

DECISION LOGIC OF EXECUTION

ALGORITHMS

DESIGN, DECISION LOGIC AND
CHARACTERISTICS OF EXECUTION
ALGORITHMS

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The bank for a changing world

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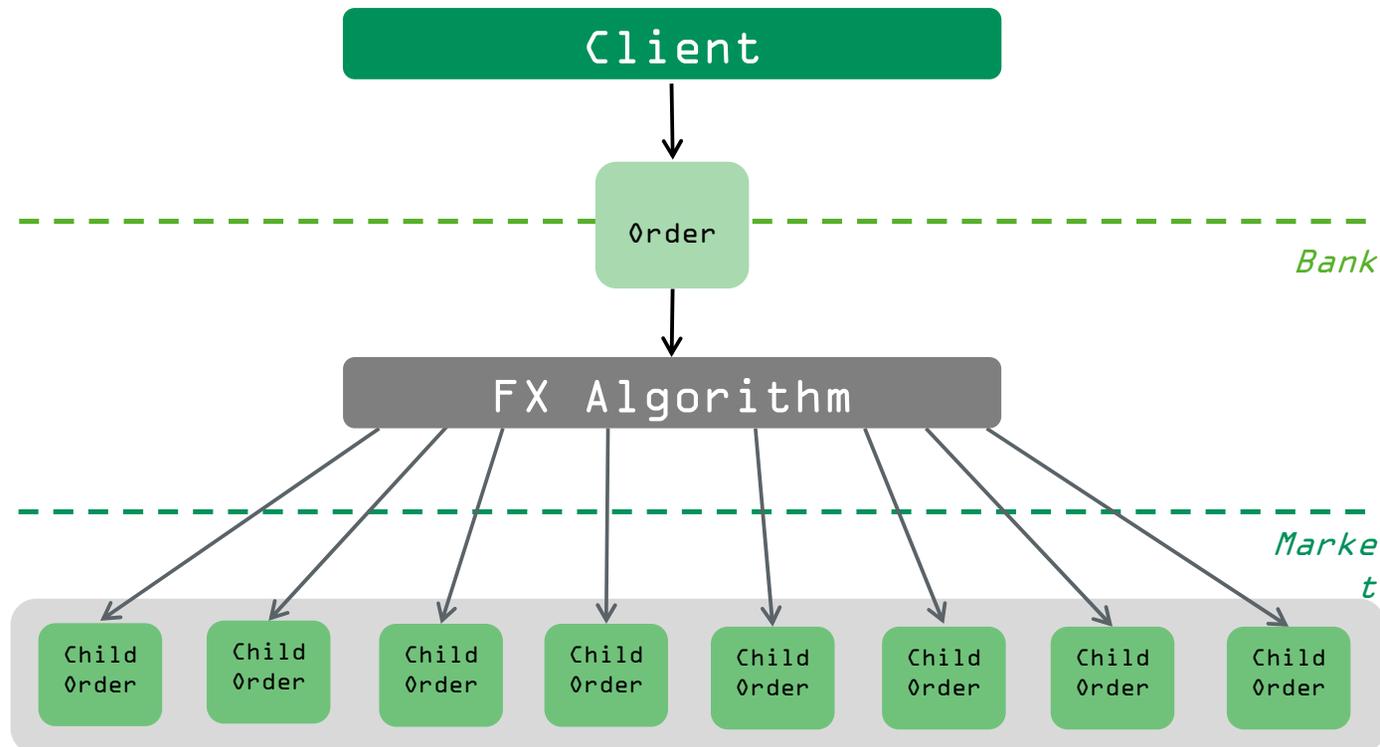
Evolution of Execution Algos



FX EXECUTION ALGORITHMS - WHAT ARE THEY?

What are execution algorithms?

- In financial markets, execution algorithms are primarily designed to manage the execution of orders on behalf of a client.
- Performance of algorithmic trading is dependent upon market conditions and risks inherent within interbank markets.



FX EXECUTION ALGORITHMS - WHY USE THEM?

Main objectives of an effective FX algo :

- Minimizes market impact
- Captures price improvement
- Reduces transaction costs
- Provide anonymity and confidentiality
- Supplies transparent post trade analysis
- Provides control directly to client

Why use Execution Algorithms?

- Control
 - Execution Algorithms gives the client more control over transactions to potentially reduce execution cost.
 - Most algorithms will allow the client to AMEND, SUSPEND, RESUME and CANCEL the order during execution.
 - The client can set-up an array of parameters for each algorithm. These include limits, start/stop times, speed of execution and many more.
- Increased transparency
 - A fully auditable, post-trade report can be generated instantaneously post-execution, which provides a full breakdown of the execution and is designed to meet the needs of client's internal execution policies.
- Increased confidentiality
 - Banks may structure the business so that algo orders are handled separately from the principal FX business



EVOLUTION OF EXECUTION ALGORITHMS



1st GENERATION:

- Basic TWAP (time-weighted) and VWAP (volume-weighted) rule sets.
- Modelled after Equities, but did not translate well to the OTC FX markets.

2ND GENERATION:

- Algorithms were re-designed to better fit the FX market landscape.
- Older strategies started to leave digital patterns and create market signals and impact, reducing their effectiveness

3rd GENERATION:

- Self-learning and predictive capabilities.
- Allows real-time adaptation by the algo of its execution behavior according to current market conditions.

4th GENERATION:

- Provides real-time feedback of execution effectiveness, during execution.
- Will allow traders to make dynamic decisions throughout the execution lifecycle.



