

**ANZ MARKETS**

**INFORMATION SHEET**  
**ALGORITHMIC FX EXECUTION**

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FOR INSTITUTIONAL,  
PROFESSIONAL AND WHOLESALE  
CLIENTS ONLY

MARCH 2023



# ANZ'S FOREIGN EXCHANGE (FX) EXECUTION ALGORITHMS

## WHAT IS AN FX EXECUTION ALGORITHM?

FX Execution Algorithms (FX Algos) are technology driven tools for accessing FX market liquidity.

FX Algos are used to minimise market impact, reduce transaction costs and optimise execution performance.

FX Algos execute trades based on parameters you define – including start time and limit price – as well as your chosen strategy and the prevailing market conditions.

## FX ALGO PRODUCTS

- ANZ currently has five FX Algo products available:
- TWAP: Time Weighted Price Average
  - Dynamic: Intelligent Implementation Shortfall
  - Peg: Spread capturing strategy that tracks the market
  - Passive: Market making strategy that never crosses the spread
  - Limit Participate: Trade at the nominated rate or better in market

## CONNECTIVITY

ANZ's FX Algos are accessible through the major multi-bank portals including Bloomberg, FXall, FX Connect and 360T.

## TCA REPORTING & EXECUTION CONSULTANCY

Detailed Transaction Cost Analysis (TCA) gives you the ability to evaluate and monitor execution performance.

Reporting is available through ANZ's TCA reporting.

## SMART ORDER ROUTER

ANZ's proprietary Smart Order Router (SOR) uses intelligent routing logic to source the most effective liquidity available across our diverse range of providers.

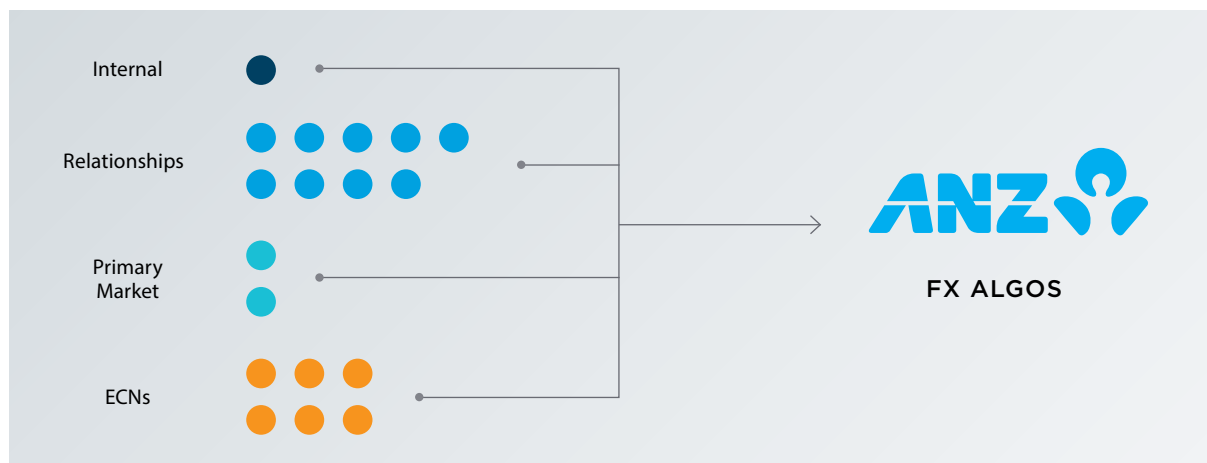
The majority of our providers are co-located with our trading engine, in a Cross-Connect data centre (LD5), giving ANZ FX Algos clients efficient access to the market with minimal latency and high reliability.

## SMART LIQUIDITY SEEKING

ANZ's ability to execute cross-currency orders through their underlying currency pairs, in conjunction with the tradeable cross liquidity itself, means better access to market liquidity and improved execution prices.

## LIQUIDITY SOURCES

ANZ's FX Algos allow our clients to tap into a fragmented FX market, through our range of providers, emphasising ANZ's strengths particularly in AUD, NZD, and Asian FX pairs.



