A Discretionary Approach to Currency Investing

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BACKGROUND

“A Discretionary Approach for Currency Investing” was written by Adnan Akant, PhD, Head of Currencies, at Fischer Francis Trees & Watts, Inc. (FFTW), and is a chapter in “The Role of Currency in Institutional Portfolios,” edited by Momtchil Pojarliev and Richard M. Levich, London: Risk Books, 2014.

“The Role of Currency in Institutional Portfolios” examines the principles for investing in currency while also highlighting why it is and will continue to be an attractive asset class. Co-edited by Momtchil Pojarliev, FFTW, and Richard M. Levich, New York University Stern School of Business, Finance Department, the book is organized in four parts and focuses on Currency Exposures in Institutional Portfolios; Currency Investment Strategies; Currency Investment Process and Global Markets; and the Future of Currency Investing.

INTRODUCTION

Currency investing started in earnest with the introduction of floating exchange rates after the breakdown of the Bretton Woods system in 1973. Although with a history spanning a period of over 40 years, the specialty of currency investing is still relatively new compared to the professional practice of investing in stocks and bonds.

In this chapter, we give a brief history of how Fischer Francis Trees & Watts (FFTW) – an institutional fixed income firm – entered the field of currency investing when it began managing global bond portfolios in the late 1980s. In the next two sections, we discuss the early evolution of FFTW’s currency process in the context of the distinct objectives of risk reduction using passive or dynamic hedging, and return enhancement, where the focus is on pure alpha generation. We then examine evidence (following Pojarliev and Levich, 2008) showing that currency managers, including FFTW, have added value as a group over long periods, and that their excess returns can be explained as consisting of true alpha – generated using a primarily discretionary approach in the case of FFTW – and currency beta factors of trend, carry and value, generated typically using systematic models. From this evidence of value-added using both discretionary and systematic approaches, we discuss these two different styles of currency investing.

1 The views expressed in this chapter are the author’s own and do not necessarily represent those of FFTW or the BNP Paribas Group or any other third party with whom he is, or may be, associated.
The chapter then reviews early research, finding that currency models based on fundamental economic variables have not been particularly successful. This failure of fundamental approaches has led to the use of models based on statistical price measures and other non-economic, technical, inputs. We describe the general challenge in building systematic models, and the difficulty of living with such models in practice. This is followed by a look at discretionary processes in currency and the features of currency markets that we believe make it possible to anticipate capital flows, and thereby predict currency movements using judgement. We finish our comparison of the systematic and discretionary approaches to currency investing by discussing some of the pros and cons of each style.

The next section turns to FFTW’s overall approach to currency investing, a blend of a judgement-only discretionary approach and the use of systematic models to capture beta factors that include trend and carry. We emphasise the importance of risk control, both with discretionary and systematic styles, due to the ever-shifting nature of currency dynamics. This is followed by an analysis of the returns and correlations of FFTW’s primarily discretionary process, naïve currency beta factor styles and major asset market indices, including stocks, bonds, hedge funds and commodities. We find that FFTW’s judgement-only returns, and the trend and value currency beta factors, have very low correlations with major indices. In the case of FFTW’s approach, we also find that currency returns are positive in 2008, the year of the Lehman crisis, as well as in 2009, the year of the economic and stock market rebound. Our correlation and return analyses – be it of the discretionary process exemplified by FFTW, or systematic approaches represented by naïve beta factors – strongly suggest that investors should consider allocating to currency investing as a separate asset, alongside stocks, bonds and other major asset classes.

FFTW’S EARLY HISTORY OF CURRENCY INVESTING

FFTW was launched in 1972 by Richard Fischer, Stephen Francis, James Trees and John Watts, who had worked together at Brown Brothers Harriman, and had the pioneering idea of applying modern portfolio theory to the active management of fixed income portfolios. A substantial industry of active portfolio management for equities had already been in place for some time, and the new discipline of modern finance (which developed after the seminal work of Markowitz, 1952) had led to a new understanding of risk and return in the world of equities, with practical implications for the industry of active equity investing. The newly founded firm was a partnership that focused solely on fixed income and actively managed institutional bond portfolios for total return – a novel concept in 1972, when bonds were mostly held to maturity in the trust departments of major banks.

After growing for more than a dozen years as a US dollar-based institutional fixed income manager, FFTW decided to expand its active management capabilities to global bonds from late 1989. The decision to go into global fixed income was a natural extension of two characteristics of FFTW’s business since its founding in 1972. The first important factor was that, from the start, FFTW had two complementary businesses in fixed income: (i) an active fixed income investment management business for institutional clients; and (ii) a proprietary trading activity that was professionally managed by a separate investment team to earn an attractive return on the partnership’s capital. The existence of proprietary trading allowed FFTW to experiment using its own capital with instruments and approaches that were not commonly used in domestic fixed income portfolios at the time. Among these novel approaches and instruments were leverage, shorting, derivatives, options and foreign exchange.

The second important factor was that, although FFTW only managed US dollar fixed income in its institutional business line for the first 15 years, many of its clients – even as early as the mid-1970s – were institutions such as central banks, international official organisations and sovereign wealth funds who had given FFTW US dollar mandates for part of their US dollar reserve or pension portfolios. After a decade of relationship with FFTW, a number of these official institutional clients were interested to have FFTW expand its active fixed income activity into global fixed income to cover their non-US bonds.

It is in this context that FFTW seized the opportunity to develop an expertise in global fixed income by opening a London office in 1989, and started to manage active global sovereign bond mandates for a European official institution and two European pension plans. The benchmarks for these active mandates included the recently launched Salomon World Government Bond index (now WGBI), which represented a multi-currency benchmark.

With the launch of the global bond product at FFTW, a new investment process with new concepts and tools was also in order. Whereas domestic US fixed income was familiar territory for FFTW and competitor fixed income managers, global fixed income was a new field requiring a more formal approach to the identification and budgeting of various active decision risks. In domestic fixed income, the notion of
separating duration, yield curve and sector decisions into individual investment activities, each with their own processes, expected returns and volatilities, was not the norm. However, with global fixed income it soon became clear that, in addition to the various components of bond risk inherent in domestic fixed income, there was a distinct new dimension of decision risk in the active management of currencies.

