# Ops Notes: Currency Strategy Section 2

To follow is section two of our *Ops Notes* on Callum Henderson's *Currency Strategy*. In case you missed section 1, you can find it here.

Keep in mind, these *Ops Notes* serve as a great reference for those who already have a foundation in currency theory and application. This is pretty advanced stuff. In the future, we'll take each of these sections and dive deeper via separate *Vault* pieces.

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## Chapter 2: Currency Economics - A More Focused Framework

1. The first thing to say about the currency market is that it possesses and obeys a different set of dynamics to other financial markets.
    a. Unlike in the case of equity or fixed income markets, the vast majority of currency market practitioners are speculators of one sort or another. Global merchandise trade going through the currency market makes up around 1–2% of total volume.
    b. Let's say we more than double that to allow for foreign direct investment, making a volume contribution of around 5%. Asset market volumes have risen sharply over the past 20 years as barriers to capital have fallen. Having made up only a small proportion of currency market volume before the end of the Bretton Woods exchange rate system, they probably now make up as much as 35% of total currency market volume on a daily basis.
    c. That still leaves 60% of daily currency market volume, which has to ascribe to "speculation".

i.    Given this, is it any wonder that many of the traditional exchange rate models that are based on the current account and therefore on trade flows are poor predictors of exchange rates over the short term?! Equally, this gives some clue as to why the portfolio balance approach to exchange rates also achieves unsatisfactory results.

## 2.1.2 Speculation and Exchange Rates: Cause, Effect and the Cycle

1. Just as supply and demand are not independent of one another and are both cause and effect, so the relationship between "speculation" and economic fundamentals is also not just one-way. It has also to be acknowledged that speculative excess can in turn affect economic fundamentals. This is best proven by example.

2. Looking at this example, we can also see that the way "speculative excess" affects economic fundamentals follows a clear and discernible pattern. Indeed, if we compare how Poland's economy performed relative to the trend in currency appreciation of the Polish zloty, we see the following pattern or "cycle" at work:

   - Fundamental market participants (e.g. corporations and asset managers) apparently deemed Polish zloty fixed income securities as good value around October 2000 and started buying them on a sustained basis, creating a trend in the Polish zloty itself.
   - As the zloty continued to appreciate, this tightened overall monetary conditions even further, in addition to already high interest rates. Meanwhile, the longer the zloty trend continued the more self-perpetuating it became, with speculators joining their fundamental counterparts, anticipating more or less guaranteed returns.
   - However, the longer the Polish zloty's trend appreciation continued, the more monetary conditions were tightened and the more this hurt Poland's economy. Exporters were hurt by the increasingly uncompetitive currency, while the domestic economy was hurt by high borrowing costs and cheap imports resulting from the currency's strength.
   - As the currency trend extended and continued therefore, fundamental market participants became increasingly concerned about economic fundamental deterioration in the form of fading economic growth and widening current account deficits, and thus increasingly started to take profit on their positions.
   - For a time, this fundamental selling was more than offset by speculative buying. Eventually, however, the combination of increasing selling pressure and clear and increasing evidence of major fundamental deterioration in the Polish economy proved too much and the speculative flow capitulated (as reflected by

the sudden and dramatic spike higher in the Polish zloty basket chart in June–July 2001, reflecting a collapse in the zloty's value).



**Figure 2.1**  Polish zloty basket chart (up-moves reflect depreciation, down-moves appreciation)
*Source*: Reuters.

3.  This cycle or pattern is not just reflective of one single example, but instead of a broader relationship between speculative flows and economic fundamentals within freely floating exchange rates. As a result, an appropriate title for this model would appear to be the "**speculative cycle of exchange rates**", which we can break down into four key phases:

    - **Phase I** — Fundamental market participants deem a currency good (poor) value and start buying (selling) it on a sustained basis, thus creating a currency trend.
    - **Phase II** — The longer the trend continues, the more speculative it becomes in nature, as more and more speculative market participants (i.e. no underlying asset in the transaction) buy (sell) the currency trend.
    - **Phase III** — However, as the trend of currency appreciation (depreciation) continues it creates increasing economic deterioration (improvement), encouraging an increasing number of fundamental market participants to sell (buy) their positions.
    - **Phase IV** — For a time, speculative inflows (outflows) more than offset those fundamentals outflows (inflows), but eventually in the face of increasing

economic deterioration (improvement) they capitulate and the currency collapses (rallies).

