It has been an environment that would have seemed perfect for macro. Macro phenomena dominated investment returns throughout the credit crisis and its aftermath; thus opportunities for macro investing seemed, at least on the surface, to be plentiful. While there’s been some success in macro investing over this period, there has been less success than one might expect, and more recently, mostly disappointment. It is not that macro managers have been suffering - unless you categorize CTAs as macro, in which case they have suffered a great deal - it is that they have generally, with few exceptions, been failing to generate (much) return as a group. We believe we can shed some light on the difficulties, and despite the pessimistic title, also provide a view as to how these troubles can be addressed, and when/how/where they may ultimately come to an end – for end they will.

Our own experience, we think, sheds some light on what the trouble has been for many macro managers and what to expect from macro as you look forward. Our thesis is that those asset classes most influenced by central bank decisions or government responses to the credit crisis, and the resulting economic turmoil, should have been the ones most difficult to trade for profit by those managers whose decisions are driven by economic and fundamental drivers of return. We see bonds and equities as having been impacted the most, while currencies, commodities, and arguably the most macro of tradable macro risks, volatility, has been impacted the least.

Our own performance runs consistent with this thesis. To begin with, trading sovereign debt for profit based on fundamentals has been tough as central banks have been an overly dominating influence on the interest rate markets at both the short and long end of the curve. Economic and fundamental drivers have been of little importance during this period for selecting between the debts of various sovereigns. Investment success or failure has been driven by the ability to forecast the behavior of central banks, government officials and politicians. For fundamentally driven macro managers, in general, we would expect this to have been a problem. Bonds are, after currency, often times the most actively traded instruments by macro managers.

Looking forward, then, we’re optimistic that the efficacy of trading sovereign debt futures will improve as central banks incrementally reduce their direct influence on the long end of the yield curve as the need for direct intervention in asset markets through quantitative easing continues to dissipate. We say “incrementally” because fully retiring unconventional monetary policy instruments across the globe will take some time. The good news is, we believe, that macro managers should begin to see improvement in this aspect of their performance as fixed income as an asset class normalizes through time.

The trading of equity indexes is a different
matter, and here we are not so optimistic about the near-term future. This is an area of investment activity that has also been tough as government and non-governmental organization (NGO) policy decisions, most notably decisions to backstop faltering European countries, banks, and “strategic industries” such as parts of the auto industry in the US, have unduly rewarded investments into markets with deteriorating fundamentals. Looking forward, we are concerned about the challenges we face in trading equity indexes on a fundamental basis if governments continue to increase their appetite for regulatory and legislative interventions. There are certainly plenty of excuses to go down the interventionist route: significant imbalances related to government and private debt, pension and healthcare overhangs, and possibly increasing geopolitical risk. There’s a risk of that happening, at least, and we are concerned about that.

Beyond fixed income and equity futures, the reflection of macro phenomena in market prices has not only been more normal, but, in fact, at times better than normal – consistent with the assumption that this would have seemed to have been a period with rich opportunities for macro. As we move further away from asset classes with direct policy impact and into currencies, commodities or more esoteric asset classes such as volatility, we find that returns in these asset classes were most certainly influenced by the actions of central banks, governments and NGOs, but only indirectly. That notion is important because it signifies that the economic impact of these actions moved asset prices. That, in turn, means that fundamental, economically-based investment strategies were able to work in these markets. Again, using our own experience as admittedly limited evidence, this has, in fact, been a particularly good period for us in generating alpha in all three of these asset classes.

There’s a limit to how much risk can be taken in commodities and in volatility trading across the industry, so as trading in fixed income futures comes back on track, this leaves currency to carry an outsized weight in generating macro returns. We think investors should be comfortable with this. We see currency as the quintessential macro asset, reflecting nearly all major macro phenomena and serving as a virtual weather vane for macro events. Because it is the most liquid market, and because currency trades on a nearly continuous basis, investors are able to react quickly, in size, and at low cost, when positioning in anticipation of, or in response to, macro phenomena. In this market environment specifically, we have seen fundamental macro phenomena play out in a manner consistent with established relationships in currency, while the same phenomena have had a much more muted impact on equity and fixed income markets due to the influence of governments and central banks mentioned above. Currency is therefore, at least for us, a great place to focus outsized macro efforts right now.