At FFTW, a framework of risk budgeting was designed and adopted for global fixed income management, where active decision risk was separated for bonds and currencies. Given that currencies are significantly more volatile than interest rates, budgeting within the overall investment process was calibrated to achieve about an equal risk contribution from bond and currency decisions. With a detailed set of ex ante assumptions on volatilities and correlations, a system of risk budgeting was designed. The actual investment process could then be separated into independent fixed income and currency components, where currency decisions could be implemented using currency forwards. In practice, the risk unit system designed could operate independently on currencies and bonds based on the assumption that currency and bond returns have near zero correlation and, more importantly, because active decisions on bonds and currencies would be supervised at all times by the global bond team head at the overall portfolio level. While overall portfolio risk would at times need some close monitoring, the independent process approach for bonds and currencies would be appropriate most of the time, and certainly when overall portfolio risk did not reach extreme levels. At the outset of the global bond process in 1989, a rough rule of thumb was that a 10% deviation from benchmark weights in inter-bloc currency – Deutschmark, Japanese yen and US dollar (DM, JPY, USD) – was about equivalent to a one-year duration shift away from benchmark in the bond portion of the global portfolio.

The design of the global bond investment process therefore led to a separation of functions between the fixed income and currency activities. In the early years of the FFTW process, each global bond team professional had a dual role where they would wear a “bond hat” to make bond decisions and a “currency hat” to make currency decisions. It was clear from the start of the global bond activity that bond and currency investing required different mindsets and judgements, even when similar inputs (eg, economic data and interest rate views) to the decisions were utilised. The investment process was judgement-oriented for both bonds and currencies, and implemented by a single team where specialisation by bond versus currency activity did not occur, although each team member focused on a set of countries and regions to cover both types of decisions. For inter-bloc currencies, a pair of senior team members would make a joint judgement, whereas minor, or intra-bloc currencies in the Group of 10 developed markets (G10), would be handled by regional or country specialists. Intra-bloc currency decisions were made as cross-trades using the appropriate inter-bloc currency for the region, either the Deutschmark for all European currencies or the US dollar for the dollar-bloc, defined as the Canadian, Australian and New Zealand dollars (CAD, AUD, NZD) – while the Japanese yen, an inter-bloc major currency, had no associated intra-bloc currency.

This single global bond team approach worked well for sovereign bonds and for currencies within a G10 universe until the late 1990s, when global bond portfolios began being benchmarked against global aggregate indices that included a wider opportunity set covering credit and agency sectors, as well as a selection of emerging market (EM) currencies and bonds. With this wider set of opportunities, the global bond investment process required more specialisation by alpha source. In 1999, with the advent of the euro (EUR) and the transition to global aggregate benchmarks, FFTW separated its global bond team into distinct government bond and currency teams. The newly reorganised currency team then decided to re-examine and articulate more clearly its investment process, starting from basic principles, with a view toward developing a stand-alone absolute return alpha engine in currencies. It is also at this point that the currency team started to officially develop and incorporate a quantitative model process for currency to diversify its long-standing judgement-only approach.

RISK-REDUCTION AND RETURN-ENHANCEMENT IN CURRENCY INVESTING

By the late 1990s, the field of currency management had evolved in two distinct directions, namely risk reduction and return enhancement. Figure 1 depicts an idealised risk–return graph for hedged and unhedged foreign assets. Over longer-term periods, hedged and unhedged foreign assets in major currencies can typically be expected to exhibit the same return but with much higher volatility, or risk, for unhedged versus hedged assets. This is the reason that risk reduction has been a strong focus of currency strategies since the inception of floating exchange rates. We now turn to a brief discussion of these distinct dimensions of currency management individually.
Risk reduction for international investments has been achieved traditionally by hedging a fixed proportion of the foreign currency exposure back to the base currency using short-term forwards that would be continuously rolled. One strand of active management focused primarily on controlling the risk of currency exposure, with a secondary objective of adding some value. These managers had developed quantitative approaches to vary the passive hedge ratio dynamically, utilising concepts similar to portfolio insurance. The notion was to replicate a call option on currency, rather than passively holding currency, using tools similar to delta hedging. The basic reason dynamic hedging worked over time is that currencies exhibited trending behaviour, making option replication quite efficient. In fact, the option-replication approach was not only low cost, it commonly created an excess return compared to passively implemented fixed ratio hedging at the same portfolio risk level.

The notion of taking advantage of trends in currency to reduce portfolio risk, and even add some return over time, was certainly appealing to investors facing undesired volatility in their international exposures. Dynamic hedging therefore gathered a significant following as a product in the currency industry. On the other hand, the primary focus on the hedge ratio and risk control left much to be desired in trendless periods where dynamic hedging typically underperformed fixed hedge ratio investing. Given the wide swings in the underlying hedge ratio in standard dynamic hedging programmes, the information ratio of such currency activity remained quite low, even when an excess return did accrue through this option-replication method. Dynamic hedging was clearly not a product focused on generating high risk-adjusted alpha in the absolute return sense, but was more suited to risk reduction. FFTW observed that most of its clients preferred to remain with traditional passive hedge ratios, where value-added was measured over well-defined global bond benchmarks with specifically tailored fixed-hedge ratios. Nevertheless, FFTW did develop a purely quantitative dynamic hedging method, which was utilised for some clients who did not want active currency in their international portfolios, yet faced substantial currency risk from tracking global benchmarks. This proprietary dynamic hedging programme was successfully utilised for a number of such clients.

A second strand of active management was focused on risk-efficient pure alpha for generating absolute return using currency. This strand dated back to the beginning of floating exchange rates, but had not yet really become a major product for institutional investors. Such currency activity was typically carried out in managed futures programmes or as part of the rapidly evolving global macro hedge fund industry, rather than being offered as a stand-alone product. FFTW’s approach to active currency since inception in 1989 was in line with this second strand, and focused on developing a risk-efficient pure alpha process that could be overlaid as an independent return source on global bond portfolios, or over any low-correlated underlying portfolio, including Libor-based strategies for absolute return applications such as proprietary trading.
CURRENCY MANAGERS HAVE ADDED VALUE

Before embarking on the merits of discretionary versus systematic management of currencies, it may be useful to review the case for any kind of active management in light of the efficient market hypothesis (EMH) (Fama, 1970). There has been much written on EMH over the years, with the evidence now pointing toward a view that a strict version of EMH may not hold, and active management can be expected to increase risk-adjusted portfolio returns. Strict EMH proponents would say that any apparent excess profits generated by an active investment process are transitory, or come from following strategies where the risk is not measured correctly – for example, holding high-yielding debt may show attractive risk-adjusted returns for long stretches of time during economic expansions, but will show sharply negative returns and high risk in deeply recessionary periods that occur infrequently. Therefore a strategy of always substituting high-yield debt for Treasuries in an active bond portfolio may appear to show superior risk-adjusted returns for long stretches of time. However, the risk of such a strategy has probably not been measured correctly: on a long enough horizon, there may not be any risk-adjusted excess return. Within the world of currencies, most academics and practitioners have dropped strict adherence to the EMH view, especially based on evidence from simple technical models that follow trends in currency (Neely, 2011). Different asset markets may exhibit different degrees of efficiency – for example, it has been empirically shown that adding value using an active investment process has been much more difficult for large cap versus small cap stock portfolios.

