

## Currency Management

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### **1. The objectives of professional currency management**

The principal problem for currency management is that currencies are particularly difficult to forecast. Of the popular and widely used methods (fundamental analysis, technical analysis, as well as quantitative analysis), only technical analysis is really geared towards delivering price forecasts. Important to note in this context is that, whilst these analyses are neatly formulated, the forecasts are not verifiable. In most cases they are vague and therefore not easily applicable, i.e. tradable. For this reason, the majority of these forecasts are simply not assessed ex-post.

The common traits among all these methods are the easily attainable price targets and the absence of any loss-limitation strategy. They result in a flatteringly high »hit-miss ratio«, the proportion of objectives that are actually achieved. But, very little attention is paid to the outcome of the losing recommendations because they occur only infrequently. In many cases, these »misses« are so great that they can wipe away the totality of the much smaller »hits«.

The newest field of capital market research, Behavioral Finance, reveals that human beings are to some extent pre-disposed to this form of trading. Every trader knows that »the trend is your friend«, but the single method that has proven itself to be the best - letting profits run and cutting losses short - goes so much against human psychology that only few can adhere to it. For most people, losses weigh more than twice as much as gains of equal monetary value. For this reason, decision makers in uncertain situations typically prefer to cash in small gains and accept a rare encounter with a big loss, than to suffer a string of small (but intensely perceived) losses together with the occasional huge win.

Already in the mid-80's, the current partners of COGNITREND developed computerized models in an attempt to eliminate these counterproductive emotions from the business of trading. Through a series of simulations, a set of precise trading rules (algorithm) is applied to a reliable historical currency market database in order to observe their viability and their stability. These rules take the form »if...then«, the same sort of reasoning that a proprietary trader might use. Through optimization, rules that are inconsistent or unprofitable are filtered out.

Thus, the objective of modern currency management is the systematic application of a profitable, tradable and verifiable strategy. This is as true for speculative market participants as it is for those whose primary concern is hedging, e.g. importers and exporters. A hedger, unlike a proprietary trader has his position imposed upon him and has little influence on the entry price. His objective is to transfer this risk to the market under the most favourable conditions. He too, however, has the option to let profits run or cut losses short, even when there is only a brief interval between the creation of the currency risk and its liquidation.

## **2. Preconditions for currency management**

To assure long-term success in currency management, a number of preconditions must be satisfied:

### **a) Verifiability of the trading strategy (transparency)**

A trading strategy must not only be verifiable but, in order that it undergo a computerized simulation, it also be amenable to mathematical formulation. A rule or an observation that cannot be formulated in a meaningful way is by definition subjective and therefore unsuitable for use in a systematic approach.

### **b) The historical test**

A trading strategy (also those involving options) must undergo a historical test. This includes both an insample and out-of-sample test (walk-forward, walk-across test) then a stress test. These historical simulations must be sufficiently long in order that the of the strategy be observed over all market phases (e.g. trend, consolidation, volatile, etc). The

length depends on the frequency of the data but, for daily price data, this should be at least five years.

### **c) Diversification**

A diversification across many currencies and many trading models is essential. But also a diversification in time is desirable, as each time zone bears its own distinct characteristics. A mixture with other non-systematic approaches, however, is not permitted.

### **d) Volume limitations**

A trading model cannot bear trading volumes without limit. One should not forget that during the historical simulation the impact of the models' own trading is not reflected in the market prices. This must also be the case during real-time trading. A diversification in time permits the trading volume to flow unnoticeably into the market. But, even there, one will eventually reach a position size which, when traded, generates unacceptable levels of slippage. When these thresholds are overstepped, significant differences can emerge between the expected and the real performances.

## **3. Currency Management at COGNITREND**

### **Introduction**

The partners of COGNITREND have been developing and running trading models for currencies and other financial instruments for over fifteen years. Both formerly, within a global investment bank, and now as an independent research company, we continue to serve institutional clients seeking to improve trading performance through the application of behavioural finance analysis and the implementation of computerised decision-making tools.

COGNITREND's relationship with the client is always that of a consultant or advisor. These relationships have taken a multiple of forms in the past, which we shall now describe, but this list should not be treated as exhaustive for future engagements.

## **Signals only**

A number of clients have been impressed by the historical performance of our trading models, but have shown little interest in knowing more about the philosophy that underlies our approach. In many cases, the client already buys in trading models from multiple sources, including internal, and creates hedging or trading portfolios himself. The client also takes sole charge of the execution.

Agreements of this kind are typically closed on an annual (renewable) basis, over which time the client specifies the volume to be traded on the model(s). The fees, fixed and/or profit-related, are settled quarterly.

## **Trading model and training**

Financial institutions, especially central banks and other monetary authorities, are increasingly strengthening their quantitative research departments to include the capacity to deliver trading models. For these clients, it is not sufficient to control a black box; they want this box to be opened. Whilst it is not possible for COGNITREND to reveal the algorithms of all of its trading methodologies, it is possible to go a long way towards bringing a client to the point where he can apply, optimise, test and validate his own trading strategies. An instruction in behavioural finance, the philosophy that guides all our research (written commentaries as well as trading models), forms an integral part of this type of consultancy.

In exceptional cases, we have conceived and delivered a complete model to clients. Such a step, however, does attract considerable fees and is always associated with other ongoing business.

## **Currency overlay management programme**

Within this structure, an asset manager who chooses to outsource the decision-making with a currency overlay management programme can rely on COGNITREND to create a portfolio of trading models to provide non-discretionary advice. As principal advisor, COGNITREND delivers in advance (usually the previous day) the trading signals for all the currency pairs destined to be executed at a pre-determined time. The asset manager, who also holds the funds, takes responsibility for the execution.