

1. Product Overview

1.1. Description

RateRoller Pro is a powerful and innovative financial tool meticulously crafted to empower brokers. This sophisticated tool goes beyond conventional functionality and analysis, offering a comprehensive suite of features that revolutionize how brokers engage with swaps implementation, by allowing the customization of swap values, this tool aim directly to increase the profitability of the brokers by a sufficient margin set.

2. Technology stack:

The tool will be a web sui where the user will be able to control and use different functionalities.

Required skilled:

- 1- MT Man-API
- 2- DB Management
- 3- Fullstack

3. Component Details

3.1. Raw Swap Reader

The Raw Swap Reader component allows users to upload raw swap data and prepares it to fit their requirements. It includes the ability to change swap types from points to percentages and vice versa.

Key functions:

1. Data upload: allowing the user to easily upload swaps received from the LP using a CSV file
2. Swap Conversion: calculates the expected value based on the Raw LP swaps in USD then converts it to the equivalent in the other charging mode (point/percentage) giving the consistency and compatibility with the broker preferences.
3. Data Validation: upon calculating the expected value, the component flags any rates that based on the tolerance profile set by the broker

3.2. Markup Profile

The Markup Profile component enables brokers to add additional profit by adjusting swap rates. Markup values can be specified for both long and short swaps.

Key functions:

1. Data upload: allowing the user to upload the markup values in either mode (point or percentage) using an CSV file
2. Markup config: allowing the user to configure bespoke markups per symbol on either direction long or short.
3. Real-time adjustment: the broker can adjust the values of the markup profile immediately to suit his needs

3.3. Skewing Profile

The Skewing Profile component allows brokers to skew swap rates based on configurable profiles. The skewing can be based on the total exposure used by a particular rule.

Key functions:

1. Data upload: allowing the user to upload the skewing values per symbol using an CSV file
2. Exposure based skewing: the skewing takes effect based on the exposure at the moment of implementation allowing the broker to optimize revenue based on the directional trading of the clients.
3. Real-time adjustment: the broker can adjust the values of the skewing profile immediately to suit his needs

3.4. Swap Rules

Swap Rules define which raw swaps to use, which markup profile to apply, which skewing profile to use, and where these adjustments should be applied (server level or group level) and on which set of symbols.

Key functions:

1. Rule configurations: allowing the broker to create custom based rules defining the required raw swaps, markup profile, skewing profile and implementation impact (server/group)
2. Criteria definition: allows the broker to apply the rules based on a specific set of criteria, such as a wild card, or a specific set of symbols or a security group
3. Rule Validation: the tool flags rules that cannot be implemented due to an error, ensuring a smooth operational automation while guaranteeing an error free implementation.

3.5. backup and validation

This component ensures the integrity of the swap adjustment process by incorporating backup and validation mechanisms. It safeguards against potential errors and provides a safety net for recording and reverting actions if needed.

Key functions:

1. Data Validation: using the tolerance profile created, the tool will evaluate swaps and flag any extreme values allowing the broker to dodge unnoticed losses.
2. Error detection: by using symbol to instrument mapping, the tool can validate the charging mode ensuring correct charges and error free implementation
3. Back up creation: the tool creates a backup before implementing allowing the broker to have a safety net to revert back any changes applied.
4. Audit trail: due to backup being generated an audit trail can be created which allows the broker to audit the swap charges in a specific day.

3.6. revert

The Revert functionality allows users to undo changes made during the swap adjustment process. It provides an essential layer of control and reversibility in case any adjustments need to be undone.

Key functions:

1. Undo actions: the user can revert to undo the swap implementation for a specific or all rules.
2. Data restoration: the revert functionality allows the broker to revert and restore data to the moment before implementation
3. L2 Authorization: the tool requires specific set of permission to allow the user to revert back the swap rates, protecting the broker incase of a human error by an engineer

3.7. logs

The Logs component records and maintains a detailed history of actions and events within RateRoller Pro. It serves as an audit trail, providing transparency and accountability in the tool's operations.

Key functions:

1. Action recording: the logs will capture every single action or event, including user interactions, system processing and outputs.
2. Timestamps: each log entry will be timestamped allowing for easier tracking and audit
3. Search function: the logs will allow the user to generate the logs based on a specific criteria like date, user or action performed.
4. Alerts: logs can and will trigger alerts incase of special event insuring efficiency in all operations performed

3.8. Reports

The Reports component in RateRoller Pro plays a crucial role in providing comprehensive insights and documentation of swap adjustments and their impact. It ensures transparency, allows for informed decision making to increase profitability.

