

Trading FX using Qi signals

Qi FX signals have a 63-66% win rate over 14 years

Summary

- Qi FX signals produce a win rate of 63-66% over the last 14 years for 90 FX pairs
- This paper describes the two main signal types: “Divergence” and “Inflection”
- We use a simple approach with no optimisation and few parameters
- We believe signals are best used as part of a discretionary process

Introduction

Macro PMs and traders typically focus on several variables that influence an FX pair. These include:

- *Interest rate differentials (across the curve)*
- *Differences in economic growth (using daily Nowcasting which is available for 20 countries)*
- *Differences in inflation*
- *Differences in Central Bank rate expectations*
- *Measures of global financial conditions (e.g., credit spreads, USD global liquidity)*
- *Commodity & Energy prices*
- *Sovereign stress measures (e.g., Eurozone, China)*
- *Measures of global investor risk aversion (e.g., equity market implied vol, EM VIX, gold/silver ratio)*

This is a lot of data to track for just one currency pair, let alone around 100.

Modelling the impact of these FX factors on a currency pair is fraught with issues:

- a) All the factors are correlated
- b) The factor time series may be non-stationary
- c) Data gathering, cleaning, and updating is a major challenge and expensive (e.g., Nowcasting).

This means that using standard approaches such as multiple regression to model an FX pair will not yield valid results.

Qi solves for these issues.

The core method is explained in this 8 min [video](#).

The benefit to FX traders is significant:

1. **Clarity on what drives an FX pair:** View sensitivity of an FX pair to various factors. E.g., Is the pair dependent on rate diffs, or is it a risk on/risk off play?
2. **Regime:** Is the FX pair in a clear macro regime or being driven by non-macro factors (e.g., geopolitics).
3. **Valuation:** Given the regime and sensitivities, is the FX pair below or above its macro warranted fair value?
4. **Screening:** Screen for an FX pair that is an ideal expression for your view. E.g., If you think crude prices are rising, which FX pair is most sensitive to this?

The focus of this WP is on the Valuation metric, and whether there a is valid directional “signal” in the data.

Section 1: Three types of entry signal

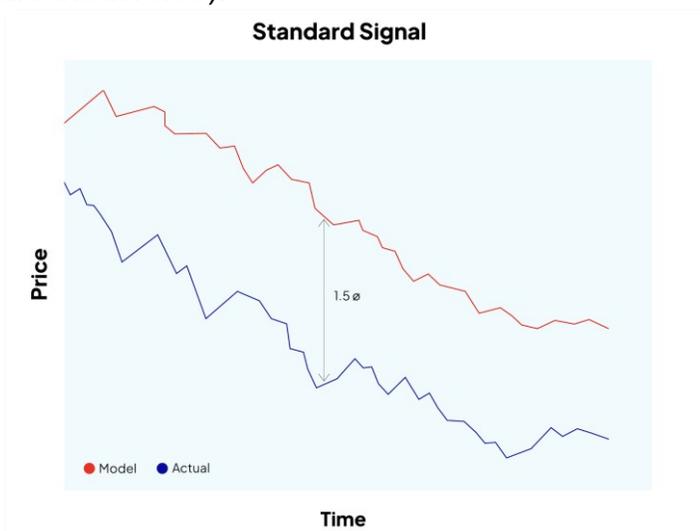
Qi calculates the macro warranted fair value of FX pairs every 15 minutes, intraday. This is compared to the actual spot price at the time, and the difference (actual minus model) is shown in both standard deviation and % terms.

R-squared threshold: Only those FX pairs that are in a clear macro regime, where the R-squared (“model confidence”) is above 65%, are considered.

Dislocation threshold: FX pairs that are trading 1.0 or 1.5 standard deviations away from their macro warranted fair value are considered.