**Fundamental Supply/Demand Dynamics**

Currency trading is not a homogeneous activity. Just as traders of futures contracts shouldn’t be viewed as all being the same (commodity trading advisors, discretionary macro traders, systematic macro managers, managers who use futures for rebalancing or for porting alpha are all clearly understood to be quite different from each other), neither should currency traders. There are those who rely upon trend, there are those who are beta grazing, e.g. playing the carry trade, there are discretionary macro traders who express many of their macro views through currency, and there are those who focus systematically on the fundamental and economic dynamics of the currency markets.

The latter category is where we happen to reside. It is worth a moment to explain what it means to focus on fundamental and economic dynamics. Simply put, in any free market, prices are set where supply intersects with demand. What is supplied is what investors find available to them in the market – a large set of assets that carry various characteristics. While defining and measuring these characteristics is in most cases...
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challenging, differences in investors' views as to the nature and magnitude of these characteristics only occur because the approaches to estimating, forecasting, and measuring those characteristics vary. Were investors to use the same methods and inputs, they would all share a common view as to what characteristics are available to them in the marketplace. In other words, what is supplied would be universally agreed upon.

That does not mean that they would agree upon the market price at which assets should trade. Agreeing on the attributes is not the same thing as agreeing upon the price at which those attributes should trade. "Intrinsic value" derives from the essence of the thing itself, and is strictly independent of anything else such as the usefulness of the thing to others. Intrinsic value is independent of demand, and therefore speaks not of the market clearing price. Where investors are expected to have substantive differences is on the value to themselves that they place on these characteristics. Investors and their investment objectives are highly heterogeneous. They differ by the duration of their objectives, their risk tolerance, their sensitivity to inflation, their need for current income relative to long-term capital appreciation, their preferences for liquidity, and so on. Two investors can agree on what the asset characteristics are, but at the same time, they are likely to disagree on how valuable those characteristics are in the pursuit of their own, differentiated objectives. Their demand differs.4

To ensure the interplay of supply and demand is clear, let’s use equities as an example. The characteristics that determine the intrinsic value of an equity would include the stock’s dividend yield, its book value, the firm’s prospects for growth, its debt burden, the quality of the management team, and so forth. These are the characteristics that are supplied, i.e. available to be acquired by investors. Demand for these characteristics clearly varies across time. Consider how scarce yield has been in the low interest rate environment of late, and how that has caused heightened investor demand for dividend-yielding stocks, and therefore the price of dividend-yielding stock, to rise on a relative basis. That’s a shift in demand. Similarly, consider how investors’ demand for stocks overall diminishes during times of significant market stress (think 2008), causing prices to fall far more than the change in underlying fundamentals could possibly explain (as Robert Shiller argued in 1981). A change in risk appetite during such times translates into a drop in demand.

Currencies work the same way. What is supplied are the fundamental attributes of each currency. Demand for currencies derives from those who trade currency as a pass-through asset when transacting internationally in financial assets, goods, and services. Demand also derives from central banks (market participants not motivated by profit), hedgers, and traders who are seeking to profit from currencies. What we do is evaluate changes in the characteristics of what is supplied and, at the same time, determine what motivates changes in the demand for each of these market participants so that we may estimate likely variations in demand. When investors react with frustration that exchange rates can vary significantly away from their fair value, we say, "Of course they do. Variations in demand explain why they do!"

Icing on the Cake

Focusing on the interplay between the supply and demand for the fundamental attributes of currencies is, we believe, the key to why we have had success where others have failed, when it comes to our macro currency investing over the past years. In particular, demand helps explain why currencies may drift away from fundamental fair value during periods where investor risk appetite is high, allowing misvaluations to grow more exaggerated. When risk appetite shrinks, i.e., when various sources of demand withdraw – sometimes very quickly – misvaluations are quickly mended. Specifically, we don’t often see demand increase for currencies that are already expensive in relation to their intrinsic value, in times of crisis. This has allowed us to produce a somewhat unique and uncorrelated return

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4It is telling that the impact demand has on the setting of prices for financial assets was never mentioned in either Robert Shiller’s seminal 1981 paper (which addressed the fact that equity prices vary much more than can be explained by underlying fundamentals), nor was demand addressed in other articles responding to this paper. The implication that Shiller drew was that markets were not efficient, and that market participants were not making fully rational decisions. To this day we see far less work being done to examine the variation in demand across time, and across market participants, and how the demand for financial assets influences market prices. This is ironic given that the financial markets rate amongst the most free markets in existence. See: Shiller, Robert J., “Do Stock Prices Move Too Much To Be Justified by Subsequent Changes in Dividends?”, nber.org.
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Stream with, as icing on the cake, a tendency to have its best performance during times when risk assets are down. The chart above shows the performance of the FQ Macro FX program scaled to a 10% risk level and MSCI World, sorted in deciles of MSCI World performance from November 2006 to April 2014. It clearly shows the tendency to gain most when the equity index is down.