Many of the reasons proposed by academics about why EMH may fail are related to the newer field of behavioural economics, where asset prices are not only driven by fundamental information and rational expectations of investors, but also by behavioural aspects and asymmetric information among market participants. Under behavioural economics, asset prices may not move quickly enough to reflect all current information and rational bubbles may form driven by sentiment swings. Furthermore, policymakers, such as central banks and governments, may create profit opportunities via policy targets, fiscal and monetary policy, or specific rules and intervention, in a world where investor expectations do not adjust instantaneously to new information.

Currency managers as a group have generally added value through active management. A study, by Pojarliev and Levich (2008), on the Barclay Currency Traders’ index (BCTI) data over the 17-year period from January 1990 to December 2006 came to some interesting conclusions. It found that currency managers as a group (106 funds as of 2006 are in the BCTI) had excess returns of 0.25% per month (or 3% annualised) with a standard deviation of 3.04% per month (or 10.5% annualised). This provides evidence that currency managers did add value, although the information ratio for the group at 0.28 was not overly impressive, yet far more attractive than the typically negative results found for large samples of active large cap equity managers in the US.

Pojarliev and Levich went beyond simply calculating total excess return by decomposing this excess return into an alpha and a sum of beta factors plus a residual error term. The underlying thesis was that there are simple, rule-based naïve strategies, such as carry, trend and value, which can be thought of as representing beta factors that earn a risk premium in currency markets. Investors can follow these well-defined styles and earn a return, just as stock investors can generally expect to earn a return over time from buying and holding market portfolios of equities (eg, the S&P 500 index). When total excess returns are looked at in this fashion, the true alpha is the excess return that is above and beyond the return earned by following the naïve strategies of carry, trend, value and volatility. In this much stricter analysis of currency manager skill, Pojarliev and Levich (2008) found that the overall group of currency managers actually has a negative true alpha, with the entire mean excess return more than fully explained by the simple strategies of carry, trend and value during this 17-year period (the volatility beta factor showed no excess return in Pojarliev and Levich’s results, and will therefore be dropped as a currency beta factor for the remainder of this chapter). It would appear from this analysis that a currency investor would be well advised to simply follow carry, trend and value as naïve strategies – which are generated by systematic processes – rather than allocating equally to each of the active currency managers in the BCTI.
We have extended Pojarliev and Levich’s analysis to an eight year period from October 2006 through to September 2014, when a composite track record fully supported by transactional accounting data is available for FFTW. Instead of using the BCTI data, where this index is not designed to be investable, we used the BTOP FX Index (BTOP) which seeks to replicate the overall composition of the currency sector of the managed futures industry. The BTOP employs a top-down approach in selecting its constituents. The largest investable currency trading programs, as measured by assets under management, are selected for inclusion in the BTOP. Each calendar year, the selected currency trading programs represent in aggregate no less than 50% of the investable assets of the BCTI. Both the BCTI and the BTOP are produced by Barclay Hedge, a provider of industry data and benchmarks for alternative investments such as currency.

We have utilized the systematic Deutsche Bank (2007) currency styles for trend, carry and value to represent the naive beta factors. The results of the analysis are presented in Table 1.

### Table 1: Currency Managers’ Annual Excess Returns Analyzed in Terms of True Alpha vs. Beta Factors (Oct. 2006 - Sep. 2014)

<table>
<thead>
<tr>
<th>Currency Manager</th>
<th>True Alpha</th>
<th>Trend Beta</th>
<th>Carry Beta</th>
<th>Value Beta</th>
<th>Total Excess Return</th>
</tr>
</thead>
<tbody>
<tr>
<td>FFTW</td>
<td>2.30%</td>
<td>-0.01%</td>
<td>0.13%</td>
<td>0.06%</td>
<td>2.48%</td>
</tr>
<tr>
<td>BTOP</td>
<td>1.06%</td>
<td>0.00%</td>
<td>0.06%</td>
<td>-0.08%</td>
<td>1.03%</td>
</tr>
<tr>
<td>DB FX Styles</td>
<td>-0.04%</td>
<td>2.01%</td>
<td></td>
<td>1.97%</td>
<td></td>
</tr>
</tbody>
</table>

Sources: FFTW, Deutsche Bank, Barclay Hedge, Bloomberg

Note: We use the methodology in Pojarliev and Levich’s analysis (2008) to estimate true alpha and returns attributable to the beta factors. Investments in FX strategies can be subject to material swings in volatility and can result in principal losses. The Total Excess Return is calculated based on the assumption of a zero benchmark return. Returns have been annualized using a compounding of monthly returns, the calculations would be impacted as follows: FFTW returns would be lower (2.35%) and produce a lower information ratio (0.41). The performance shown above for FFTW is presented after assuming a flat 50bp fee. Actual fees charged by FFTW can vary and are subject to negotiation. A copy of FFTW’s current fee schedule can be found on the firm’s ADV filing and available upon request.

We have found in Table 1 that over the recent eight year period from October 2006 through to September 2014, FFTW as well as the BTOP have generated economically significant true alpha. During this shorter recent period, active currency managers represented by the investable BTOP appear to have had a low exposure to the beta factors of carry and value since Deutsche Bank carry and value beta factor returns were substantial while the BTOP returns attributed to these factors were negligible. This finding perhaps reflects some loss of confidence in systematic approaches in the immediate aftermath of the Lehman crisis. Given the evidence that systematic management in currency – in the form of trend, carry and value beta factors – can be expected to add value, and that a primarily discretionary currency process practiced at FFTW has also been largely successful, it is worthwhile to discuss some of the main pros and cons of a discretionary versus a systematic process.

### SYSTEMATIC VERSUS DISCRETIONARY CURRENCY INVESTING

#### Systematic processes in currency

In the first decade of the modern floating-rate regime that started in the early 1970s, academic researchers attempted to formulate fundamental economic models that explained and predicted the movement of currencies. Although much effort went into developing such models, results were disappointing. By the early 1980s, a powerful negative finding was reported by Meese and Rogoff (1983), who argued that a random walk model performed as well as any estimated fundamental economic model at horizons up to three years, even when
models utilised actual realised values of future explanatory variables such as GDP, inflation, trade balances, interest rates, etc. In other words, fixed fundamental models of exchange rates could not explain or predict currency movements in the medium term, even when given the precise evolution of future economic data, which in reality is of course not available when using real models.