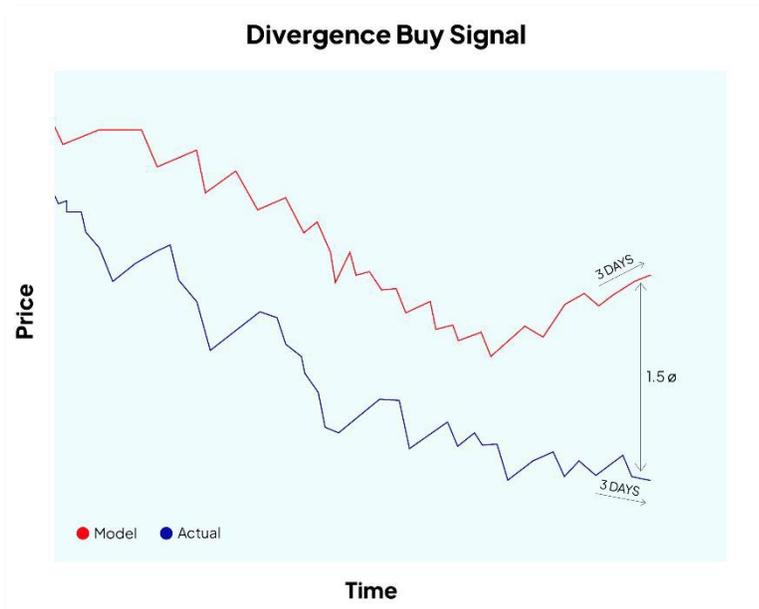
Standard Signal

A standard signal simply highlights that there is a dislocation between actual and model. While the performance of these signals is positive overall, an FX pair can for example remain cheap to model and continue trading lower. This is illustrated below for “buy” signals (“sell” signals are the inverse).



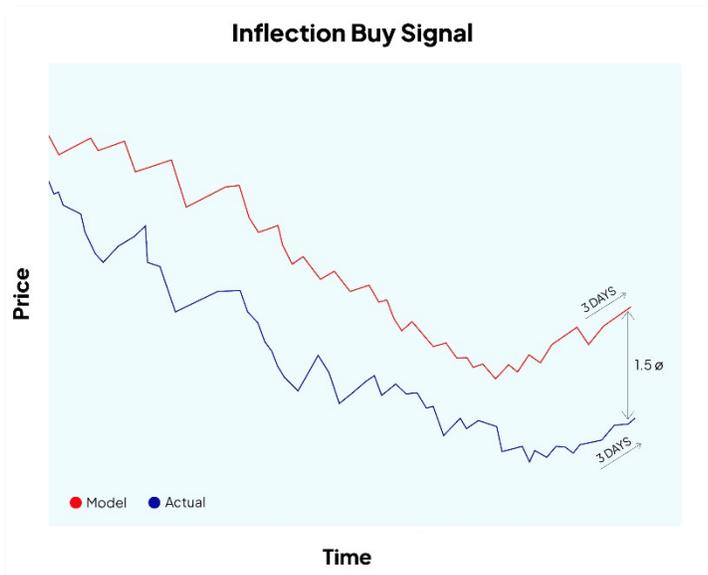
Divergence Signal

A “divergence” signal adds a further condition that the model value has increased over a 10-day period. This adds a momentum requirement on the model value. Signal performance improves with divergence signals. This is a signal based on high model confidence, a significant dislocation, and a momentum condition on the model value.



Inflection Signal

An “inflection” signal requires that both the actual and model have increased over a 3-day period. This is a signal based on high model confidence, a significant dislocation, and a momentum condition on both the model value and the actual price.



Section 2: Signal performance over the last 14 years

There is **one simple exit rule** used for all divergence and inflection signals. That is, the trade is exited when the actual price is within 0.25 standard deviations of the model value. There is no other risk management rule or stop loss used.

Results

	Avg return %	% Winners	Total # signals since 1/1/2009	Avg holding period (biz days)
Divergence 1.0 σ	0.45%	65%	1791	22
Inflection 1.0 σ	0.50%	66%	829	18
Divergence 1.5 σ	0.51%	63%	707	25
Inflection 1.5 σ	0.79%	63%	217	21

*No bid-offer costs included

*All signals sampled at the daily close (16:00hrs GMT)

*90 FX pairs across both DM and EM covered

* 1 Jan 2009 – 31 June 2022 period covered

* Includes both buy and sell signal types

* All Qi data is point-in-time

Section 3: Turning “signal” into “alpha”

Simple and naive entry/exit rules for all FX pairs over a long period and large sample demonstrate that there is clear “signal” in the FX valuation data. It is important to keep the criteria simple and not use too many parameters in order to minimise overfitting risk. No backward-looking optimisation was used. Note also that results are likely to improve if intraday signals are used.

However, “signal” is not “alpha”. Trade sizing, portfolio concentration and other factors need to be considered. **The ideal use case for Qi FX signals is therefore to combine them with a discretionary overlay.** They can be used not only for trade idea generation but also for time entry and exit on strategic positions.

Qi FX signals are available via the Qi web portal or via RETINA™, a live notifications system available via the Slack or Symphony messaging platforms, as well as via Rest API.