Key functions:

1. Summary report: offers a high-level estimate before applying the swap rates, allowing the broker to understand the estimate profit generated and adjust accordingly.
2. T+1 Detailed report: this report provides in-depth analysis on profit generated by using the different swap rules to calculate the profit generated and compares it vs the raw swaps expected profile for an accurate profit calculation.
3. Customization: this functionality allows the broker to generate a report based on a specific criterion such as date, symbol, group or a profile.
4. Export function: this allows the broker to export the reports in a CSV format.

3.9. Tolerance Profile

The Tolerance Profile component in RateRoller Pro defines the level of accepted deviation that the broker is willing to tolerate in terms of swap value adjustments. This profile is instrumental in identifying and flagging incorrect charges or stale swap rates, providing brokers with a mechanism to ensure the accuracy and reliability of their swap operations

Key functions:

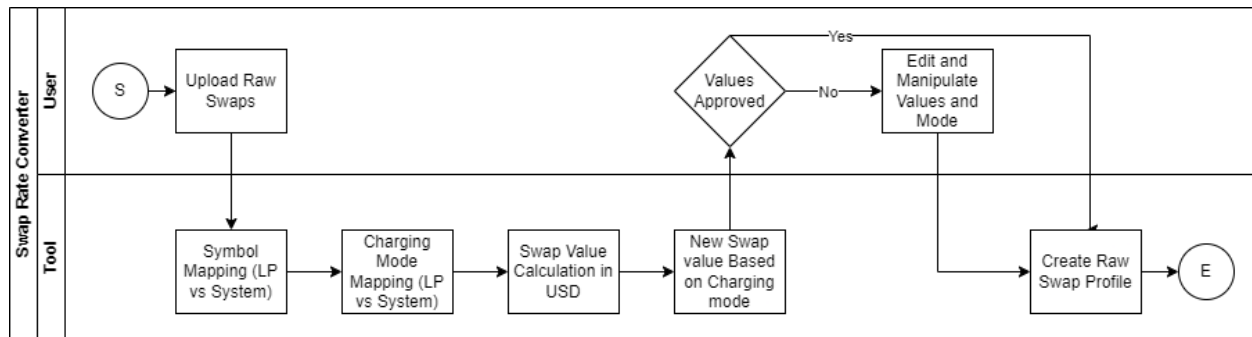
1. Data upload: allowing the user to upload the skewing values per symbol using an CSV file
2. Deviation monitoring: the tool uses the profile to monitor and validate final swap rates vs the defined tolerance value, this allows for identification of extreme values and stale swaps
3. Alerts: when a swap value exceeded the tolerance level, an alert is sent to the broker to notify and allow the broker to adjust the values accordingly
4. Reporting: this function allows the broker to view all swap rates that surpassed the tolerance value set, based on a specific criterion such as date, symbol or value.

4. Product Logic

4.1. Raw Swap Converter

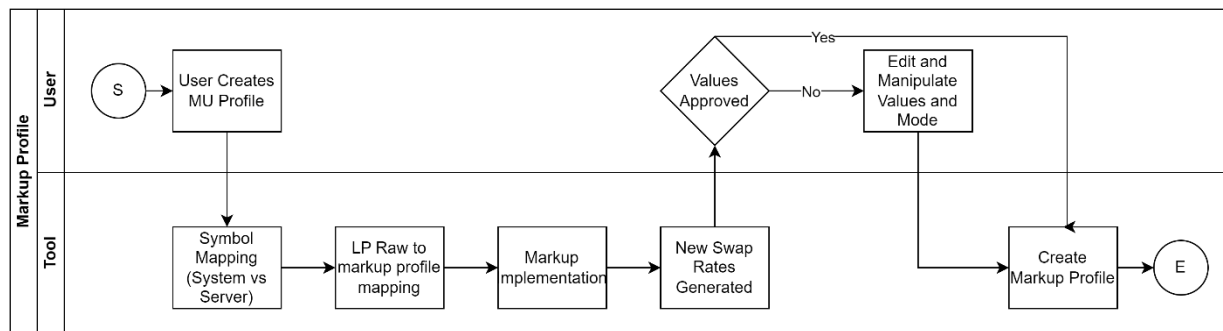
The Raw Swap Converter logic is the following:

1. The broker uploads raw swap rates received from the liquidity provider using a CSV file.
2. Tool Maps LP symbol to tool symbol
3. Tool Maps LP charge mode to tool charge mode
4. The tool calculates expected value charges in USD
5. Based on the brokers decision, the rates are either accepted or sent for manipulations
6. Raw swap profile created.