**2.1.3 Risk Appetite Indicators and Exchange Rates**

1. While flow and technical analysis have done much to dispel such a view, recent work on the relationship between "risk appetite" and asset prices has made a real breakthrough in terms of being able to predict those short-term swings in sentiment and in turn how they affect currency and asset prices.
   ○ Risk appetite or market sentiment are not easily definable concepts given that what these are focusing on is the investor's willingness or otherwise to invest — which is not always based on logic!
   ○ Despite such difficulties, the private sector has over the past few years been hard at work creating "risk appetite indicators" to measure overall conditions for risk tolerance across currency and asset markets.
   ○ Within the investment banks, JP Morgan created its "LCPI Index" Bank of America has its "Global Hazard Indicator" and Salomon Smith Barney its "Instability Index". For the purpose of an example, we will focus on the Instability Index. The index was originally created to track levels of risk appetite or conversely "instability" for fixed income investors.

2. The three generally accepted categories within most such risk appetite models for this purpose are:

   ● Risk-seeking
   ● Risk-neutral
   ● Risk-aversion

   The Citigroup Instability Index, which was formalized in 1999, is just such a guide and includes three main components:

   ● **Deleveraging** — There are two parts to this. The first looks at the relationship in the currency market between the US dollar (as an equity-linked, higher yielding asset) and the likes of the Swiss franc (as a traditional safe-haven currency) and Japanese yen (as a low interest rate, funding currency). During times of market stress, the US dollar tends to lose ground against these as "leverage" or risk is cut. The second component looks at US and European bank equities as a measure of market "leverage".
   ● **Credit spreads** — In the US dollar credit markets, this tracks the spreads between BBB-rated industrial credits, emerging market Brady bonds and swaps to Treasuries, while it also tracks Euro swap spreads to Bunds. The overall reading gives a very good indicator of investor risk-tolerance.

- **Implied volatilities** — Across the three asset classes of equities, debt and currencies, tracking three-month implied volatilities gives a good idea as to demand levels for option-related protection structures from investors. Option implied volatility tends to rise more sharply during asset market slumps than when asset prices are rising.
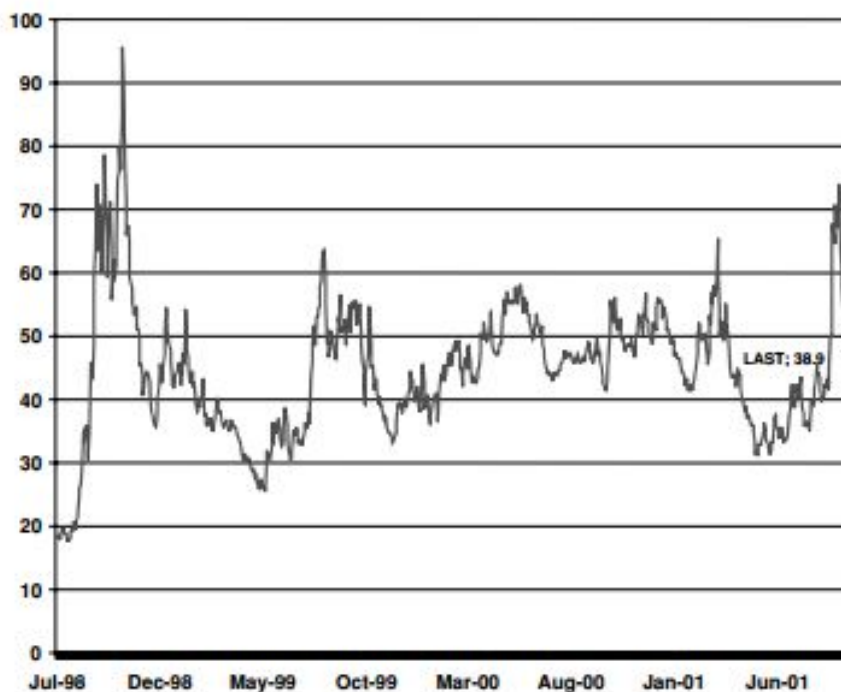