As the years passed, many other researchers attempted to find models of economic data that would explain currency movements. In 2001, a special conference on empirical exchange rate models was held at the University of Wisconsin, for the anniversary of the original work by Meese and Rogoff, and a subsequent paper by Rogoff (Rogoff, 2002) summarised the continued failure of exchange rate models. To this day, researchers have not been able to explain currencies in the short to medium term using fundamental economic data.

Another way to see the difficulty of modelling currencies is by observing nominal exchange rates versus their purchasing power parity (PPP) valuations. PPP is a theory of long-term equilibrium exchange rates based on the relative price level of two countries. The concept is based on the notion that identical goods will have similar prices in different markets. There are obviously many limitations to this PPP principle, since not all goods are traded and income levels differ greatly in different countries. Nevertheless, PPP can provide an anchor for gauging whether a currency is cheap or expensive. In Figure 2, we track the nominal and PPP values of the euro versus the US dollar since 1994 (note that the values for the euro were reconstructed for the period prior to its introduction in 1999). The euro’s fluctuations around its PPP level last for years, and go to extreme levels. For example, the overvaluation of the euro has been going on since 2003, reaching an extreme of more than 30% in 2008. Prior to that, the euro was undervalued for six years, reaching a low point of more than 20% below PPP in 2001.

![Figure 2: Extreme Fluctuations in PPP Take Years to Correct](image)

Extreme fluctuations in PPP, which take years to correct, suggest that the notion of an equilibrium valuation based on PPP is not a very useful tool by itself for managing currency risk for periods under three years. In fact, this failure likely lies at the root of the Meese–Rogoff negative finding, as discussed in Rogoff (2002). This counterintuitive result is a strong hurdle for those trying to build currency trading models based strictly on fundamental economic information.

Exchange rates just do not follow simple economic rules in a consistent way. A currency can be strong or weak whether economic growth, inflation, the trade balance, interest rates, productivity, PPP valuations, etc, are high or low over the medium term. Those who believe they have found a systematic rule for trading currencies based on fundamental inputs are often focused on factors such as real interest rates, growth surprises in various economies or PPP valuations. However, such rules are less than reliable over one-year periods, which is the most
relevant timeframe for typical active investors. Furthermore, the application of such rules varies dramatically for different currencies – e.g., growth surprises act in a positive direction for the euro versus the US dollar, while they tend to act in a negative direction for the Japanese yen versus the US dollar. None of the economically or fundamentally derived data by themselves can generally be made into reliable and universal rules for trading currency.

The failure of fundamental economic approaches to predicting currencies in the 1970s led to investigations of other types of systematic methods for currency investing. It is for this reason that currency models often utilise statistical price measures of the underlying currency, such as moving averages or price volatility, as an important component of the model, even when fundamental variables such as PPP are also used as inputs. Many models usually attempt to combine a variety of inputs, including statistical (or technical) price information, measures of volume and currency contract open interest in futures exchanges, and even sentiment or positioning indicators based on surveys of investors.

A systematic investment process, whether based on fundamental or technical inputs, is one where portfolio decisions are made based on a set of predetermined rules. The rules themselves may be adaptive, but the mechanism for adaptation is then a predetermined rule itself. With the advent of high-speed computation, it is possible to envisage very elaborate rules that act on a wide range of data, including quantitative measures of textual data, such as the frequency of key words in a set of business news, for example. The predetermined rules are normally developed through backtesting and data mining to exhibit high performance in the form of risk-adjusted return. Typically, the robustness of the rules is investigated by varying the parameters, and possibly even the detailed structure of the rules, to see if performance is relatively stable, and the sensitivity of results is not high for small variations in the rules. Clearly, there is a distinct trade-off between specifying rules that work well for the past, but show great sensitivity to even modest changes in parameters. Also, the complexity level of the rules is an important element, as systematic models can be built to perform to an arbitrary degree of excellence for historical data by simply increasing the number of rules and parameters.

It is therefore easy to fall prey to the illusion that a complicated model is the best way to approach investment decision-making for the future. Alas, it is often the case that the better a complicated model performs in the past, the worse it is likely to perform over any extended future period. As in science and philosophy, Occam’s razor applies in model building: among competing models, the model with the fewest assumptions (rules) should be selected, and one should proceed to simpler models until simplicity is traded for greater accuracy in a very significant way.

In most systematic models, risk control is typically a key ingredient of the process, and is implemented quantitatively. Risk control can take the form of rebalancing the positions traded either progressively or with hard stops when losses occur, such that capital is preserved. A quantitative approach to dynamic risk management can sometimes be found in portfolio theory, or adaptive weights, where portfolio positions may be adjusted as new information becomes available on underlying asset prices or other model inputs. By necessity, models in the real world work causally with recent data to react to changing conditions, as do all active investment processes, be they systematic or discretionary.

In practice, living with systematic models can be difficult for a number of reasons. Even high information ratio strategies can have many years of flat to negative returns that will test the patience of sceptical investors. Lower information ratio strategies will mathematically require a very long period of time to establish statistical confidence that value is, in fact, added by the systematic process. Model signals are also often counterintuitive, especially when the “headline news” is not supportive. It can be very difficult to stick to a model during market events such as the Asian debt crisis of 1997–98, the Long-Term Capital Management (LTCM) crisis, the terrorist acts of 9/11, the October 1987 stock market crash, Enron’s collapse, the Lehman crisis, the eurozone sovereign debt crisis, the Japanese tsunami of 2011 and the US sovereign credit downgrade and political threats of US default in 2011–13.

Discretionary processes in currency

In our discussion of systematic models, we have examined the difficulty academics have in explaining the movement and valuation of currencies based on fundamental economic factors. We also examined earlier the empirical evidence that many active currency managers have nevertheless shown an ability to add solid value. The questions then are: what makes currency alpha possible, and can a discretionary approach capture this alpha efficiently?
After the start of the free-floating exchange rate regime in the early 1970s, the currency market was proven to be by far the largest financial market; according to BIS (2013), its daily volume reached over USD5.3 trillion in 2013, with an annual growth rate of about 10% since 2010. There are many thousands of participants, large and small, spread around the world trading currency 24 hours a day, nearly every day of the year. The liquidity of the currency market is also unsurpassed among financial markets: transaction costs are minimal and major currencies can be traded in very large sizes. Given the size and liquidity of the currency market, many casual observers expect a degree of efficiency that precludes the possibility of alpha generation by active managers. As we have seen earlier, however, the evidence shows that many active currency managers consistently add value.

The existence of profit potential in active management may be the result of a few distinct characteristics of currency markets. In spite of the enormous volume and liquidity of these markets, a very large portion of the daily flow is not driven by profit-seekers in currency. Transactional flows for trade in goods and services, corporate activity for mergers and acquisitions or foreign direct investment, purchases or sales of international stocks or bonds, hedging activity for exports or imports, official currency flows for reserve management or intervention, flows generated by tourists travelling abroad or guest workers sending savings to their home country, etc, are not driven primarily by the motive of profiting directly from currency moves.

