Investments and the FX/Currency Market

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Contents

Why FX/Currency Is Important!

- “There is an increasing awareness of currency’s role in an international portfolio. Currency is often the major component of diversification and if handled intelligently, proper execution can reduce costs; with proper positioning can come increasing return.
- There are **few opportunities to reduce costs, increase diversification and potentially enhance returns.** Currency management can help reach all of these goals.”

Characteristics of Currency Markets

- **Size** – Huge 4.1+ trillion USD a day
- **Different Objective of Players**

  A) Current transactors – price takers

  B) Forward transactors – price anticipators
- **<u>Players do not have unified vision of valuation</u>** (Unlike asset classes like fixed income which utilizes the PV of future cash flows and equity relies on the dividend discount model)
- **Prices** are very transparent

Different Objectives of Players

Price takers

- need to transact - assume the market is efficient. execute at spot or outright forward
- e.g.. tourists, most corporations, investors.
- Impact of transaction is very short term, typically days, but lasts.

Price anticipators

- believe that the forward price of currency is not what will be realized.
- expect "forward surprise" and take a position which will later be liquidated.
- transaction is longer, typically weeks to months, but often neutralizes.

Players (by motivation)

1. **Hedgers** – offset risk
2. **Speculators** – seek profit by buying low selling high
3. **Intermediaries** – make a spread or commission

There can be overlaps and confusion between the goals and mission of the above groups.

Players (by sector)

1. Banks
2. Governments - Central banks, Supranationals (IMF, World Bank, etc.)
3. Corporations
4. Institutional Investors
5. Hedge Funds
6. Individuals

Flow (hence price) Is Driven by

Central Bank Policy

Economic not Price considerations

Currency Price

- **Goods & Services**
  - Often Price Takers
    - Trade related
    - Has lasting effect
- **Capital Flow**
  - Often Price Takers
    - Investment related
    - Has lasting effect
- **Price Anticipators**
  - NOT Price Takers
    - Currency Alpha
    - Limited lasting effect

