

# Global Execution Services

# Algorithmic Trading

*Making the world liquid*



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## Natixis Algorithmic Trading Strategies

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# Our Execution Services

Natixis delivers high value-added tailor-made services combining **Quant Research, Sales Trading and Execution expertise** in a team of 50 specialists with an outstanding understanding of local needs.

Beyond our focus on **European Markets and major MTF**, we are constantly improving our service offer and expanding our worldwide network. We can offer a wide diversity of services ranging from pure **Direct Market Access (DMA) to Direct Capital Access (DCA) and Direct Strategy Access (DSA)**.

Our expert proprietary algorithmic strategies provide opportunistic event-driven execution and robust risk control. They are back-tested daily and are continuously evolving.

Natixis algorithms are developed in-house using all Natixis execution and market expertise and embedded specific cash and derivatives techniques. Natixis Execution tools allow our clients to trade in line with the market, capture liquidity, and increase alpha return.

## WHAT WE OFFER

### We Provide Clients with Broad Access to Equity Markets

- Direct access or via external brokers
- Direct Market Access (DMA) / Sales Trading execution
- Long standing markets and alternative platforms
- Institutional, corporate and retail network clients
- Commission Sharing Agreement (CSA)

### Algorithmic Execution

- In-house algorithms with proven track records
- Direct Strategy Access (DSA)

### Direct Capital Access (DCA)

- Electronic access to cash equity market making
- Trading for size at best bid/offer

### Market Making – Cash Equity, ETF, Convertible Bond, Flow Derivatives

- Dedicated desks for each activity

### Leader in Order Routing for Retail Network and Small Asset Managers

### Synthetic prime brokerage

- Access to Natixis repo and financing capabilities
- Integrated with our execution facilities

### Smart Order Router

- Access to a broad spectrum of alternative platforms

### Internal Matching

- Recognised cross-network capacity

### Customized Single Order Execution

- 10 pan-European traders-dealers

### Program Trading – Pair Trading

- Customized product range

### Best Execution Analytics

- Market watch publications
- Client-based transaction cost analysis (TCA)
- Client assistance to formulate best execution strategies



# *Our Algorithmic Trading*

## **Simplicity**

Natixis algorithms are **easy to use** and require minimum user input: numerous parameters are automatically determined by the algorithms according to the characteristics and value of the targeted markets.

## **Innovation**

Our experts are constantly developing **prototypes** to improve algorithms already in production. We run **daily performance analyses** of our algorithms and focus our efforts on sub-optimal executions.

## **Flexibility**

Our algorithms are the result of **pure in-house developments**. This allows for a dynamic evolution of algorithms according to changing market conditions and Quant Research innovation. Such flexibility is also leveraged to offer **fast customisation and tailor-made solutions** to our clients.

## **Focus on multi-venue**

In order to cope with the fragmentation of modern financial markets, Natixis algorithms are **designed to trade on any available source of liquidity** and our benchmarked algorithms integrate **multimarket price sources**.

The opportunity to connect to and trade on new external and internal liquidity pools is permanently screened by our expert team with a view to finding the **perfect balance between latency, coverage and costs** while maximising **execution quality**. Our execution team can also access third party algorithms for specific purposes such as **liquidity hunting on dark pools**.

## **Integration of standard order types**

In addition to our **Price and Volume Driven Algorithms**, Natixis Equity Markets has leveraged its trading and IT infrastructure to offer the whole range of standard orders (**Market on Open/Close, Peg, Iceberg**).



## Natixis Algorithmic Trading Strategies (Volume Driven Algorithms)

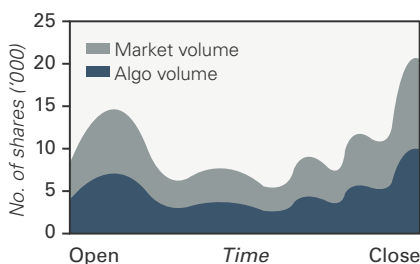
# 1.0 Volume Weighted Average Price

A strategy that releases waves into the markets (Primary exchange and MTFs) using stock specific historical volume profiles in order to execute the order close to the **Volume Weighted Average Price (VWAP)** over a chosen period of time, with some randomization to reduce gaming risks.

The **VWAP** algorithm aims to execute a global quantity at an average price close to the Market Volume Weighted Average Price over a defined period of time.

### CHARACTERISTICS

**VWAP is to be favoured in the following cases**



- To limit the market impact by executing a large quantity not too quickly.
- To execute totally an order (without guarantee if the order is limited).
- Suitable for a liquid security with a stable volume profile from one day to the next.