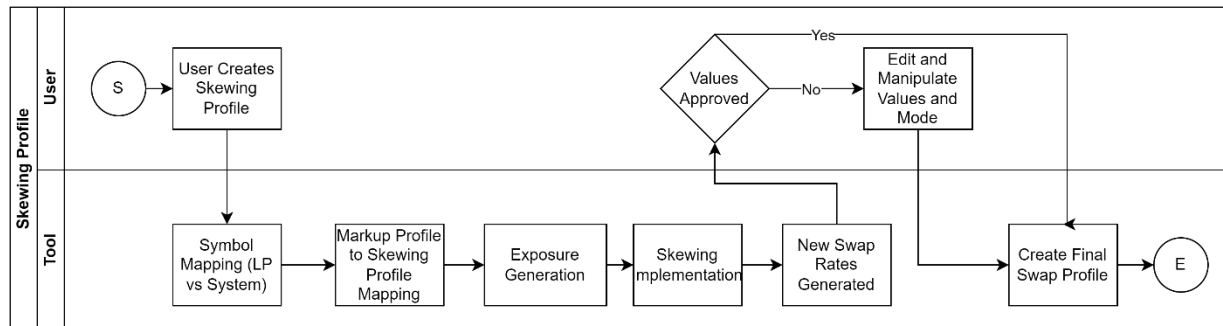
4.2. Markup Profile Logic

Markup profiles are specified by symbol and allow brokers to add additional markup on top of the raw swap rates based on direction (long or short).



4.3. Skewing Profile Logic

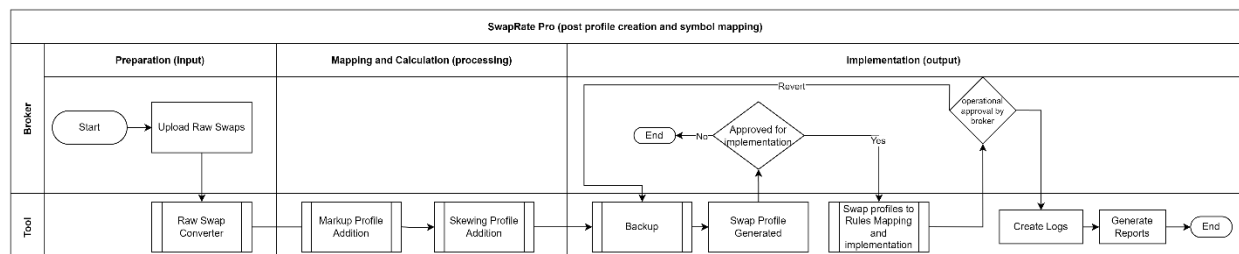
Skewing profiles enable brokers to skew swap rates based on the total exposure used by the rule. Skewing is applied to achieve desired pricing adjustments.



4.4. Full Logic

RateRoller Pro follows a logical sequence:

1. User Uploads Raw Swaps
2. Raw Swap Conversion process
3. Markup Process
4. Skewing Process
5. Backup Process
6. Approval Process
7. Swap profile to server/Group implementation
8. Operational approval process:
 - a. Revert upon rejection to backup (previous values)
 - b. Create logs and generate reports upon approval
9. End process successfully.



Additional Information:

- For skewing profile calculation, the tool will automatically request the total exposure and evaluate if the total exposure is long or short. It will then apply the skewing profile values accordingly.
- The above logical process does not include the profile creation or the swap rule mapping

- Processes to include:
 - Symbol mapping (lp and system/ system and server)
 - Raw swap profile creation and structure:
 - Points to percentage conversion
 - USD value calculation
 - Markup profile creation and structure
 - Skewing profile creation and structure
 - Tolerance profile
 - Exception logic for groups:
 - Stale swaps
 - Exception exists and not available in swap profile
 - Exception doesn't exist but available in swap profile
 - Rules logic including symbols applied and group/server
 - Back up
 - Validation
 - Log creation
 - Revert
 - Report (summary – estimate and details – T+1)
 - Maker – checker