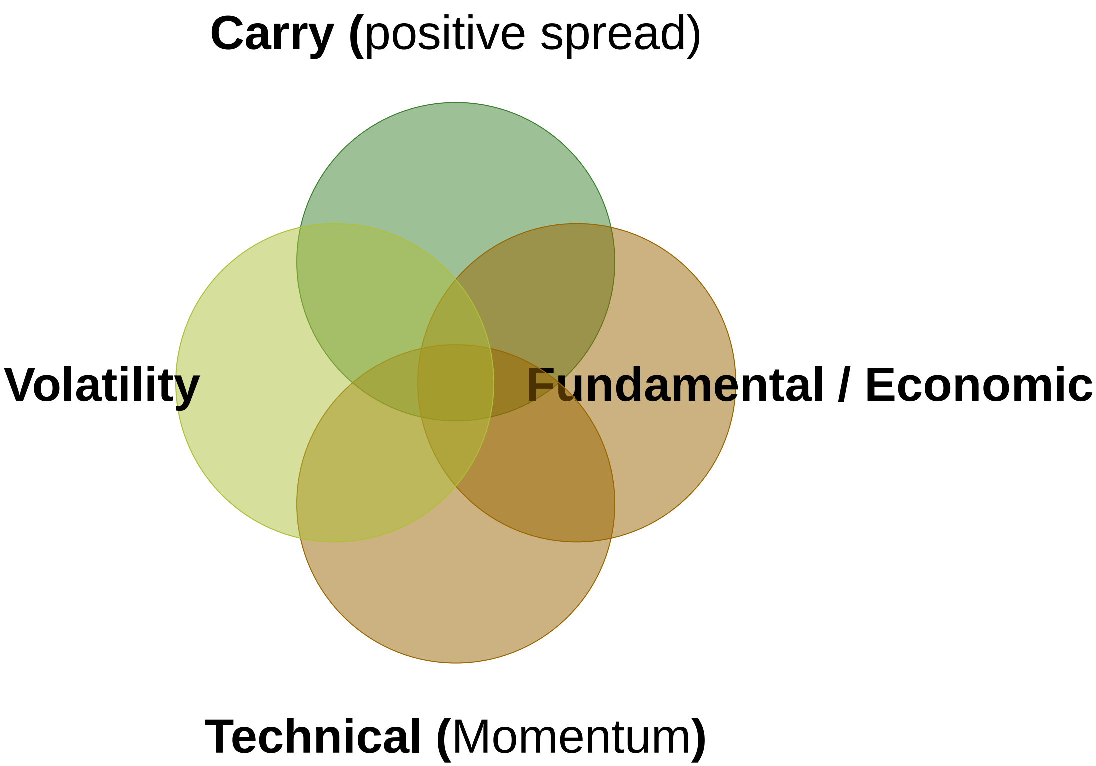
Overview: Currency Valuation

Assume the following simple model could determine the value of the USD

$$= aX + bY + cZ$$

- Not only do the inputs to the marginal factors X, Y, and Z change BUT so do coefficients a, b, and c!
- This makes any static econometric model suspect, especially in different regimes.
- **IMPLICATION: HUMAN JUDGEMENT NEEDED**

Currency Alpha Sources



- **Carry** – positive spread exists on forward currency
- **Fundamental** – driven by short term measurable data, most rapidly changing is often flow
- **Technical** - driven by price changes
- **Volatility** – control downside risk, attempt to capture upside, price driven

•**These are the building blocks of alpha but are affected by the Regime one is in.**

•**Regime determination requires some element of non quantitative assessment.**

Currency Valuation

The factors that drive currency valuation in a given period are therefore

= **a(Fundamental) + b(Carry) + c(Technical)**

Regimes will affect the coefficients a,b,c

Volatility measures help determine the regime.

Carry is an easily calculated variable:

Forward (DC/FC) = Spot(DC/FC)* [(1+$r_{domestic}$)/(1+$r_{foreign}$)]

where DC = domestic currency
FC = foreign currency

$r_{domestic}$ = domestic interest rate
$r_{foreign}$ = foreign interest rate

The following pages review some important examples of inputs for Regime, Fundamental and Technical factors.