### Main Parameters

	Description
<b>Start / End time</b>	By default, start time is at reception of the order, potentially including market open if received before the opening auction.
<b>Trading style</b>	Conservative, neutral and aggressive. The conservative option suits a favorable price variation while Aggressive option applies better to an adverse price trend.

### Optional Parameters

	Description
<b>%Volume</b>	The strategy will limit the participation rate to this maximum volume constraint. Order may not be completed. As soon as the limit constraint is respected, the strategy spreads the volume over a short period in order to reduce market impact.
<b>Price limit</b>	The strategy will apply the price limit to orders. Orders may not be completed. As soon as the limit constraint is respected, the strategy will spread the volume over a short period in order to reduce market impact.
<b>Would price</b>	The strategy will aim to complete the order if the stock trades at the Would price or better. The use of the Would option may significantly deviate the execution price from the benchmark price.



## Natixis Algorithmic Trading Strategies (Volume Driven Algorithms)

# 1.0 Volume Weighted Average Price

### VWAP Algorithm Specificities


During the related period, the algorithm regularly sends orders to the market according to a distribution function of the representative curve of the considered stock historical volumes.

The period is broken down into execution intervals, the duration of which is determined optimally by the algorithm to reduce the market impact. Trading strategy will adapt to real time market conditions in order to limit and reduce the risk of price deviations.

### To go further...

Adjustments are automatically applied to the execution strategy if the algorithm detects significant spreads between the price estimations and/or volumes and the intraday prices/volumes. The algorithm uses iceberg orders on exchanges where this order type is available.

### VWAP Parameters



Parameters : VWAP

Quantity :

Start Time : 09:00:00

End Time : 18:00:00

Limit Price :

Would Price :

% Volume :

Trading Style : NEUTRAL

OK Cancel



## Natixis Algorithmic Trading Strategies (Volume Driven Algorithms)

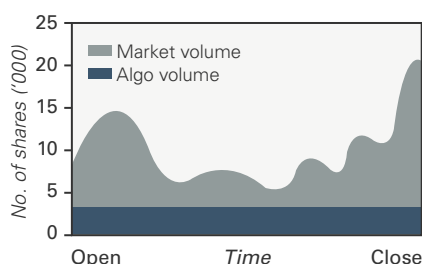
# 2.0 Time Weighted Average Price

A wave trading strategy that releases waves into the markets (Primary exchange and MTFs) using evenly divided time buckets between start and end time, with some randomization to reduce gaming risks.

The **Time Weighted Average Price (TWAP)** algorithm aims to execute a quantity by following a linear volume allocation profile.

### CHARACTERISTICS

**TWAP is to be favoured in the following cases**



- Anticipation of high volume periods with adverse prices (TWAP better than VWAP in that case).
- To limit the market impact by not executing a large quantity too quickly.

### Main Parameters

	Description
<b>Start / End time</b>	By default, the start time is at reception of the order, potentially including market open if received before the opening auction.
<b>Trading style</b>	Conservative, neutral and aggressive. The conservative option suits a favorable price variation while the aggressive option applies better to an adverse price trend.

### Optional Parameters

	Description
<b>%Volume</b>	The strategy will limit the participation rate to this maximum volume constraint. Order may not be completed. As soon as the limit constraint is respected, the strategy spreads the volume over a short period in order to reduce market impact.
<b>Price limit</b>	The strategy will apply the price limit to orders. Orders may not be completed. As soon as the limit is respected, the strategy will spread the volume over a short period in order to reduce market impact.
<b>Would price</b>	The strategy will aim to complete the order if the stock trades at the Would price or better. The use of the Would option may significantly deviate the execution price from the benchmark price.

## Natixis Algorithmic Trading Strategies (Volume Driven Algorithms)

# 2.0 Time Weighted Average Price

### TWAP Algorithm Specificities

During the related period, the algorithm regularly sends the markets equal quantities of orders to execute. In order to avoid suffering a sudden temporary market variation, a maximum percentage of participation might be added.

The execution is made so as to minimize market impact. The user can act on the impact's level by configuring the level of aggressiveness (on the price). When a limit price is reached, executions are suspended as long as the limit is not met. The linear allocation profile of the executed quantities might not be respected (the price condition has priority over the volume) and the order may not be completed at the end of the period.

### To go further...

Execution Strategy adjustments are automatically applied if the algorithm detects significant spreads between price and/or volume estimations and intraday prices/volumes. The algorithm uses iceberg orders on exchanges where this order type is available.