# TIME WEIGHTED AVERAGE PRICE (TWAP)

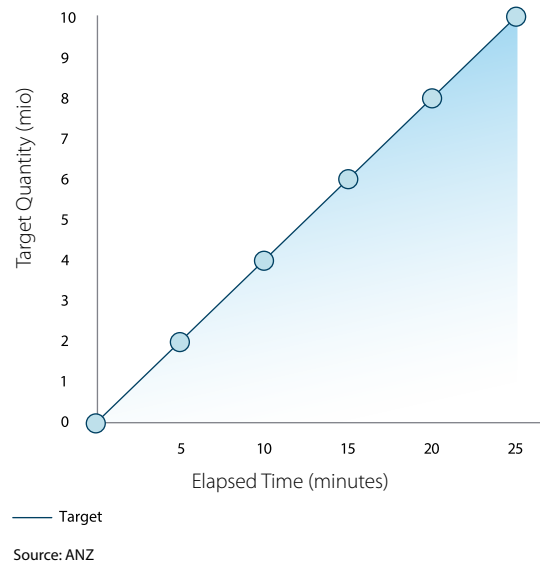
## HOW TWAP WORKS

TWAP executes trades at regular intervals between specified start and end times.

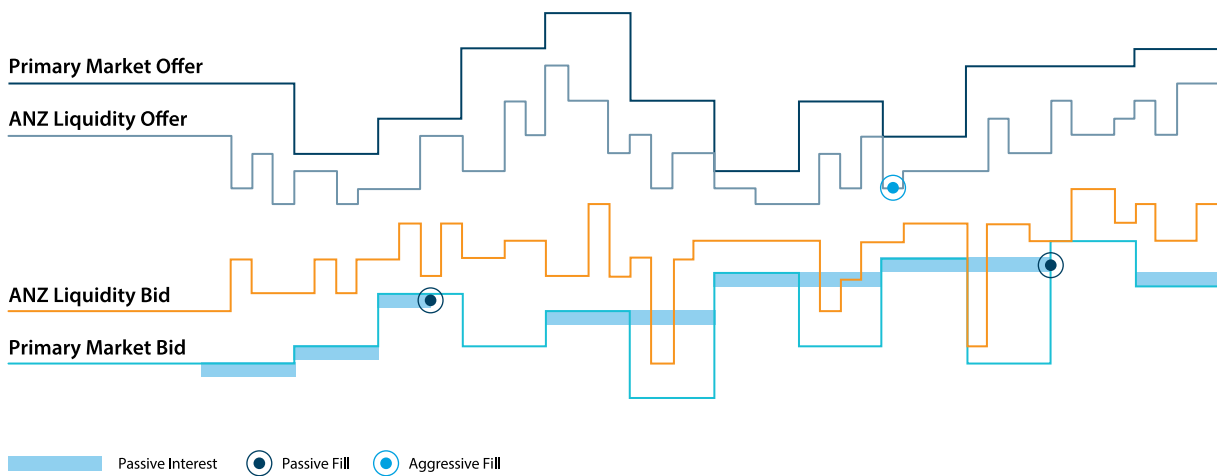
Options include the ability to catch up dynamically when the Algo is running behind its execution schedule or to extend the end time if the order is only partly filled.

Clients will have the ability to pause (and resume) their TWAP orders as well as the ability to amend TWAP strategy parameters while the order execution is in-progress.