To Determine the Intrinsic Value

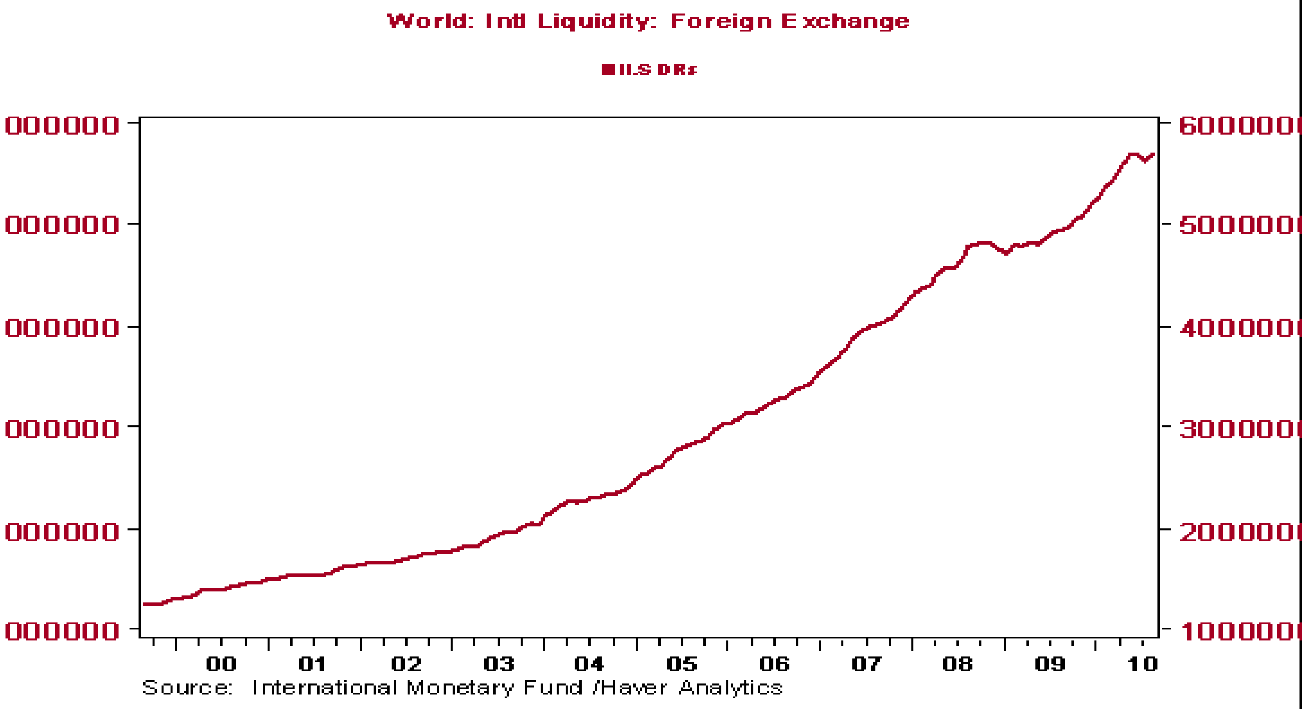
Use the framework

= **a(Fundamental) + b(Carry) + c(Technical)**

Regimes will change a, b, c

1) Determine Regime and hence the coefficient
2) Know that Fundamental = Σ of factors
3) Know that Technical = Σ of factors
4) Understand this is a dynamic process
5) **Compare intrinsic value versus market price**

Currency Dynamic Has Changed Due to Massive FX Reserves



- Graph in SDR's. Conversion rate is about .65 to USD , meaning global reserves now > $9 Trillion
- *Take away: Best analysis can be undone by a Sovereigin Wealth Fund with a directive*

A Few Lessons from History…

Role of Currency in a Portfolio

- Return

  - if the risk adjusted return is high pursue for it's own sake

  - if risk adjusted return limited or zero then hedge to reduce risk

- Diversification

  -the offsetting of risk

  -low return or zero return acceptable

Currency: Part of the Investment

- Any foreign investment creates an add-on foreign Currency exposure

International Asset Returns	=	**Foreign Asset Returns**	**+/-**	**Currency Impact**

- Currency overlay transforms the currency impact

International Asset Returns	=	**Foreign Asset Returns**	**+/-**	**Currency *Hedge Costs***

