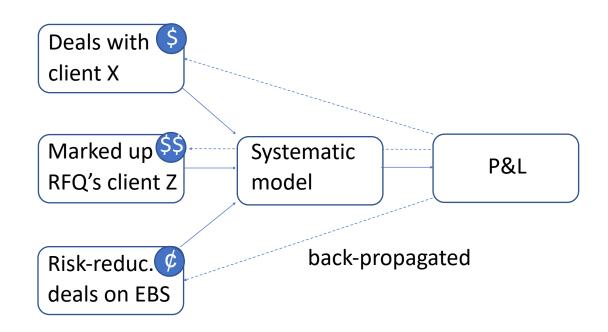
- Consistent deal flow
- See high percentage of client activity
- Have history
- Fills the gap

Even for outgoing counterparty trades:

- Anonymous exchange eg MOEX zero
- EBS some information content

More subtle:

 marking up passes where have clue (now it's lost)



Pricing traders perspective

For traders only P&L matters

- Backbone incentive
- Convincing unreliable



Absolute level:

- of interest to traders
- motivating to win flow



Model overall
("master")
level of risk

Second-order

Indirect P&L incentive (amplifying):

- Get great edge themselves signal will be shared
- Proactive if something in RUB impacts MXN, will come to MXN guy
- Confident flow effort not wasted, but squeezed to max

Model information advantage

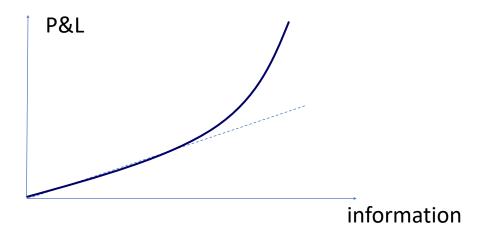
Ideally P&L dependent only on:

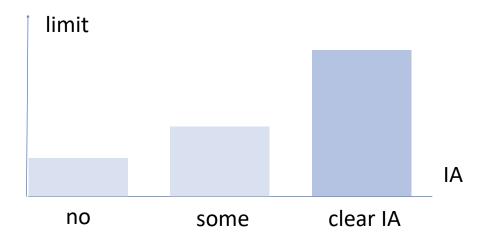
- Quantity of flow
- Quality of flow

Sort of dependency?

Better than linear, because getting critical mass creates externalities

Information advantage (IA) indicator: best informed trades = best risk/reward Dynamic tie between IA and limits press harder to realize high IA





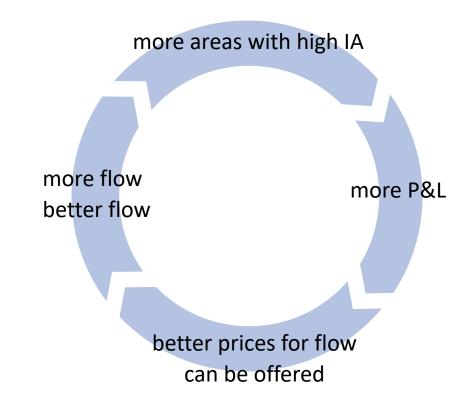
Model process-driven

Virtuous loop, built-in self-enhancement

Imperative: bad trading decisions cannot derail the loop: Trading model can only be process-driven = systematic

Features in our case:

- Sound and transparent concept, no black box
 - Replicating as close as possible collective mind of smartest clients where they vote with their money
- Advanced statistics powerful tool for all things risk
 - The best approach quintessentially statistical



Benefits

Management

Systematic statistical picture of markets

"These are buying, these are selling, these are conspicuously absent – and it means the following"

- Report each day
- The more activity generated the clearer the picture

Outside-the-box:

- Own prop as good indicator:
 - Everyone one way telling of upcoming short-term move against it
 - Sound basis proxy of street positioning
- Sales know their clients knowledge wasted
 - Systematic questionnaire (aggregated)
- Regular in-house technical / strategist signals can also be thought of as flow for additional overlay
 - Might be powerful combination

Capital efficiency:

- Freeing up capital through improved risk/reward
 - Bigger budget on same risk

Traders as driving force

Leaders in the client process

- Proactive push to bring in more flow
- No point in sales push if trader not interested enough
- Vice versa will always work. If sales see eager trader, will do their part

Higher interbank profile

Second-order, but still significant value

 No sales involved, any trader can become a specialist and attract interdealer flow

Further motivating portfolio-level market-making:

- Difficult to win focusing to close each deal at profit
- Statistical, portfolio approach a necessity
 (BE target over a sample of deals/clients etc)

Example of XTX Markets:

- 150 math/cs specialists
- no traders
- #3 FX player in 5 years (only JPM and UBS ahead)
- Illustrates direction
- In combination with bank-specific advantages can go a long way

Redefining the business for digital economy age

Breakthrough in data acquisition and processing



Redefining business as proactive data extraction and monetization









Incidentally, reminiscent of... digital economy leaders – technology sector

- Allows to leap-frog the competition
- Without need for any major overhaul

Thank you