## TWAP EXECUTION PROFILE



## HOW TWAP ORDERS INTERACT WITH OUR LIQUIDITY



Source: ANZ

# DYNAMIC INTELLIGENT IMPLEMENTATION SHORTFALL (DYNAMIC)

## HOW DYNAMIC WORKS

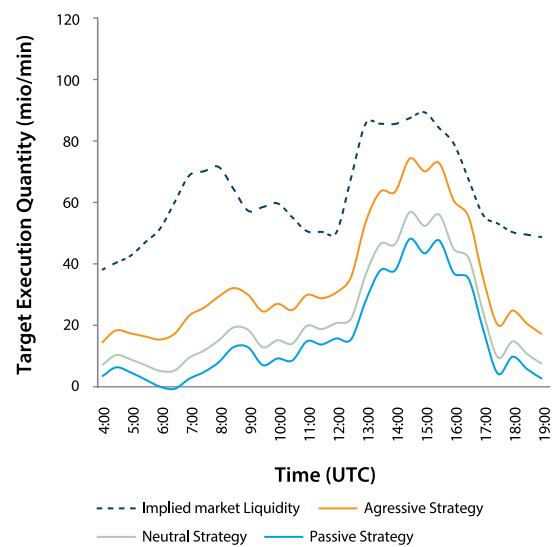
Dynamic uses a proprietary liquidity prediction model to adapt its behaviour in real time.

Order duration is decided by the algorithm based on execution goals, market volatility and liquidity conditions. It also takes into account market events and queueing dynamics.

Dynamic trades currency crosses by referencing relative market volatility of each component leg.

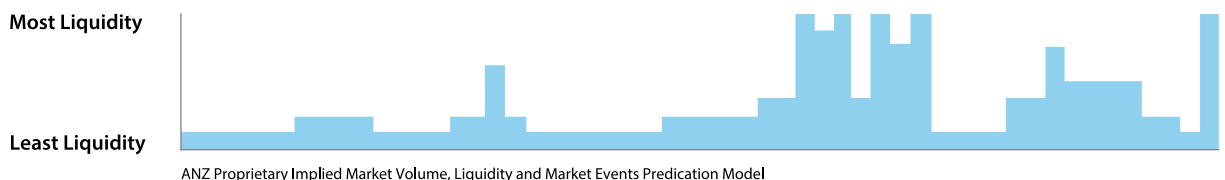
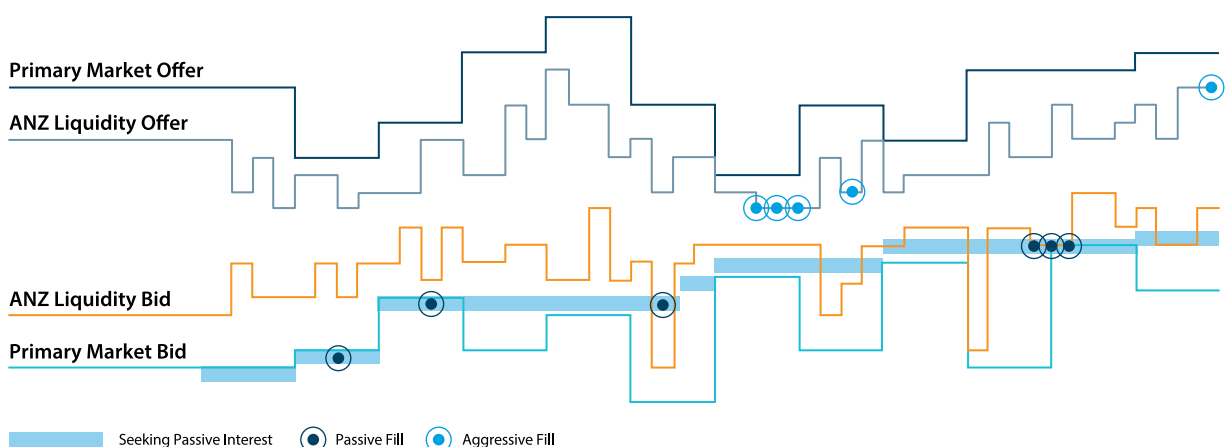
Liquidity seeking behaviour looks for liquidity interest and reacts to market conditions.