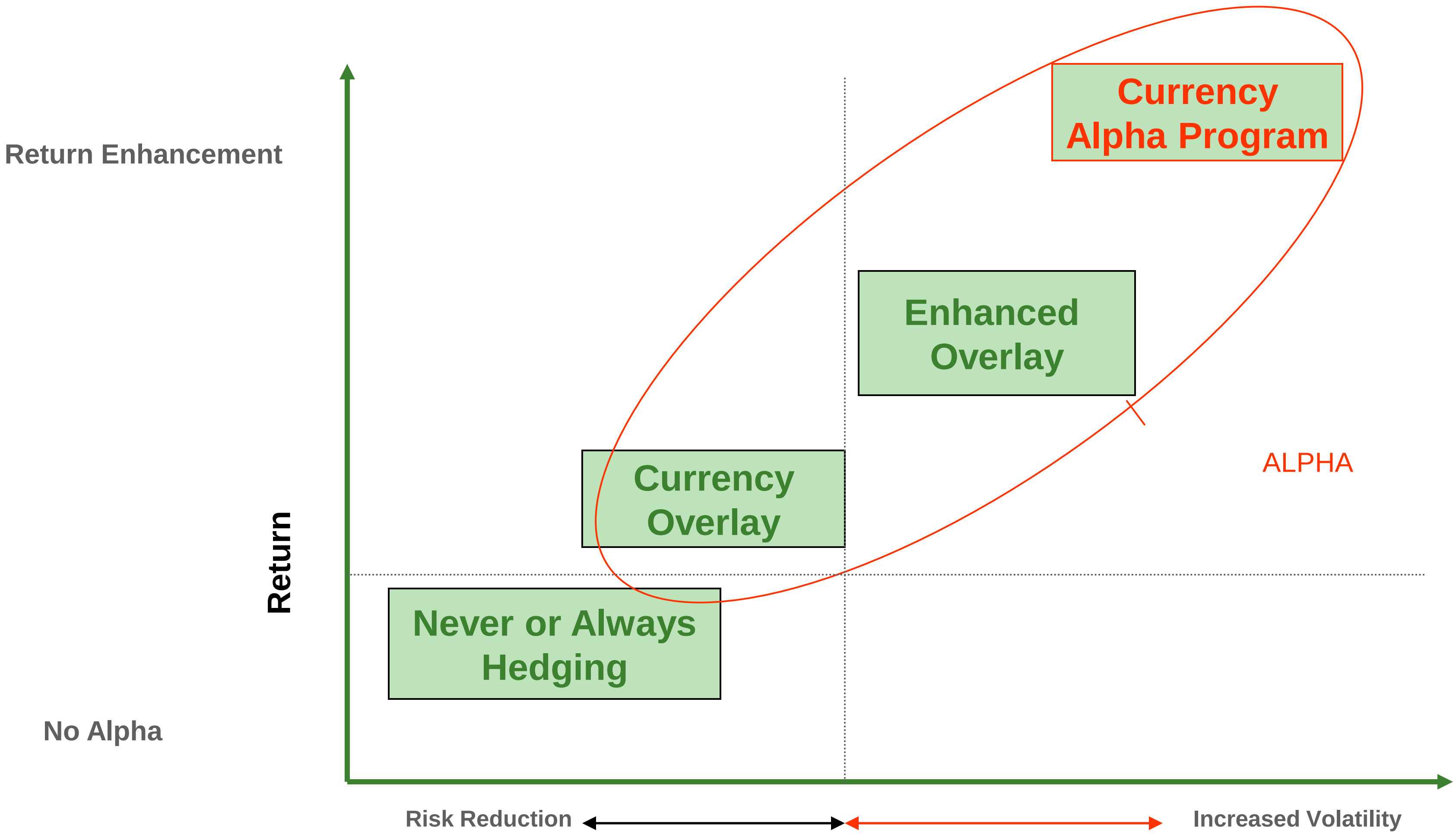
Investors mostly focus on the asset, not the currency