### TWAP Parameters

**Parameters : TWAP**

Quantity :

Start Time :

End Time :

Limit Price :

Would Price :

% Volume :

Trading Style :

OK Cancel





# Natixis Algorithmic Trading Strategies (Volume Driven Algorithms)

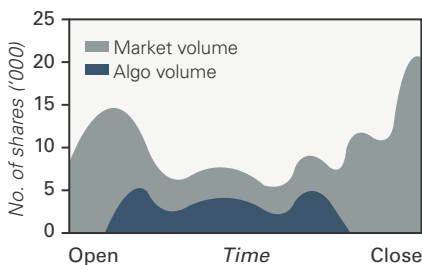
## 3.0 Participate

The **Participate** strategy, also known as Percentage of Volume (POV) trades at a user defined percentage of the current market volumes on primary exchanges and MTFs until the order is completed or market closes. This strategy can be strict or dynamically adapted to market conditions.

**Participate** algorithm aims to follow (live) the exchange volumes on the market by respecting a target level of participation.

### CHARACTERISTICS

**Participate is to be favoured in the following cases**



- Satisfied with current prices.
- Willing to limit the market impact on the execution period.

### Main Parameters

	Description
<b>Start / End time</b>	By default, start time is at reception of the order, potentially including market open if received before the opening auction. End time will apply if the order has not been completed before.
<b>Trading style</b>	Conservative, neutral and aggressive. The conservative option suits a favorable price variation while the aggressive option applies better to an adverse price trend.
<b>%Volume</b>	Targeted participation rate.

### Optional Parameters

	Description
<b>Price limit</b>	The strategy will apply the price limit to orders. Orders may not be completed. Volume traded outside the price limit is not taken into account by the strategy.
<b>Would price</b>	The strategy will attempt to complete the order if the stock trades at the Would price or better. The use of the Would option may significantly deviate the final participation rate from the targeted participation rate.



## Natixis Algorithmic Trading Strategies (Volume Driven Algorithms)

### 3.0 Participate

#### Participate Algorithm Specificities

Until the quantity to be executed is completed, the algorithm sends orders to the market to be executed, according to the defined participation ratio, and according to the volume traded in the markets.

In order to adjust the execution to market conditions, the algorithm may get behind/ahead the level of target participation, but still respecting a maximum spread (which is determined according to the security, etc...).

Furthermore, trading style is customizable. If you consider that favorable market conditions should apply, then select the conservative trading style. In the case of adverse market condition, the aggressive style would suit better. Executions are suspended as long as the limit is not respected.

This algorithm does not guarantee completion of the order on the current day (the risk is greater if the order is limited).

#### To go further...

A possible delay is gradually caught up to limit the market impact.

#### Participate Parameters

**Parameters : Participate**

Quantity :

Start Time :

End Time :

% Volume :

Limit Price :

Would Price :

Trading Style :

OK Cancel



# Natixis Algorithmic Trading Strategies (Volume Driven Algorithms)

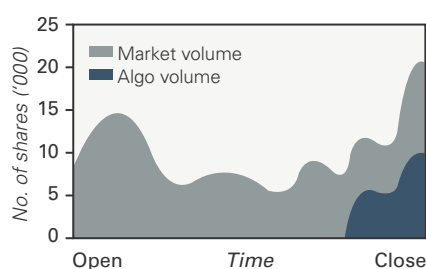
## 4.0 Target Close

The **Target Close** strategy manages the market impact of the order on the closing price by defining the strategy's optimal start time based on historical volumes and real-time market conditions.

The strategy is designed to require minimum input from user.

### CHARACTERISTICS

Target Close is to be favoured in the following cases



- This strategy allows the user to participate in auction phases without any concern about the opening/closing hours as well as auction order characteristics.
- Reduce market impact on closing price of significant orders while minimizing market risks.

### Main Parameters

	Description
<b>% Intraday volume</b>	Maximum intraday volume participation rate estimated from historical intraday volumes.
<b>% Close volume</b>	Maximum auction volume participation rate estimated from historical auction volumes.

### Optional Parameters

	Description
<b>Price limit</b>	The strategy will apply the price limit to orders. Orders may not be completed. Volume traded outside the price limit is not taken into account by the strategy.