The participants who are attempting to profit from currency moves directly are primarily currency dealers such as international banks, and active currency managers such as hedge funds, private speculators and specialised currency overlay managers. The first group, the bank dealers, tends to focus on very short-term moves, with the largest activity taking place intraday. The second group, which includes the true active currency managers who seek to profit from moves over multi-week or longer periods, is indeed a small fraction of the entire flow and of the participants in the currency markets. The data is hard to ascertain accurately, but we estimate this flow and group to account for less than 10% of the overall currency market. The fact that investors seeking to profit from currency movements over periods exceeding a single day constitute a minor portion of the market may explain partly why this group can exploit significant opportunities and shows some success in adding value.

Currency markets serve as a significant “release valve” for global imbalances, and play a large role in macroeconomic equilibrium adjustments. In most countries, it is far easier from a political, as well as an economic perspective, to let the currency adjust than to move official interest rates, shift fiscal policy or deploy other tools to relieve financial and economic stresses. For this reason, currencies can move significantly, providing profit opportunities for those who are able to anticipate capital flows stemming from global macro imbalances. This paradigm is certainly true for countries that have sovereign monetary policy and free capital flows – for example, the US or the UK. For countries that choose to peg their currencies at a fixed rate, the situation is obviously different. With fixed exchange rates, a country has to choose between a sovereign monetary policy and free capital flows. The famous “trilemma” (Mundell and Fleming, 1963) of foreign exchange, as illustrated in Figure 3, states that a country can only have two of the following three: a sovereign monetary policy, free capital flows or pegged exchange rates.

Figure 3: The trilemma of currency markets

![Figure 3: The trilemma of currency markets](source: Mundell and Fleming, 1963)
Most major countries have a sovereign monetary policy and free capital flows, and thus free-floating exchange rates (with the eurozone viewed as a single country for this purpose). An example of pegged exchange rates and sovereign monetary policy is China (US dollar peg), where free capital flows are therefore not possible. An example where pegged exchange rates and free capital flows co-exist is Hong Kong (US dollar peg), in which case a sovereign monetary policy is therefore not feasible: Hong Kong interest rates must closely match US rates.

Given that macro imbalances often occur around the world, and that currencies are a primary method by which such imbalances are reduced, active currency management makes a great deal of sense, provided imbalances can be identified, and the timing of capital flows that act to alleviate such imbalances can be anticipated. In fact, many active strategies seek to anticipate policy changes and capital flows that generate adjustments in currencies. Capital flows themselves typically respond to expected rates of return, which are driven not only by sovereign economic policy, but also by a number of other factors. In what follows, we will discuss FFTW's approach to active currency management as a practical example of how one discretionary currency manager seeks to organise its process for generating return in currencies.

A discretionary process in currency can also be conceived as one that starts from the building blocks of the systematic beta factors discussed by Pojarliev and Levich, (2008), such as trend, carry and value, and uses judgement to vary weights attached to these beta factors. At the simplest level, a discretionary process can be a time-varying risk allocation between well-understood currency beta factors where the weights can change based on judgement. For example, during recessionary periods or financial crises (eg, the Lehman crisis), the weight attached to carry models would be reduced – possibly to zero – using a judgement about the market environment. Similarly, during periods where there is a strong theme, such as the Bank of Japan instituting quantitative easing (QE) to target higher inflation via weakening the yen, the weight attached to trend models involving the yen would be increased to its highest level commensurate with a long-run risk budgeting plan. Providing the discretionary currency manager has skill in making such judgements about the environment and current relevant market themes, a discretionary approach could outperform a fixed-weight static risk allocation to beta factors – or even a dynamic weight allocation based on predetermined rules that may never be sophisticated enough to foresee and assess correctly all potential market environments.

A contrast of discretionary and systematic styles

It is useful to review some practical considerations in any investment process, be it systematic or discretionary. First, it is critical to determine the important factors that underlie market dynamics. Focus should be placed on sensible, postulated fundamental economic relationships or important features of investor behaviour. The underlying question is how, or why, EMH may fail, and how this can be exploited in an active investment strategy, be it systematic or discretionary.

The attractive feature of a discretionary process is that it is typically adaptable to abrupt changes in market conditions or fundamental relationships in the global economy. Decision factors that have been identified over time through experience, skill or even quantitative approaches can be given flexible weights for any given active decision. This type of flexibility can be very important in periods of market stress or changing economic environments. A systematic approach, by contrast, will typically behave in a more rigid way, as adaptive rules are hard to formulate a priori to be as flexible and responsive to changing conditions as a skilled investment manager. When it comes to pattern recognition, the skilled human mind is typically far more adept at extracting useful information from massive amounts of data than a computer algorithm.

The drawback of a judgement-based, or discretionary, process is that it requires the identification of superior investment skill, a highly uncertain management task, especially since the description of a judgement-based process tends to be difficult, fuzzy and heuristic. Entrusting funds to an active manager always requires a leap of faith, and the confidence that future returns will be similar to historical ones. This is, of course, true whether the active manager is discretionary or systematic. However, a substantial proportion of investors find more comfort in precisely articulated rules of the systematic variety of decision-making versus the use of skill and judgement in the case of currency. A main benefit of a systematic process is that rule-based approaches make investing objective, easy to explain and implement, at usually a lower cost than a judgement-based process. For many investors or fiduciaries of funds, a higher degree of confidence is often achieved from precisely articulated rules of the systematic variety, and detailed historical simulations, than from relying on the skills and experience of a discretionary currency team.

In practice, however, rule-based models do not often work as expected in real-time. In addition, a research effort with substantial resources is commonly required to validate models on an ongoing basis, and to stay current with changing market conditions and economic relationships.

A dilemma in model building is the risk of excessive data mining. As discussed earlier, the more complex the rules and number of parameters...
in a given model, the better the historical fit – however, it is less likely the model will perform well in the future. The quantitative modelling industry is replete with examples of models with great backtest results that stop working soon after real-time implementation. Models need to be based on intuitively sensible relationships, and be subjected to tests of robustness and stability by varying all parameters and checking sensitivity of results to various tests (bootstrap, Monte Carlo, wide variations in parameters, etc). Models should also be monitored in real-time with frequent hypothesis-testing to ascertain continued validity.