It is worth keeping in mind that our fundamentally created long volatility bias is very different from naively created long volatility strategies, such as, for example, just being short the currency carry trade at all times (the currency carry trade is highly correlated to equity markets) or flight to safety plays such as just being persistently long the US Dollar or long the USD and CHF against AUD and NZD. What differentiates these three examples of na"ive long volatility strategies referenced in Table 01 from our Macro FX strategy is less how they perform during crisis; they all add value on average based on their directional bias.

\[\text{FIGURE 01 - DECILE RETURNS OF MSCI WORLD TOTAL RETURN INDEX VS SCALED TCA L/S 10% RISK VALUE-ADDED (NOVEMBER 2006 - MAY 2014)}\]

Sources: First Quadrant, L.P., MSCI

\[\text{TABLE 01 - AVERAGE MONTHLY RETURNS OF DEFENSIVE CURRENCY STRATEGIES WHEN MSCI WORLD IS UP OR DOWN (NOVEMBER 2006 - MAY 2014)}\]

<table>
<thead>
<tr>
<th></th>
<th>Scaled TCA L/S 10% Risk (net)</th>
<th>Risk Off Portfolio 1</th>
<th>Risk Off Portfolio 2</th>
<th>Short Carry</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSCI World TR positive</td>
<td>-0.21</td>
<td>-1.47</td>
<td>-1.44</td>
<td>-1.17</td>
</tr>
<tr>
<td>MSCI World TR negative</td>
<td>1.59</td>
<td>1.78</td>
<td>1.43</td>
<td>2.13</td>
</tr>
<tr>
<td>Average Monthly Return</td>
<td>0.50</td>
<td>-0.12</td>
<td>-0.25</td>
<td>0.20</td>
</tr>
</tbody>
</table>

Risk Off Portfolio 1: Long USD and CHF against short AUD and NWZ in equal proportion.
Risk Off Portfolio 2: Long USD against an equally weighted portfolio of other develop market currencies (AUD, CAD, EMU, JPY, NOK, NWZ, SGD, SEK, CHF, GBP)
Short Carry: Short the three highest cash yielding currencies and equally long the lowest three currencies in the developed market universe traded in the TCA 10 pct strategy (AUD, CAD, EMU, JPY, NOK, NWZ, SGD, SEK, CHF, GBP and USD)

\[5\text{The scaled performance was derived by scaling the live performance of the Tactical Currency Allocation Long/Short USD (2% Risk Value-added) to 10% to reflect returns at a typical alternative risk level. All scaled returns are supplemental to the composite. Please see Scaled TCA Returns Disclosures and Tactical Currency Allocation Long/Short USD – Valued –Added Composite Information and Additional Disclosures: Tactical Currency Allocation Long/Short USD – 2% Risk Value-Added found at this end of this paper for further details regarding the live performance used.}\]
on our back test - though not every time as they are all examples of proxy hedging strategies. Instead, what’s more relevant is how much drag they have on the portfolio in normal times.

All three sample strategies would have been negatively correlated with exposures typically found in most long only portfolios (most of us are negatively exposed to tail events not only directly through our equity exposure, but also indirectly through correlated risk exposures elsewhere in the portfolios, so any strategy with a long volatility characteristic will typically be highly diversifying), and all three strategies would have made money during crisis episodes. However, the three naïve strategies would have lost most and in two of the cases all (and more) in periods between crisis.

Timing of the shifts in demand for the fundamental characteristic does matter, and it is what, we believe, has allowed our macro currency investment approach to deliver not only as a standalone investment vehicle, but also when it comes to increasing the return, reducing the risk and reshaping the return distribution of both traditional and alternative portfolios. And it has done so using one of the most liquid sets of financial assets in the world: developed market currencies.

Summary

The recent challenges that macro managers have faced in generating strong returns during a period that, on the surface, would have seemed ideal for macro trading can be explained by the outsized influence of central banks, governments, and non-governmental organizations on the financial markets. This runs consistent with our own experience, as trading in those assets that have been only indirectly impacted by the actions of these entities has, in fact, been profitable for us. We believe that the environment for macro investing is generally improving, and for currency, in particular, it is not only the past but also the future that seems especially promising.