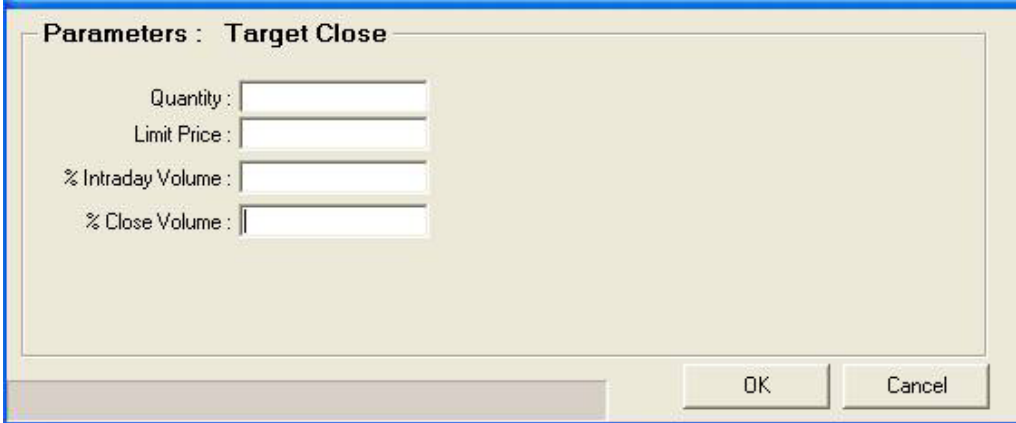
## Natixis Algorithmic Trading Strategies (Volume Driven Algorithms)

### 4.0 Target Close

#### Target Close Algorithm Specificities

According to specific market auction characteristics, the strategy uses the Stock Exchange standards to send orders. This strategy will automatically define the optimal start of the order, will use the **VWAP** strategy during continuous trading and send the remaining quantity during the auction, while targeting % volume parameters based on historical data.

#### Target Close Parameters



Parameters : Target Close

Quantity :

Limit Price :

% Intraday Volume :

% Close Volume :

OK Cancel



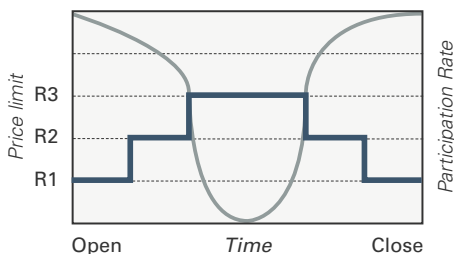
# Natixis Algorithmic Trading Strategies (Price Driven Algorithms)

## 5.0 Steps

The **Steps** strategy trades at a user defined percentage of the primary exchange and MTFs volumes and increases or decreases this participation rate when the stock price reaches user defined levels.

### CHARACTERISTICS

Steps is to be favoured in the following cases



— Stock price  
- - - Algo Participation

- The strategy makes it possible to simulate other algorithm behaviours such as Momentum, Value or Implementation Shortfall while offering better controls over specific constraints.

### Main Parameters

	Description
<b>Start / End time</b>	By default, start time is at reception of the order, potentially including market open if received before the opening auction. EndTime will apply if the order has not been completed before.
<b>% Volume</b>	Targeted participation rate.
<b>Trading style</b>	Conservative, neutral and aggressive. The conservative option suits a favorable price variation while the aggressive option applies better to an adverse price trend.

### Optional Parameters

	Description
<b>Price limit</b>	The strategy will apply the price limit to orders. Orders may not be completed. Volume traded outside the price limit is not taken into account by the strategy.
<b>Direction / Price level / Ratio %</b>	Direction is either above or below. New participation rate should apply when the stock price is "Above or Below" the Price Level. Maximum consistency controls are applied to these parameters at the start of the strategy. The user can define up to 3 ranges.





## Natixis Algorithmic Trading Strategies (Price Driven Algorithms)

# 5.0 Steps

### Steps Parameters

Parameters : Steps			
Quantity :	<input type="text"/>	Direction 1 : Above <input type="button" value="v"/>	Trading Style : NEUTRAL <input type="button" value="v"/>
Start Time :	<input type="text" value="09:00:00"/>	PriceLevel 1 :	<input type="text"/>
End Time :	<input type="text" value="18:00:00"/>	Ratio 1 (%) :	<input type="text"/>
% Volume :	<input type="text"/>	Direction 2 : Below <input type="button" value="v"/>	
Limit Price :	<input type="text"/>	PriceLevel 2 :	<input type="text"/>
		Ratio 2 (%) :	<input type="text"/>
		<input type="button" value="OK"/>	<input type="button" value="Cancel"/>



## Natixis Algorithmic Trading Strategies (Price Driven Algorithms)

### 6.0 Momentum/Value

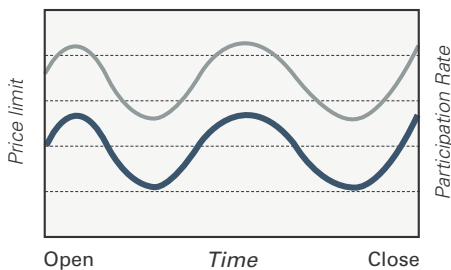
The two strategies trade at a targeted percentage of the current volumes on primary exchanges and MTFs, and dynamically adjust this participation rate to stock price variations benchmarked to a reference price.