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Typology of Execution Algos



TYPICAL ALGORITHM TYPES

Banks allow users to select a strategy based on their execution requirements. Some examples of the algorithms include:

A Fast aggressive

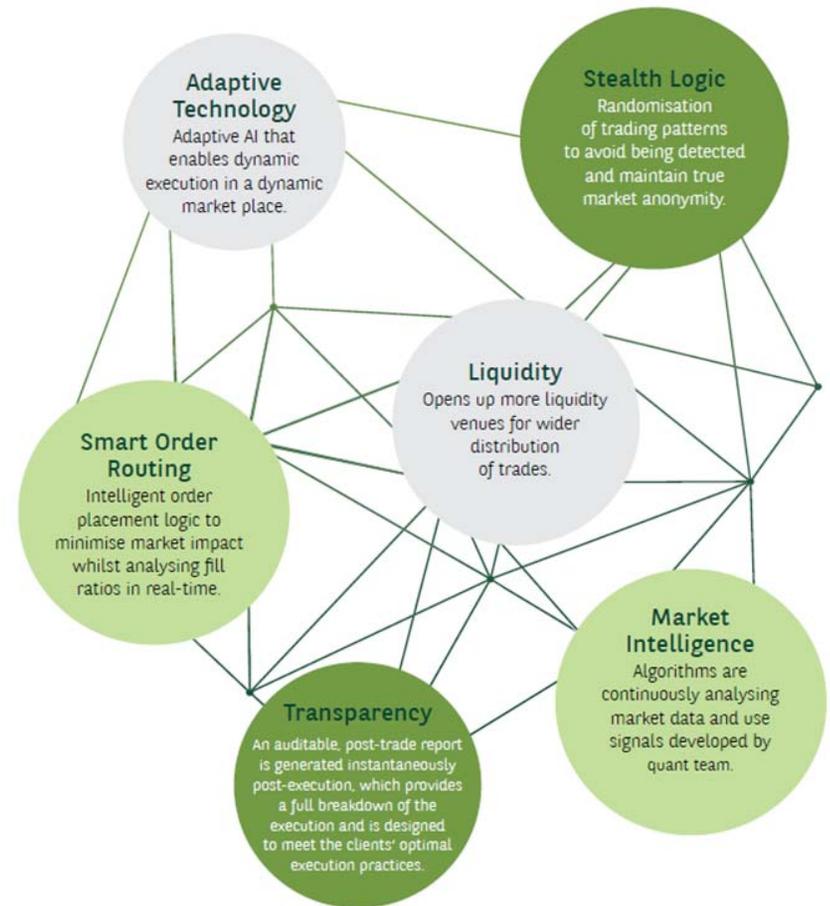
Best-suited for executing a position quickly into the market while minimizing the potential market impact. Usually features a logic that will sweep liquidity across all FX trading venues while minimizing any signals to the market.

B Passive Opportunistic

An adaptive algorithm which has been designed to constantly adapt to existing market conditions. It is tailored for maximizing spread capture by favoring passive executions, while aggressively capturing spread.

C Time based ('TWAP')

Designed as an time-based algorithm that looks to work an order on a user-defined schedule. It uses logic that enables it to react to market movements.



3

Execution vs. Liquidity Structure

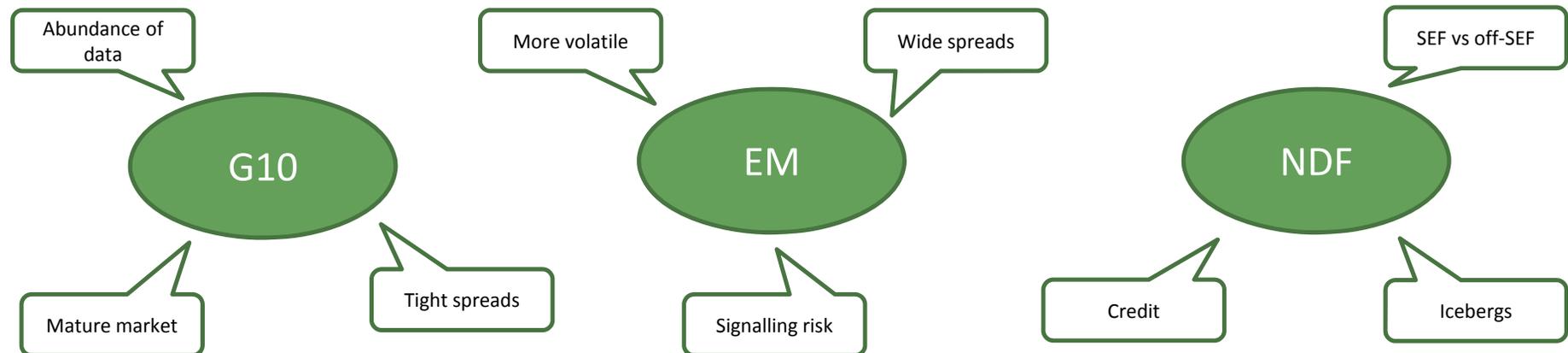


G10, EM & NDF

Liquidity structure and trading hours

- Nuances exist not only between currency buckets but individual currency pairs
- Understanding the liquidity regime is important
 - High / low liquidity
 - High / low volatility
- Execution algos use a combination of historical and live market data
- Considerations necessary when trading 'crosses' vs. trading 'direct'
- When to trade becomes an important decision
- No single price in FX - over 50+ venues to source FX Spot liquidity without any clear central market, what is fair value?
- Last look vs. non-last look

Liquidity Fragmentation



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