Investors Initially Often Don’t See Currency as Part of the Investment

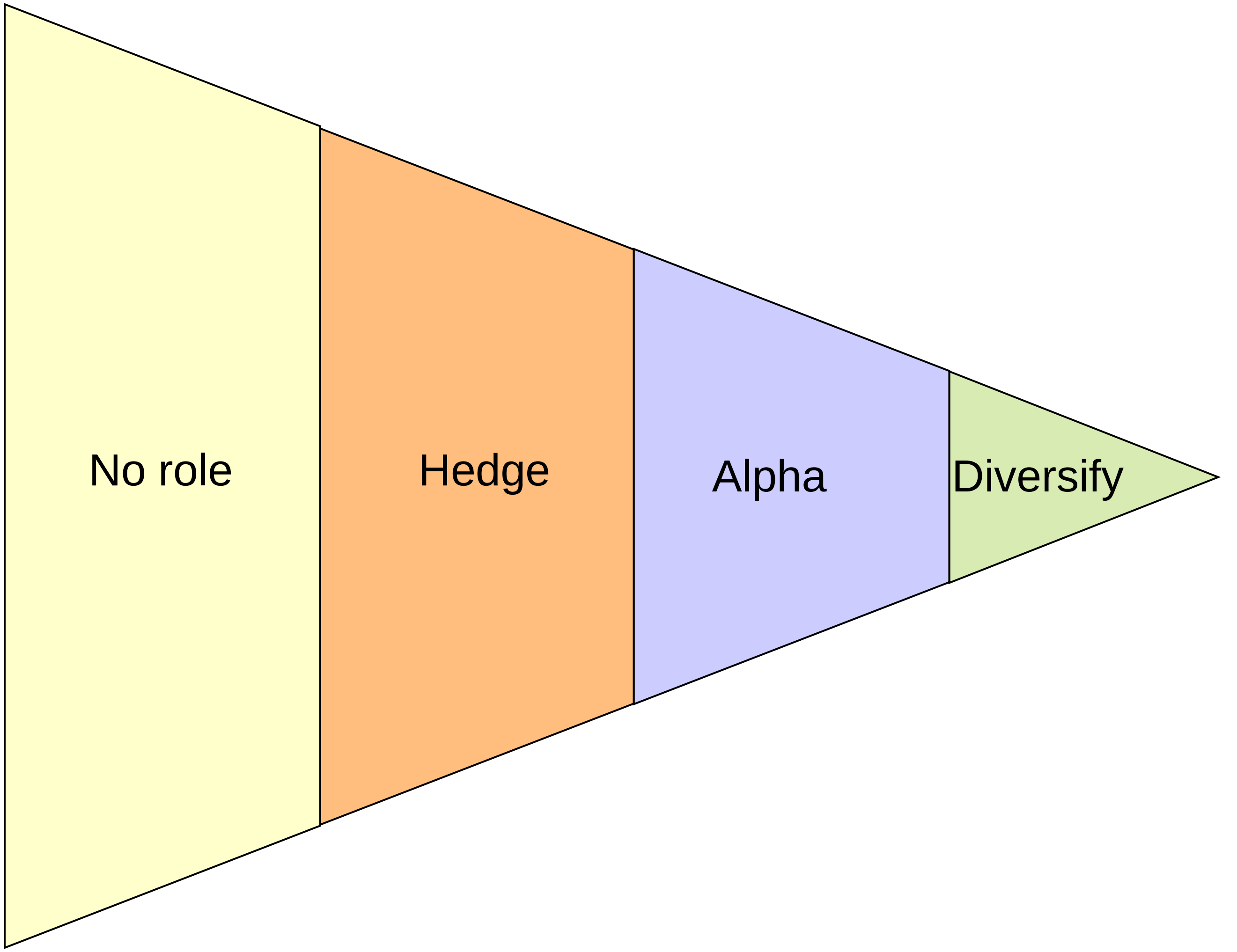
		Investors Area of Concentration		**Investors After Thought**
International Asset Returns	=	**Foreign Asset Returns**	**+/-**	**Currency Impact**
International Asset Returns	=	**Foreign Asset Returns**	**+/-**	**Currency *Hedge Costs***

Currency can be bundled or unbundled from the asset.