There is usually a continuum between systematic and discretionary processes in the real world. In a primarily judgement-based process, quantitative analysis can identify important factors that should be considered in decisions. Risk control, or capital allocation, is usually an integral part of both successful models and discretionary approaches. Unlike econometric models where the level of fundamental variables must be forecasted accurately, trading models and discretionary investing typically only need to discover the direction of price movement. Also, effective risk control (stops or dynamic risk-allocation rules) in either case can reduce the impact of poor decisions.

Signals from systematic models can be used as additional factors to weigh in a judgement-based process. Optimisation tools can be used to create risk-efficient portfolios based on subjective probability inputs and scenario analysis by market specialists. Risk control and portfolio construction can be based on quantitative techniques, even while investment decisions are judgement-oriented. Conversely, in a primarily quantitative or systematic process, models are commonly constructed based on a judgement about what variables and structure should work – ie, what model-builders determine makes sense to experienced, skilled investors. On an ongoing basis, systematic models may be adapted or even dropped based on a judgement about the changing validity of assumptions underlying the models, as well as strictly statistical techniques used to validate models.

In practice, judgement and quantitative techniques work well together in a disciplined investment approach. The usual emphasis is that return generation is driven more by judgement, while risk control, portfolio allocation and currency beta generation is driven more by quantitative techniques. We will discuss in greater detail below how FFTW has evolved its currency investing process from a purely discretionary approach to one that blends systematic models with judgement.

**FTFW’S APPROACH TO CURRENCY INVESTING**

At FFTW, we accept that the real world is complex, subtle and ever-changing, and that rigid models that attempt to capture excess return using currencies have a limited degree of efficiency. We subscribe to the notion that true currency alpha can be generated using a global macro judgement approach, while currency beta factors such as trend and carry can be captured using systematic models. FFTW approaches active currency management by taking a well-diversified set of measured positions away from neutral (zero for absolute return) using a blend of discretionary and systematic approaches. These positions are driven by judgement views and quantitative model trades on major as well as minor currencies in the G10, and also on about 20 of the most liquid EM currencies. Such positions are modified frequently in response to, or in anticipation of, economic and market developments. The objective is to provide an alpha with an attractive information ratio. Depending on perceived relative values, forward contracts, options or swaps are used to implement this active currency process.

A discretionary currency process focused on themes

The judgement-only component of FFTW’s currency process is anchored in the notion that currencies move due to themes that need to be identified correctly and monitored continuously. Currency themes arise typically from solid fundamental economic factors; nevertheless, no simple rules exist for determining which themes will dominate at any given time. When market themes shift, a rigid framework for evaluating fundamentals usually falters. A number of competing themes or hypotheses about each of the major currencies tend to co-exist. At any point in time, however, only a few of these themes drive currencies, while the others recede to the background. This feature of currency markets makes forecasting based on fixed fundamental models treacherous for short- to medium-term horizons. FFTW’s currency team members gather weekly to systematically review the critical factors they believe may affect each of the major currencies over the following three months. The factors reviewed always include expected shifts for at least the following variables: (i) relative GDP growth rates versus consensus expectations (growth surprises); (ii) relative real long-term interest rates and inflation developments; (iii) official policy targets for currencies and monetary policy (ie, short-term rates); (iv) the fiscal position; and (v) the trade balance and capital flows.
Depending on the current environment, team members may introduce and review additional factors, such as risk aversion, one-off special factors that can affect capital flows, or political issues such as elections, trade negotiations or geopolitical developments. After positing plausible currency themes and discussing them thoroughly, the small team of currency professionals may decide that a given theme is consistent with fundamental economic factors and is validated by current price action. This type of evidence will normally confirm that an existing theme is ongoing. However, at times the analysis of factors will suggest that a new theme may well be emerging, requiring a decisive shift in views, or at least risk control due to increased uncertainty. An example of potential currency factors for the US dollar, euro and yen as of April 16, 2014, is provided in Table 2, with the dominant current themes, based on FFTW’s judgement-only currency process, highlighted.

### Table 2: Currency Themes Across Major Currencies as of April 16, 2014

<table>
<thead>
<tr>
<th>Currency</th>
<th>Positives</th>
<th>Negatives</th>
</tr>
</thead>
</table>
| USD      | • US growth is likely to remain a leader among majors in 2014, while the Fed is likely to continue tapering QE.  
          • The safe-haven nature of the USD remains prominent in a world of limited alternatives when economic and geopolitical risks escalate. | • If US growth falters sufficiently, the Fed may suspend tapering of QE. A significant shortfall in growth and/or inflation would be a negative surprise for the USD vs. majors. |
| EUR      | • An increase in growth or inflation expectations beyond the current 1% rate would be a positive surprise, especially if US growth disappoints.  
          • Further moves toward banking union and structural reforms in peripherals would sustain a strong EUR. | • A low and declining inflation trend may force the ECB toward cutting rates and even possibly using unorthodox measures such as QE which would undermine the EUR.  
          • Systematic risk in the Eurozone may resurface after the Asset Quality Review of Banks in a slow global growth environment. |
| JPY      | • The yen generally benefits from risk aversion in a global recessionary environment.  
          • A sharp slowing of the Japanese economy after the planned increase in the consumption tax in Q2 could derail Abenomics and lead to a stronger JPY. | • Further BOJ easing in a positive global growth environment and a successful continuation of Abenomics should weaken the JPY further. |

Source: FFTW, as of April 16, 2014

FFTW strongly believes that there are unpredictable leads and lags (over- and under-shoots) between currency moves and the release of fundamental economic news. The study of past and current fundamental economic information in order to predict the future course of currencies can therefore be flawed at turning points, where risk control becomes particularly important. However, because currency trends persist in time, confidence and conviction can usually be gained from fundamental economic information about the direction of the current trend and the ongoing validity of the current theme. On the question of horizon, FFTW attempts to identify a timescale that blends theme analysis with the release frequency of influential fundamental economic information. FFTW’s judgement-only process therefore operates over horizons of about one to 12 weeks to capture cycles of monthly and quarterly data releases and other macroeconomic events, such as central bank policy meetings.
There are many factors that can influence currency markets and generate capital flows and trends. At FFTW, we focus on five areas to make judgements about alpha opportunities, as illustrated in Figure 4.

**Figure 4: Major factors which influence currency markets**

1. **Yield Spreads**: Sovereign interest rate spreads are the foundation of expected return differentials that create incentives for capital to flow from areas with surplus savings to deficit countries.
2. **Terms of trade dynamics**: Improving terms of trade (ratio of export prices over import prices) generally have two positive impacts on capital flows: 1) improving trade balance and 2) foreign direct investment inflows into the export sector.
3. **Monetary policy expectations**: Changes in the outlook for monetary policy have a large impact on the expected evolution of interest rate spreads, and can change the risk–reward trade-off of investments in one currency versus another.
4. **Tax/ regulatory policy changes**: One-off policy changes can significantly alter the expected return of holding a particular currency.
5. **Risk Aversion**: Increasing risk aversion among investors tends to drive a reversal of “usual” capital flows as risky holdings are pared back in favor of cash.