The reference price can be automatically defined by the strategy or entered by the user. The **Value** Strategy will increase the participation rate when the stock price moves favorably and decrease it when the stock price moves away from the reference price.

The **Momentum** Strategy adopts the opposite behaviour.

#### CHARACTERISTICS

Momentum/Value is to be favoured in the following cases



- The Value Strategy suits mean-reverting trading belief.
- The Momentum strategy suits trend-following belief.

— Stock price  
— Algo Participation

#### Main Parameters

	Description
<b>Start / End time</b>	By default, start time is at reception of the order, potentially including market open if received before the opening auction. EndTime will apply if the order has not been completed before.
<b>Trading style</b>	Conservative, neutral and aggressive. The conservative option suits a favorable price variation while the aggressive option applies better to an adverse price trend.

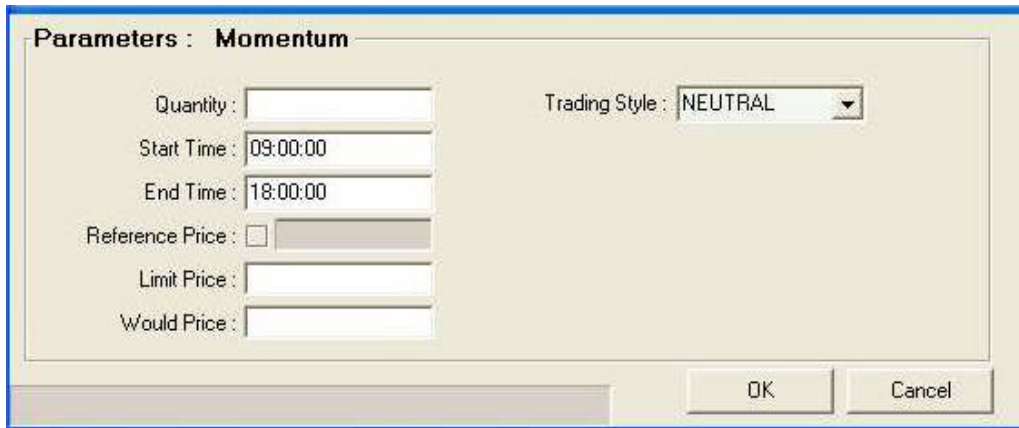
#### Optional Parameters

	Description
<b>Price limit</b>	The strategy will apply the price limit to orders. Orders may not be completed. Volume traded outside the price limit is not taken into account by the strategy.
<b>Would price</b>	The strategy will attempt to complete the order if the stock trades at the Would price or better.
<b>Reference price</b>	The strategy replaces the mid-point bid offer with the defined reference price as the benchmark price.

## Natixis Algorithmic Trading Strategies (Price Driven Algorithms)

# 6.0 Momentum/Value

### Momentum/Value Parameters



The screenshot shows a dialog box titled "Parameters : Momentum". It contains several input fields and a dropdown menu:

- Quantity :
- Start Time :
- End Time :
- Reference Price :
- Limit Price :
- Would Price :
- Trading Style :  (dropdown menu)

At the bottom right, there are two buttons: "OK" and "Cancel".



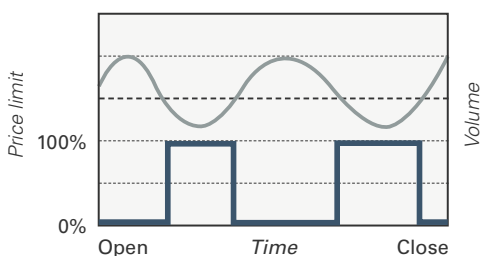
# Natixis Algorithmic Trading Strategies (Price Driven Algorithms)

## 7.0 Hunt

The **Hunt** strategy provides the opportunity to execute an order on the primary exchange and MTFs while never being placed in the market and thus to minimize information leakage.

### CHARACTERISTICS

Hunt is to be favoured in the following cases



— Stock price  
- - - Algo Participation

- Suitable for illiquid instruments.
- To execute an order at a limit price without being visible to the market.

### Main Parameters

	Description
<b>Start / End time</b>	By default, start time is at reception of the order, potentially including market open if received before the opening auction. EndTime will apply if the order has not been completed before.
<b>Price limit</b>	The strategy reacts to liquidity offered at the price limit or better.

### Optional Parameters

	Description
<b>Minimum quantity</b>	The strategy will react to favorable price only if available liquidity is above the Minimum Quantity so as to reduce information leakage for small quantities.