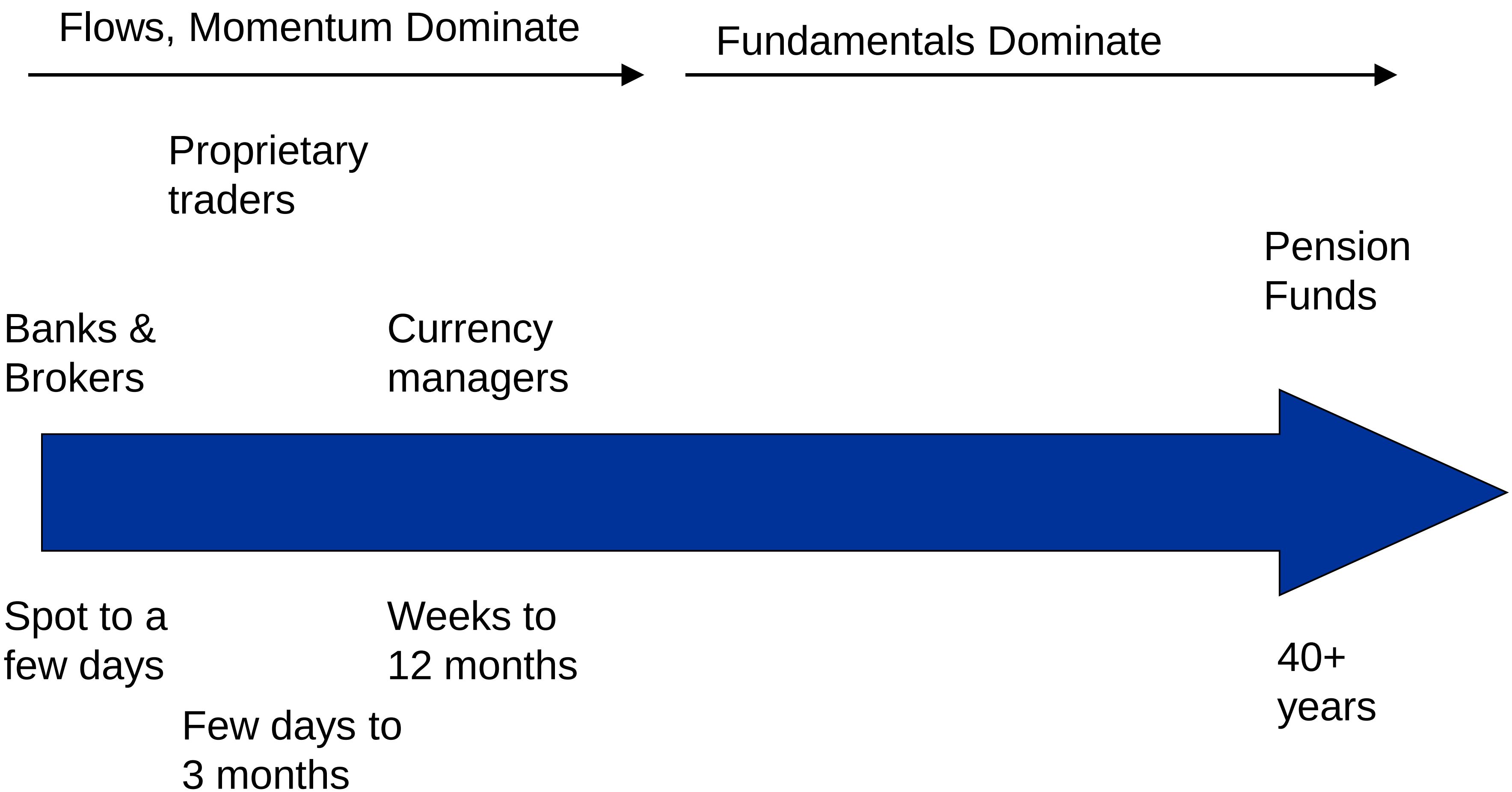
Market Evolution of Currency Management



Progression for Currency's Role…



Value from Currency And Time



The Currency Management Process Can Be Broken Down into Four Steps

Currency Analytics Road Map

Hedging Policy	Active/Passive	Choice of Style	Implementation
Goals: Risk reduction? Alpha? Both? Time horizon? Benchmarks, hedge ratio, multi asset hedge?	Inaction is a decision. Changing a hedge ratio in a passive plan is an active decision Benchmark decision will bias results	How much tracking error is acceptable? Should there be style diversification?	Is currency being managed: As directed? As desired? Any surprises? Should there be modification?

But There is More…

- Globalization is not going away!
- Execution is important in an OTC market
- Role of technology: electronic trading, algorithmic trading, prime brokerage and market transparency
- Markets are adapting to potential regulation
- Role of emerging markets, non deliverable forwards (NDF's), Government Intervention, Sovereign Wealth Funds (SWF)
- Safe havens, alternatives to fiat currencies?

- What about the forward market?
- **Currencies are a risk class, a choice and source of alpha**