## DYNAMIC EXECUTION PROFILE



Source: ANZ

## HOW DYNAMIC ORDERS INTERACT WITH OUR LIQUIDITY



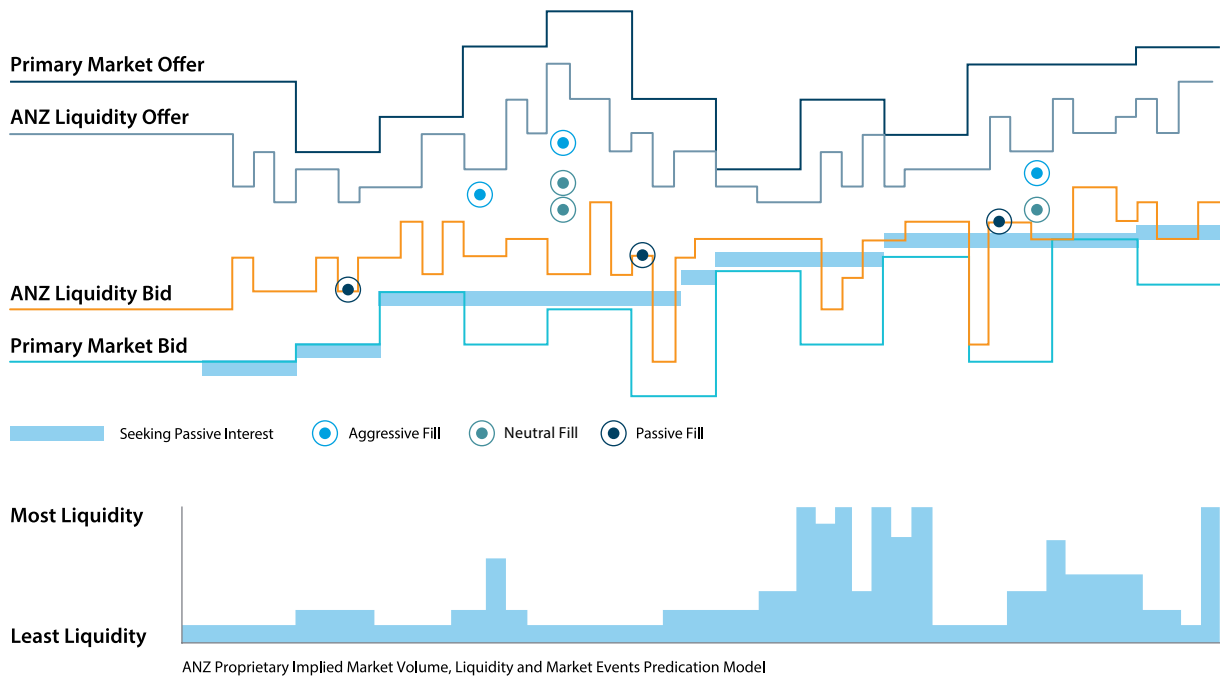
Source: ANZ

# PEG

## HOW PEG WORKS

Peg places a moving order that targets levels within the spread of ANZ's entire liquidity sources. Options on execution include how passive the order is, balancing spread capture versus speed of execution. Peg is most appropriate for interacting in a more passive fashion with the market and spread capture over speed of execution.