### Hunt Parameters

**Parameters : Hunt**

Quantity :

Start Time :

End Time :

Limit Price :

Minimum Quantity :

# Natixis Algorithmic Trading Strategies (Price Driven Algorithms)

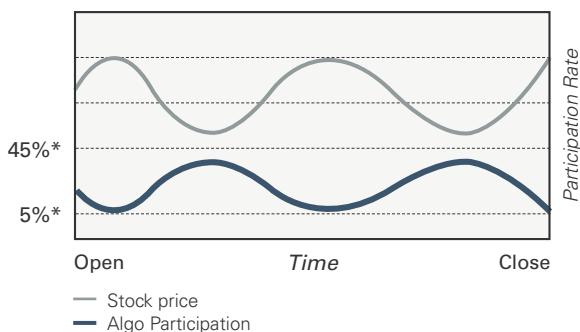
## 8.0 Implementation Shortfall

The objective of **Implementation Shortfall** is to minimize the execution cost of an order. The aim is to try trading off the real time market impact cost of the order and the opportunity cost of delayed execution. The strategy will increase the targeted participation rate when the stock price moves favorably and decrease it when the stock price moves adversely.

The strategy is designed to trade on primary exchanges and MTFs, requiring minimum input from the user.

### CHARACTERISTICS

Implementation Shortfall is to be favoured in the following cases



- Order benchmarked to the current stock price (bid-offer mid price) with decent liquidity.
- Orders where you want to control market impact\*\* while benefiting from favorable conditions (as regards price and volume variations).

\* Participation limit – excluded from limit & would price  
\*\* to specific benchmark

### Main Parameters

	Description
<b>Start / End time</b>	By default, start time is at reception of the order, potentially including market open if received before the opening auction. EndTime will apply if the order has not been completed before.
<b>Trading style</b>	Conservative, neutral and aggressive. The conservative option suits a favorable price variation while the aggressive option applies better to an adverse price trend.

### Optional Parameters

	Description
<b>Price limit</b>	The strategy will apply the price limit to orders. Orders may not be completed. Volume traded outside the price limit is not taken into account by the strategy.
<b>Would price</b>	The strategy will aim to complete the order if the stock trades at the Would price or better.
<b>Reference price</b>	The strategy replaces the mid-point bid offer with the defined reference price as the benchmark price.



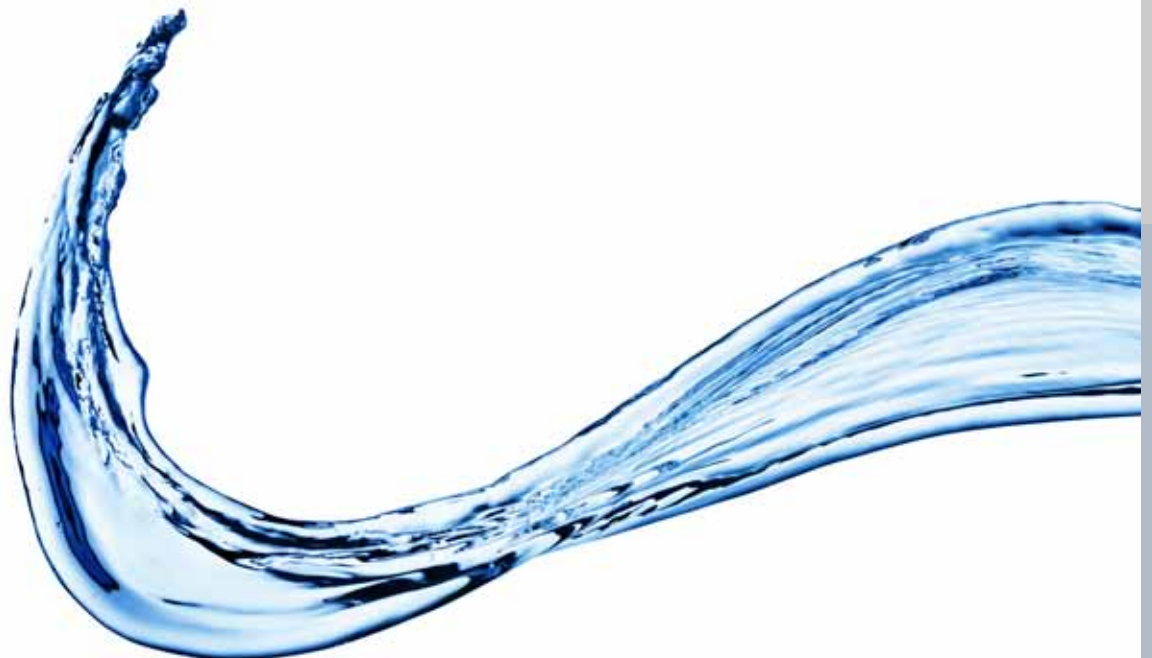
## Natixis Algorithmic Trading Strategies (Price Driven Algorithms)