**Figure 2.2**  SSB Instability Index
*Source:* Citigroup.

3. By creating a corridor for a risk-neutral stance, we can in turn create specific index parameters for both "risk-seeking/stable" and "risk-aversion/unstable" market conditions. Thus:
    - Risk-seeking/stable: <40
    - Neutral: 40–50
    - Risk-aversion/unstable: >50

4. In turn, if we compare this index with a number of exchange rates, we find an important and specific correlation.
    - During "risk-seeking/stable" market conditions, investors tend to buy credit product as opposed to Treasuries, equities as opposed to money market funds and in the currency world high carry emerging market currencies as opposed to low carry "safe havens" such as the Swiss franc or Japanese yen.

- When risk appetite conditions shift from risk-seeking/stable (below 40) in the index to neutral (40–50), many of these high carry currencies such as the Polish zloty, Hungarian forint, Slovak koruna, Mexican peso and Brazilian real tend to lose ground as investors become slightly more cautious, paring back their exposure.
  - Frequently, the yen or the Swiss franc are used as funding currencies with which to buy these high yielders, hence as risk appetite is reduced so they tend to recover some ground as long high carry/short funding currency positions are reduced.
  - Finally, when market conditions deteriorate to the extent the index moves into "risk-aversion/unstable" territory (above 50), high carry currencies are cut across the board, to the increasing benefit of safe havens such as the Swiss franc and the Japanese yen.

**Table 2.1** Currency decision template using a risk appetite/instability indicator

| | Risk-seeking/stable (<40) | Neutral (40–50) | Risk-aversion/unstable (>50) |
|---|---|---|---|
| Asset managers | • Raise currency exposure to high carry currencies | • Reduce currency exposure to high carry currencies | • Eliminate currency exposure to high carry currencies |
| Currency speculators | • Buy high carry currencies<br>• Short low carry safe haven currencies | • Close positions | • Short high carry currencies<br>• Buy low carry safe haven currencies |
| Corporations | • Hedge high carry currency strategically | • Only hedge high carry currency exposure tactically | • Only hedge high carry currency exposure tactically |

5. The relationship between risk appetite and specific currency performance has been proven statistically within academic research using correlation analysis. From this, we can come up with a rough template for currency trading, hedging and investing decisions using the index (Table 2.1):

- The link between risk appetite or instability and currencies comes through capital flows and therefore through the balance of payments.
- Countries with high current account deficits are dependent on capital flows and therefore dependent on high levels of risk appetite.
- Conversely, countries with current account surpluses are not dependent on capital flows or risk appetite. Therefore, during periods of risk-seeking, it should be no surprise that currencies whose countries have current account deficits tend to outperform.

- Equally, during periods of risk aversion or avoidance, currencies whose countries have current account surpluses tend to outperform by default as capital flows are reduced or even reversed.

6. The principles that we have described here work for the developed market currencies. They also work very well within emerging market currencies, albeit with some caveats. Emerging market economies and currencies have some specific characteristics which need to be considered when using a risk appetite or instability indicator:

- **Most emerging market economies have current account deficits** — Because of high capital inflows, most emerging market economies run trade and current account deficits. As a result, most are risk-dependent, though one would assume this anyway.
- **Emerging market economies tend to have structurally high levels of inflation** — Due to economic inefficiencies and higher growth levels, emerging market economies have tended to be characterized by higher inflation levels.
- **Emerging market interest rates are more volatile** — Capital inflows to the emerging markets are frequently substantially larger than the ability to absorb them without consequent major financial and economic imbalances. Such inflows artificially depress market interest rates until such time as economic imbalances become unsustainable, at which point the currency collapses and interest rates rise sharply. Thus, such inflows can cause substantial interest rate volatility.
- **Political, liquidity and convertibility risk add to emerging market volatility** — Politics is no longer seen as a primary risk consideration within the developed markets, but it still is within the emerging markets however, given higher levels of political instability. Emerging markets are also considerably less liquid and some are not convertible on the capital account, both of which affect market pricing.