Changes in the outlook for monetary policy have a large impact on the expected evolution of interest rate spreads and can change the risk/reward trade off of investments in one currency versus another.

Two of these areas are directly linked to interest rates: (i) yield spreads, which incorporate the foundation of expected return differentials that create incentives for capital flows from areas with surplus savings to deficit countries; and (ii) monetary policy expectations, which have a large impact on the expected evolution of interest rate spreads, and can change the risk–reward trade-off of investments in one currency versus another.

A third factor is related to trade balances and the terms of trade dynamics. Improving terms of trade (ratio of export prices over import prices) generally has two positive impacts on capital flows: (i) an improving trade balance; and (ii) foreign direct investment inflows into the country’s export sector.

A fourth area of importance is fiscal and regulatory policy: tax policy changes can significantly alter the expected return of holding a particular currency. For example, a shift in corporate taxes can cause large inflows into a country, as has happened in the US and Japan at various times since the early 2000s (eg, the Homeland Investment Act of 2004 allowed a reduced tax rate for repatriated US corporate profits for one year, which contributed to a strengthening of the US dollar in 2005).

Finally, a fifth factor that is very difficult to model but extremely important in affecting capital flows is risk aversion. Unexpected developments, such as the Lehman bankruptcy of 2008, the 9/11 attacks of 2001, the LTCM bankruptcy of 1998, the Japanese tsunami of 2011, and many lesser events or investor sentiment swings, can cause an increase in risk aversion. High levels of risk aversion tend to drive a reversal of “usual” capital flows, as risky holdings are pared back in favour of safe investments. Gauging risk aversion is best done using a discretionary judgement-only approach, as every episode tends to be very different and appears with little warning.

The FFTW judgement-only currency process is based on a flexible way of analysing the factors described above, and utilising judgement to assign a proper weight to the opportunities and risks presented, as opposed to following the rigid styles incorporated in the currency beta factor models.
Risk control is critical

Since no amount of analysis will reliably predict a turning point in currency trends, risk control is an ongoing process of paramount importance. The three distinct phases of FFTW’s risk control system are: (i) ex post; (ii) ex ante; and (iii) stop-loss. FFTW calculates “risk units” for all currency pairs using a database of ex post statistics for volatilities and measures of independence. In this risk budgeting phase, performed about once a year, it is assumed that the future probability of loss from a given portfolio of currencies will resemble what it was in the recent past (the last five years). This measure helps calibrate the size of the risk budget allocated to the active judgement-based currency process. In the second phase, ex ante forecasts of return and risk, determined at weekly discussions of potential themes and scenarios, are analysed. This phase identifies combinations of currency positions that minimise the expected loss for a given return target over the forecast horizon. Finally, when actual moves in foreign exchange rates contradict expectations and no rationale exists for a change in outlook, a stop-loss procedure is triggered in which the currency exposure is automatically eliminated.

Once a trend changes, sentiment indicators can be very useful in revealing how swiftly the turn will happen. Monitoring market sentiment also ensures that the trend presumed to be in play is actually favoured, yet the market is not already excessively optimistic about this theme. Sentiment monitoring is an art used to calibrate the size of the position committed to a theme, not a reason to enter a new trade. In this sense, the monitoring of sentiment is closely connected to the issue of risk control. Again, judgement rather than a fixed rule determines how sentiment information is used.

The cumulative return of FFTW’s primarily discretionary process over an eight-year period from October 2006 through to September 2014 is shown in Figure 5. The excess returns are in the form of absolute return against a zero benchmark (with no earnings on cash or capital used) and a target volatility of about 5%. As can be seen in Figure 5, returns for the overall period show an information ratio of 0.43 with a maximum drawdown of 6.16%. In Figure 5, the BTOP is also shown as an FX industry benchmark for comparison. It can be seen from the low and volatile returns of the BTOP benchmark that this recent eight year period was a particularly difficult one for active currency managers, as it largely covered the Lehman crisis and its aftermath. At the time of writing, FFTW expects that industry performance in currency investing will increase again as the global economy continues to recover and normalise. As financial repression of volatility by central banks – with near-zero short-term rates and quantitative easing programmes in a number of major countries – diminishes, global macro and excess return opportunities for currency investing should increase.

**Figure 5: FFTW’s FX Alpha Returns**

Excess Returns from October 2006 through September 2014

<table>
<thead>
<tr>
<th></th>
<th>FFTW</th>
<th>BTOP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Annual Excess Return</td>
<td>2.48%</td>
<td>1.06%</td>
</tr>
<tr>
<td>Annual Volatility</td>
<td>5.71%</td>
<td>4.53%</td>
</tr>
<tr>
<td>Information Ratio</td>
<td>0.43</td>
<td>0.23</td>
</tr>
<tr>
<td>Maximum Drawdown</td>
<td>-6.16%</td>
<td>-12.04%</td>
</tr>
</tbody>
</table>

*Sources: FFTW, Barclay Hedge*

*Note: Investments in FX strategies can be subject to material swings in volatility and can result in principal losses. The Total Excess Return is calculated based on the assumption of a zero benchmark return. Returns have been annualized using simple rather than compounded returns, the approach applied by the benchmark provider (Barclay Hedge). If returns were annualized using a compounding of monthly returns, the calculations would be impacted as follows: FFTW returns would be lower (2.35%) and produce a lower information ratio (0.41). The performance shown above for FFTW is presented after assuming a flat 50bp fee. Actual fees charged by FFTW can vary and are subject to negotiation. A copy of FFTW’s current fee schedule can be found on the firm’s ADV filing and available upon request.*
A blend of discretionary and systematic styles

In the case of FFTW, the overall currency process (as of October 2014), which is illustrated in Figure 6, is organised into two separate investment styles to capture both a true alpha and a beta component corresponding to the framework of Pojarliev and Levich’s analysis discussed earlier.

Figure 6: FFTW’s currency process: A blend of discretionary and systematic styles

The beta component is based on systematic models and was introduced gradually over time, as the currency process evolved from its judgement-only approach that started in 1989. As of October 2014, FFTW’s approach to capturing the value beta factor still relies on the judgement-only process rather than a systematic model due to an important focus on performance for periods shorter than three years. The existing systematic component includes three distinct models for capturing excess returns from trend, carry and yield-delta approaches. The trend and carry approaches are classic and well understood. The yield-delta approach developed at FFTW is based on changes in interest rate spreads rather than the level of rate spreads, which drive carry (hence the term “yield-delta”). Through research, FFTW has found that such yield-spread momentum is a good basis for a systematic model that is robust and has strong negative correlation to the carry approach.