# 8.0 Implementation Shortfall

### Implementation Shortfall Parameters

**Parameters : Implementation Shortfall**

Quantity :	<input type="text"/>	Trading Style :	NEUTRAL <input type="button" value="v"/>
Start Time :	09:00:00		
End Time :	18:00:00		
Reference Price :	<input type="checkbox"/> <input type="text"/>		
Limit Price :	<input type="text"/>		
Would Price :	<input type="text"/>		



# Natixis Equity Markets Global Execution Services

## Natixis Execution Algorithms in a Nutshell

Do you want to know more?  
 Our Algorithmic Trading Expert Team will be pleased to answer your questions.  
 Call us on +33 (0) 1 58 55 92 66 / 06 99 / 05 09 (Paris) 0800 917 15 47 (London)  
 or email to [dsa.support@natixis.com](mailto:dsa.support@natixis.com)

**1 Variety**  
 8 algorithms, 1 SOR, a range of order types

**2 Simplicity**  
 Automatic setting of most parameters

**3 Flexibility**  
 In-house developments means fast customisation

**4 Accessibility**  
 Direct access on clients' gateways via FIX

**5 Performance**  
 Daily analysis and backtests

**6 Defragmentation**  
 Multi-venue trading and benchmarks

### Volume Driven Algorithms

Used to control the execution rate. Better suited for long duration orders – from 30 min to 1 day

	VWAP	TWAP	PARTICIPATE	TARGET CLOSE
<b>Performance Diagram</b>				
<b>Strategy Objective</b>	<ul style="list-style-type: none"> <li>Aims to target the VWAP (Volume Weighted Average Price) over a defined period not exceeding the day.</li> </ul>	<ul style="list-style-type: none"> <li>Aims to execute trades evenly based (on time) not volume over a defined period not exceeding the day.</li> </ul>	<ul style="list-style-type: none"> <li>Aims to execute trades at a user predefined participation rate based on real-time volume until the order is completed.</li> </ul>	<ul style="list-style-type: none"> <li>Aims to execute trades targeting the closing price while monitoring the market impact on the closing auction by beginning the order before the auction if needed.</li> </ul>
<b>Usage</b>	<ul style="list-style-type: none"> <li>VWAP target orders.</li> <li>Passive strategy in order to minimize market impact on large orders.</li> <li>Liquid securities with low volume variance market impact on large orders.</li> </ul>	<ul style="list-style-type: none"> <li>Anticipation of unfavorable prices during high volume periods.</li> <li>Alternative strategy to VWAP but with a flat volume profile.</li> <li>Liquid securities with high volume variance.</li> </ul>	<ul style="list-style-type: none"> <li>Execution in line with real-time market volume with a trade price close to the VWAP over the execution period.</li> <li>Satisfied with current market price but willing to reduce market impact over the execution period.</li> </ul>	<ul style="list-style-type: none"> <li>Closing prices target orders.</li> <li>Orders with the ability to minimize market impact over the closing price.</li> </ul>
<b>Main Parameters</b>	<ul style="list-style-type: none"> <li>Limit price</li> <li>Percentage of volume</li> <li>Would</li> <li>Trading style: conservative, neutral, aggressive</li> </ul>	<ul style="list-style-type: none"> <li>Limit price</li> <li>Percentage of volume</li> <li>Would</li> <li>Trading style: conservative, neutral, aggressive</li> </ul>	<ul style="list-style-type: none"> <li>Limit price</li> <li>Percentage of volume: main parameter</li> <li>Would</li> <li>Trading style: conservative, neutral, aggressive</li> </ul>	<ul style="list-style-type: none"> <li>Limit price</li> <li>Percentage of volume: available for intraday and auctions</li> </ul>
<b>Typical Order/Example</b>	<ul style="list-style-type: none"> <li>Buy 150,000 shares over the day including open and closing auctions with a volume limit of 20%.</li> </ul>	<ul style="list-style-type: none"> <li>Buy 150,000 shares spread evenly between open and closing auctions with a volume limit of 20%.</li> </ul>	<ul style="list-style-type: none"> <li>Buy 150,000 shares at a participation rate of 25% not exceeding a price 40.20 with a neutral trading style until completed or market closes.</li> </ul>	<ul style="list-style-type: none"> <li>Buy 150,000 shares targeting the closing price without exceeding 25% of the estimated volume during the execution period.</li> </ul>
<b>Main Behaviour</b>	<p><b>Volume and price delay</b></p> <ul style="list-style-type: none"> <li>When a volume or price limit is set, trades are suspended as long as the limit condition is not met.</li> <li>As soon as the limit is reached, the volume delay is spread over a short period of time</li> </ul> <p><b>Volume profile calculation</b></p> <ul style="list-style-type: none"> <li>A volume profile for 2,500 securities is generated at least every day based on historical data using proprietary models.</li> <li>Confidence level indicators are generated in order to analyse each security volume profile variance.</li> </ul>		<p><b>Price delay</b></p> <ul style="list-style-type: none"> <li>When a volume or price limit is set, trades are suspended as long as the limit condition is not met.</li> <li>As soon as the limit is reached, the volume delay is gradually caught up in order to reduce market impact.</li> </ul>	<p><b>Execution strategy</b></p> <ul style="list-style-type: none"> <li>Historical volumes are used to define the start time and volume placed at the closing auction.</li> <li>Although minimum input is required, several execution strategies for trading before the closing auction are proposed.</li> </ul>