## HOW PEG ORDERS INTERACT WITH OUR LIQUIDITY



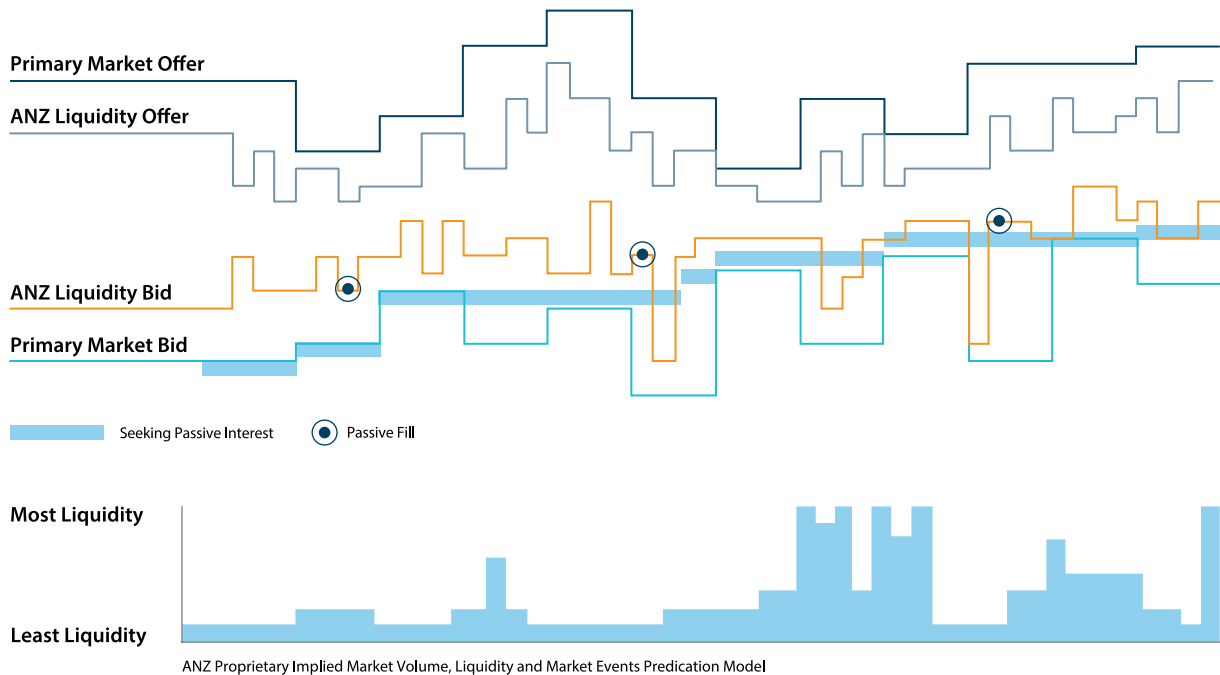
Source: ANZ

# PASSIVE

## HOW PASSIVE WORKS

Passive is a market making strategy that never crosses the spread. Passive is most appropriate for execution over a longer time windows where spread capture and minimizing market impact are favoured over speed of execution. Passive interest rests against ANZ's market liquidity sources.

## HOW PASSIVE ORDERS INTERACT WITH OUR LIQUIDITY



Source: ANZ

# KEY PARAMETERS

Parameter	Description	Applicable Strategy
Start Time	Choose to start now or at a scheduled time (Note: Future dated orders are not yet supported)	All
End Time	Choose from end of day (New York), timed duration or specified end time (Note 1: Multi-dated orders are not yet supported) (Note 2: End time can be extended for TWAP)	All
Direction	Direction of trade, dealt on terms and split leg cross support	All
Limit Price	Limits the completed order execution price (average price) to a specified rate	All
Execution Style	<p>Controls the execution velocity according to your urgency and execution goals</p> <p><b>DYNAMIC/PEG - EXECUTION STYLES THAT CAN BE APPLIED</b></p> <p><b>Aggressive</b> Use the Aggressive option when you believe the market may move unfavourably against you and you would like your order filled as quickly as possible whilst attempting to minimise market impact.</p> <p><b>Neutral</b> Use the Neutral option when you do not have a view on market direction and want to have your order executed with minimal market impact.</p> <p><b>Passive</b> Use the Passive option when you believe the market may move in your favour and want your order to execute over a longer time frame with minimal market impact.</p> <p><b>TWAP - EXECUTION STYLES THAT CAN BE APPLIED</b></p> <p><b>Market &amp; Peg</b> Choose to execute by waiting to be matched and crossing the spread.</p> <p><b>Market only</b> Choose to execute by crossing the spread only.</p>	TWAP, Dynamic, Peg
Include ANZ Liquidity	Choose whether or not to include ANZ liquidity	All
Initial Fill	Instruct the algorithm to trade a larger initial order to try to minimise possible implementation shortfall by trading more initially (Note: Initial fill is restricted to prevent market impact)	Dynamic only
Pause/Resume	All strategy parameters (except 'Direction') can be amendable during order-execution	All

## CONTACT

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or contact your ANZ Sales Representative

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