These three beta factors taken together show solid excess returns with desirable diversification benefits over time. For example, during the financial crisis of 2007–08, the overall beta component had good returns, with trend and yield-delta performing very strongly, more than offsetting the carry approach, which showed significant underperformance.

The models were developed over two decades of proprietary research at FFTW, and have been allocated a risk budget of 40% of the total currency process since October 2006. The remaining 60% of the risk budget is allocated to the judgement-only process discussed earlier. This judgement process seeks to generate return by anticipating capital flows resulting from global macro and country-specific factors. Led by the team head, the judgement-only process can always dominate model positions given the 60/40 risk budget split in favour of judgement. In practice, models are not frequently interfered with, as they were developed within the currency team, which strongly believes in the longer-
term validity of these beta factors (models have been suspended a few times since the Lehman crisis, based on judgement, due to unusual post-crisis market and economic conditions). At the end of the day, however, the currency team leader retains discretion to over-ride, change or switch off models at any time using judgement.

The currency team continuously studies the characteristics of model performance to retain confidence in the structure of the models over time. The model styles selected at FFTW are well-understood currency factors that have worked for decades (especially trend and carry). The FFTW model suite is meant to complement the judgement-only process with a portion of the risk budget, and create a diversified portfolio of investment styles. The critical element is the combination of models, and the additional diversification benefit of using judgement, which remains the most flexible approach in times of stress or changing economic and market conditions.

THE CASE FOR CURRENCY INVESTING: CORRELATIONS WITH MAJOR ASSET MARKETS

We have discussed the evidence that active currency management can be expected to provide attractive excess returns over time. What makes the case for including active currency as a separate source of return in longer-term global portfolios particularly compelling is the low level of correlation active currency shows with major stock, bond, commodity and hedge fund indexes. The data in Table 3 were computed utilising FFTW’s primarily discretionary process for generating currency returns, as well as naïve currency beta returns based on Deutsche Bank’s systematic trend, carry and value styles over a period of 8 years from October 2006 through September 2014 (the time of writing), which covers the period for which FFTW’s currency return record is available.

As can be seen in Table 3, correlations with all the selected major asset markets of currency beta factors for trend and value, as well as for the FFTW FX alpha process, are 25% or lower. In the case of the carry beta factor, correlations with equity markets and the Hedge Fund Research Institute (HFRI) Weighted Composite index reach levels as high as 77%. The higher correlation of the currency carry beta factor with equities is a well-known finding, and has often dissuaded investors from allocating to active currency strategies that rely primarily on carry styles. It is clear from Table 3, however, that currency styles such as trend, value and FFTW’s FX alpha process show 20% or lower
correlation to equity returns. In fact, FFTW’s FX alpha process has shown positive returns during both the sharp global equity market sell-off phase following the Lehman crisis in 2008 and the sharp global equity market rebound phase in 2009 as the US economic recovery began to take hold.

The correlation data in Table 3, together with the positive expected return for various styles of active currency investing – including positive performance shown for FFTW’s FX alpha process in both 2008 and 2009, the years surrounding the Lehman crisis, suggest that long-term investors should seriously consider allocating some of their portfolio risk to active currency programmes on a stand-alone basis.

CONCLUSION

Since the inception of the floating exchange rate regime in the 1970s, currency fundamentals have been difficult to forecast and model, yet currency managers have added value using both systematic and discretionary approaches. Systematic approaches, used extensively by many currency managers, often focus on currency beta factors such as trend, carry and value. A discretionary approach is driven typically by currency themes that generate global macro trends based on the anticipation of capital flows. Risk control is a critical element of both systematic and discretionary approaches due to the constantly shifting nature of themes, and of the underlying dynamics of currencies. In practice, there is a continuum from discretionary to systematic approaches, and a blend of styles dominated by judgement can work well. Finally, an analysis of returns and correlations for various styles of active currency with major asset markets and indices – including, for example, the eight-year track record of FFTW’s primarily discretionary currency process – suggests strongly that investors should consider allocating to currency investing as they now do to equities, bonds and other alternatives, such as hedge funds, commodities and real estate.
Adnan Akant, PhD, Head of Currencies
Adnan is the Head of the Currencies team and is responsible for setting strategy for currency alpha and overlay portfolios as well as the currency portion of global/international portfolios. After joining FFTW’s New York office in 1984, Adnan’s primary focus was on US interest rate strategies and proprietary trading. He moved to the global bond and foreign exchange area in 1994 and has been responsible for the development and implementation of foreign exchange strategies since then.

Prior to FFTW, Adnan spent six years managing the World Bank’s Liquidity portfolio and advising the Treasurer on the Bank’s multi-currency borrowing program, thereby gaining considerable experience in analyzing macroeconomic influences on interest rate and currency markets. Adnan left the World Bank as senior investment officer in 1984. He has 35 years of investment experience.

Adnan holds a Ph.D in systems science from MIT (1977), an MS in finance from the MIT Sloan School (1978), as well as BS and MS degrees from MIT in electrical engineering and computer science (1972-1975). He is also a member of the New York Academy of Science and Sigma Xi, The Scientific Research Society.

Adnan is Chair of the Buy-Side of the Foreign Exchange Committee (FXC), established by the New York Federal Reserve in 1978 to provide guidance and leadership to the global foreign exchange market. The FXC includes representatives of major financial institutions engaged in currency trading in the US. In words of the New York Fed, “The Foreign Exchange Committee is a select group of individuals who have achieved stature within both their own institutions and the marketplace”. Adnan’s leadership role with the prestigious committee dates from June 2008.

Momtchil Pojarliev, PhD, CFA, Senior Portfolio Manager - Currencies
Momtchil is a Senior Portfolio Manager on the Currencies team at FFTW where he focuses on generating alpha for portfolios as well as contributing to the investment process, both in the judgment and quantitative styles. Momtchil also contributes to the growth and development of FFTW’s currency alpha strategy as a stand-alone product. He joined FFTW in 2013 and is based in New York.

Prior to joining FFTW, Momtchil was a director and senior portfolio manager at Hathersage Capital Management, responsible for both investments as well as business development for foreign exchange portfolios. Before that he was head of currencies for Hermes Fund Managers. Prior to Hermes he was a senior FX portfolio manager at Pictet Asset Management. Momtchil began his investment career at Invesco Asset Management, first as a senior economist and then as a senior FX portfolio manager. He has 13 years of investment experience.


Momtchil holds an MSc in finance from Vienna University of Economics and Business Administration (1998) and a PhD in financial econometrics from University of Basel (2001). He is a current CFA Charterholder.
References


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