### Price Driven Algorithms

Can execute 100% of an order very rapidly if market conditions are compatible with order parameters

STEPS	MOMENTUM / VALUE	HUNT	IMPLEMENTATION SHORTFALL
<ul style="list-style-type: none"> <li>Aims to execute trades at multiple user predefined participation rates subject to market price bandwidth.</li> <li>Orders with flexibility on the participation rate to step up and down at user defined price levels.</li> </ul>	<ul style="list-style-type: none"> <li>Momentum strategy aims to minimize the spread between the execution price and the arrival price while assuming that the stock price will remain on its trend.</li> <li>Value strategy aims to minimize the spread between the execution price and the arrival price while assuming that the stock price will follow a mean reverting behaviour.</li> <li>Large orders targeting the arrival price while assuming a belief on the stock price's future trend.</li> </ul>	<ul style="list-style-type: none"> <li>Aims to execute all liquidity proposed at a better price than the limit price while not being visible in the market.</li> <li>Orders where information leakage would be very detrimental.</li> <li>Particularly suited to illiquid stocks.</li> </ul>	<ul style="list-style-type: none"> <li>Aims to minimize the spread between the execution price and the arrival price.</li> <li>Large orders targeting the arrival price while monitoring the impact cost.</li> <li>To reduce impact on liquid stocks and improving performance compared to a constant participation rate.</li> </ul>
<ul style="list-style-type: none"> <li>Limit price</li> <li>Percentage of volume: multiple possibilities offered</li> <li>Would</li> <li>Trading style: conservative, neutral, aggressive</li> </ul>	<ul style="list-style-type: none"> <li>Limit price</li> <li>Would</li> <li>Trading style: conservative, neutral, aggressive</li> <li>Reference price</li> </ul>	<ul style="list-style-type: none"> <li>Limit price</li> <li>Minimum quantity</li> </ul>	<ul style="list-style-type: none"> <li>Limit price</li> <li>Would</li> <li>Trading style: conservative, neutral, aggressive</li> <li>Reference price</li> </ul>
<ul style="list-style-type: none"> <li>Buy 150,000 shares at a participation rate of 25% below 41.00. Increase the participation rate to 30% below 40.00 and stops above 41.40.</li> </ul>	<ul style="list-style-type: none"> <li>Buy 150,000 shares targeting the arrival price subject to an aggressive trading style, increase the participation rate when the price moves away from the arrival price.</li> </ul>	<ul style="list-style-type: none"> <li>Buy 150,000 shares below 41.00 without being in the market. React to any offer price below 41.00 and with a minimum quantity of 100 shares.</li> </ul>	<ul style="list-style-type: none"> <li>Buy 150,000 shares targeting the arrival price subject to an aggressive trading style. Try to complete the order below 40.20.</li> </ul>
<p><b>Model monitoring</b></p> <ul style="list-style-type: none"> <li>Initial controls are implemented to validate the consistency in participation rates and price levels.</li> </ul> <p><b>Execution strategy</b></p> <ul style="list-style-type: none"> <li>Similar behaviour to the Participate strategy with several levels of participation rates.</li> </ul>	<p><b>Momentum quantitative model</b></p> <ul style="list-style-type: none"> <li>The algorithm will automatically define in real-time the participation rate balancing the impact risk and the market risk.</li> <li>In a favorable price move, the algorithm will substantially decrease the participation rate in order to benefit from the favorable trend.</li> </ul>	<p><b>Price change</b></p> <ul style="list-style-type: none"> <li>Dynamic triggers as mid-point or price within the spread can be defined in order to reduce information leakage to the market.</li> </ul>	<p><b>Quantitative model</b></p> <ul style="list-style-type: none"> <li>The algorithm will automatically define in real time the participation rate balancing the impact risk and the market risk.</li> <li>In a favorable price move, the algorithm will substantially increase the participation rate.</li> </ul>

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