### 2.2 Currency Economics

1. The purpose of establishing a framework known as currency economics is to be able to combine the new with the exchange rate models and use both in a more targeted and focused way.
   a. The traditional exchange rate models, focusing as they do on such factors as trade, productivity, prices, money supply and the current account balance, help provide the long-term exchange rate view.
   b. Capital flow-based models are considerably more helpful and accurate in terms of predicting short-term exchange rate moves.

2. These two types of exchange rate model should not necessarily be viewed as polar opposites. The very purpose of establishing a specific framework known as currency

economics is to create an integrated approach to exchange rate analysis, which is capable of answering the riddles of short-, medium- and long-term exchange rate moves.

    a. Within this, there are three specific analytical tools which should be of use to currency market practitioners in bridging the gap between short- and long-term exchange rate analysis:

- The standard accounting identity for economic adjustment
- The J-curve
- The REER

**2.2.1 The Standard Accounting Identity for Economic Adjustment**

- $S − I = Y − E = X − M$ — Refer to the Balance of Payments section [(Section 1, pg. 9)](#) for more information on this.

**2.2.2 The J-Curve**

1. This is a particularly useful concept because it deals with that frustrating delay between the change in the exchange rate and the adjustment to the economy.
   a. Equally, it deals with both trade and capital flows.

2. Classic economic theory suggests that a fall in the nominal exchange rate should lead to a reduction in the current account deficit by making imports more expensive and exports cheaper. However, this assumes that the transmission mechanism from the exchange rate to export and import prices is immediate.
   a. We know however that this is not the case. Corporations tend to take a wait-and-see attitude in times of market distress, delaying major price changes until financial and economic conditions become clearer.

3. We can also see this at work from the angle of the exchange rate rather than the trade balance. As an exchange rate appreciates, it causes exports to become more expensive in the currency to which these exports are going and imports from that country to become cheaper.
   a. The initial reaction in the trade balance is not negative however. As the exchange rate appreciates, it causes export prices to rise and import prices to fall. This in turn causes the value of exports to rise vs. imports, thus the initial reaction in the J-curve is that the trade balance actually improves.
   b. While this is happening, however, the impact of higher export prices reduces demand for those exports, causing falling export volumes.
   c. In turn, falling export volumes eventually lead to a fall in the value of exports and thus to a deterioration in the trade balance.
   d. The delay between the fall in export volumes and export values and the subsequent impact on the exchange rate is reflected by the concept of the

J-curve. That delay factor varies between exchange rates depending on specific export price sensitivity to changes in the exchange rate.

### 2.2.3 The Real Effective Exchange Rate

1. As noted in Chapter 1, the REER is the trade-weighted exchange rate (NEER) adjusted for inflation. It is viewed as a good indicator of medium- to long-term currency valuation.
   a. REER appreciation usually causes significant trade and current account balance deterioration. The fact that this does not have an immediate reaction in the exchange rate confirms not only the existence of the J-curve but also the presence of significant capital inflows.
   b. Such inflows can offset a widening trade deficit for a period of time, but eventually are not able to. When they reverse, or rather when they just stop, the exchange rate comes under ever increasing pressure until such time as it collapses to restore equilibrium.
   c. This process can also work equally well with real depreciations. From the end of 1995 to mid-1998 the Japanese yen experienced an increasing REER depreciation. Capital outflows offset an increasingly improving current account balance until such time as they could no longer do so, whereupon the Japanese yen rallied significantly, resulting in one of the most dramatic collapses in the dollar–yen exchange rate — or any exchange rate — in history. REER valuation and the external balance are both cause and effect.
   d. It takes a REER depreciation of a currency to narrow significantly a large external imbalance. That said, an excessive REER appreciation can cause that imbalance in the first place.

**Stay tuned for parts 3 and 4!**