From our experience, it makes sense that currency – which we view as the cornerstone of macro and the quintessential macro asset – has been working very well over this period; we trade based upon fundamentals rather than upon anomalies or beta grazing. It is well worth noting that an approach to currency that focuses on fundamentals tends to provide rare and desirable characteristics that, we contend, make currency one of the best marginal contributions to a plan’s overall risk and return profile.
Tactical Currency Allocation Long/Short USD – 2% Risk – Value Added Composite

<table>
<thead>
<tr>
<th>Year</th>
<th>Gross¹</th>
<th>Net¹</th>
<th>Benchmark</th>
<th>Number of Portfolios¹</th>
<th>Composite Dispersion (Yo)</th>
<th>Total Compos-ite Assets¹ (Millions USD)</th>
<th>Total Firm Assets¹ (Millions USD)</th>
<th>Total TCA Strategy Assets¹ (Millions USD)</th>
<th>Total Firm AUM (Including Notional Values)¹ (Millions USD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006 (Nov-Dec)</td>
<td>+0.5%</td>
<td>-0.4%</td>
<td></td>
<td>≤5</td>
<td>-</td>
<td>2,250</td>
<td>14,604</td>
<td>11,958</td>
<td>26,301</td>
</tr>
<tr>
<td>2007</td>
<td>+0.1%</td>
<td>-0.1%</td>
<td></td>
<td>≤5</td>
<td>-</td>
<td>2,250</td>
<td>14,594</td>
<td>12,921</td>
<td>31,025</td>
</tr>
<tr>
<td>2008</td>
<td>+4.0%</td>
<td>+3.9%</td>
<td></td>
<td>≤5</td>
<td>-</td>
<td>2,250</td>
<td>7,947</td>
<td>6,591</td>
<td>20,043</td>
</tr>
<tr>
<td>2009</td>
<td>+0.9%</td>
<td>+0.7%</td>
<td></td>
<td>≤5</td>
<td>-</td>
<td>2,250</td>
<td>7,891</td>
<td>7,792</td>
<td>17,104</td>
</tr>
<tr>
<td>2010</td>
<td>-0.4%</td>
<td>-0.5%</td>
<td></td>
<td>≤5</td>
<td>-</td>
<td>2,250</td>
<td>8,558</td>
<td>7,203</td>
<td>18,713</td>
</tr>
<tr>
<td>2011</td>
<td>+0.8%</td>
<td>+0.6%</td>
<td></td>
<td>≤5</td>
<td>-</td>
<td>2,250</td>
<td>7,947</td>
<td>6,591</td>
<td>16,725</td>
</tr>
<tr>
<td>2012</td>
<td>+1.6%</td>
<td>+1.5%</td>
<td></td>
<td>≤5</td>
<td>-</td>
<td>2,250</td>
<td>7,891</td>
<td>7,792</td>
<td>17,104</td>
</tr>
<tr>
<td>2013</td>
<td>+1.2%</td>
<td>+1.0%</td>
<td></td>
<td>≤5</td>
<td>-</td>
<td>1,250</td>
<td>9,702</td>
<td>7,274</td>
<td>17,284</td>
</tr>
<tr>
<td>2014 (Jan-May)</td>
<td>+1.5%</td>
<td>+1.5%</td>
<td></td>
<td>≤5</td>
<td>-</td>
<td>1,250</td>
<td>11,780</td>
<td>7,234</td>
<td>18,908</td>
</tr>
</tbody>
</table>

See additional disclosures for important information concerning this composite and the effect of fees. *Supplemental Information.* 1Includes market values for fully funded portfolios and the notional values for margin funded portfolios, all actively managed by First Quadrant. 2At End of Period Reported. 3Includes market values for fully funded portfolios and the notional values for margin funded portfolios, including both active and passive components, all managed by First Quadrant and non-discretionary portfolios managed by joint venture partners using First Quadrant, L.P. investment signals. First Quadrant is defined in this context as the combination of all discretionary portfolios of First Quadrant, L.P. and its joint venture partners, but only wherein FQ has full investment discretion over the portfolios. 6Effective December 31, 2012, reflects all actively managed TCA strategy assets, inclusive of currency managed on a constrained, customized, or long-only basis. Prior to December 31, 2012, this figure was restricted to only assets managed under the standard TCA Long/Short strategy. Includes other TCA composite assets based in foreign currencies for all periods presented.