INFOVEST 21

STRATEGY FOCUS

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Quantitative Global Macro

Investor Perspective

Discretionary global macro managers have had mixed results. On one hand, a few have gone out of business this year, such as Olea Capital Partners, Elysium and Maven. Others have had major redemptions, such as Wood Allen Capital Management, Dennis Keegan's Auspex Group. On the other hand, Christian Siva-Jothy, as well as Peloton Partners, came out of Goldman Sachs in London and raised nearly $1 billion each.

While quantitative global macro managers have been around for a long time, for example QFS Partners, managed by Sandy Grossman, has been in existence since the early 1990s, a new group of these managers has sprung up in the last two years. These quantitative global macro managers are having a lot of traction with institutions.

David McCarthy, co-founder of Martello Investment Management, a specialist fund of funds that focuses on trading managers, says quantitative global macro strategies are based on quantitative and factor models. The models use a variety of inputs such as economic and price data. Factor models include such things as the slope of the yield curve and interest rate differentials. Discretion is generally not used.

The quantitative global macro managers are attempting to identify value opportunities across the G-10 framework. They are trying to identify pockets of opportunity within individual national markets and in addition across markets as well.

McCarthy, whose firm manages and advises on $1 billion in assets, says the range of performance for these managers in 2005, through September, was from a low of -6.7% to a high of +28.7%. Last year, performance ranged from -15% to +16%.

Differences with macro managers

McCarthy says the discretionary global macro managers will use some quantitative inputs in their discretionary trading. They may want to know, on some economic level, whether the US dollar is overvalued or undervalued. The discretionary global macro manager may use momentum indicators in their trading and they may also use economic indicator models. They will also use their fundamental analysis in their trading but ultimately reach a discretionary judgment.

On the other hand, the quantitative global macro managers will usually only use quantitative modeling and the algorithms they've developed to take positions.

McCarthy says the quantitative global macro managers have performed, on average, the same as the discretionary global macro managers.

A big difference, however, is capacity. McCarthy says, "There are very few managers in our universe of quantitative global macro managers who are closed to new investment. So you can get capacity in these managers where the big name discretionary global macro managers are closed to new investment. On an average return basis, they don't seem to be any different but it appears that capacity is more achievable in the quantitative global macro space than the discretionary global macro space."

The quantitative global macro positions tend to change slowly over time – they are waiting for the next economic announcement, the yield curve is shifting slowly, relative interest rates between US and Europe are shifting slowly, so the dollar may become more or less attractive. "You're not going from a 100% position to a 1% position in one day. The turnover in their positions is far smaller than one would see in a lot of the discretionary global macro managers," adds McCarthy.

On average, the quantitative global macro managers probably have more independent positions on than the discretionary global macro managers. There are more themes going on than in a discretionary global macro portfolio. There are far more discretionary global macro managers than quantitative global macro managers. For example, Martello follows 38 discretionary global macro managers compared with 21 quantitative global macro managers.

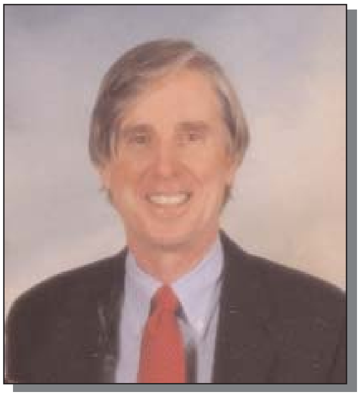
Wide variation in performance

Given that the quantitative managers use similar factors in their modeling, it is surprising that they don't have similar returns. The fact that they've had such divergence of returns suggests that the managers are coming at things very differently, says McCarthy. "Some are more diversified by markets while others are more concentrated. For example, some are more focused on G-5 countries. Some focus more on bond and stock markets of 15-20

Inside this Issue -

Interviews with:

Also Inside:



DAVID MCCARTHY

Martello Investment Management

countries…Some may have an equity component while others may not. Another difference is their risk management approach," says McCarthy.

He says one of the characteristics of a pure quantitative global macro model is that it can be similar to a value bond equity model. The managers are trying to identify an underpriced security whether it is stocks, bonds or currencies relative to other instruments. It also has the same negative implication as the "value-trap" in equities. The dollar might be cheap today but it can get cheaper before it turns around. So if the model is simply identifying that the dollar is cheap, how do you protect yourself against the dollar becoming more so before it ultimately turns around?

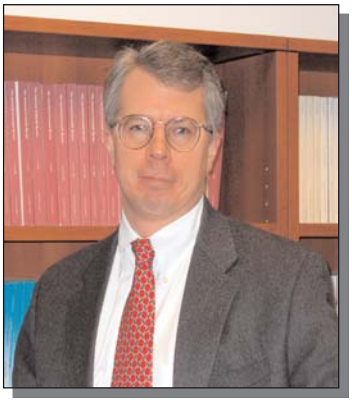
The managers differ significantly in how they handle that risk problem. A number of them use momentum indicators to a greater or lesser extent, as a risk management function within their value indicators. Others use simple risk management control principles to cut leverage when a particular position is moving against them. How much a manager allocates to momentum indicators can lead to significant differences in these managers' results.

McCarthy allocates to a couple of managers in this space. "Because they are surprisingly different, you can capture a diversification level that is important to the portfolio that you wouldn't if you only had one manager."

Institutional interest

Institutional assets have flowed into the quantitative global macro space. McCarthy says perhaps it is because they are not overly complex. "They are similar in concept to tactical asset allocation models that institutions might otherwise have bought but in an absolute return format. Tactical asset allocation models can earn them 100 basis points over LIBOR while quantitative global macro could earn them 1000 basis points flat out."

McCarthy also observes that this isn't a small niche area. According to Calyon's Nelson Report, Goldman Sachs Global Alpha has $5.4 billion. Bridgewater has $3.48 billion. "Some of these quantitative global macro managers are as large as the discretionary global macro managers. They could get larger with increasing liquidity in Latin American and Asian markets. They can add a lot of instruments to their portfolio. They can keep pace with the discretionary global macro managers."



ADAM DUNSBY

Cornerstone Trading

Describe your company, your flagship fund, track record and assets.

Adam Dunsby: Cornerstone Trading started in 1995. Our flagship program is International Value Program. This program invests in the major fixed income, currency and commodity markets based on a quantitative analysis of market fundamentals. We've been implementing this program since 1997. It currently has about $335 million in assets. We also have about $90 million in a different approach - a short-term trading program which is capacity constrained. The other principal is John Eckstein.

How do you differ from discretionary global macro traders?

Adam Dunsby: There are different ways to use information. A discretionary trader is going to look at the world around him and interpret all that information through his head, through his past experiences, and only possibly make use of some external forecasts.

Someone who does systematic global macro takes a different approach to processing information. In our case, what we'll do is look at a market and ask, "What is the important information? What are the driving factors? Is relationship between these factors and market returns stable over time?" After we've answered these questions we'll then use statistical models to process that information into return and volatility forecasts. Our program is 100% systematic and 100% model driven.

To simplify things, I would say a systematic global macro manager would use a lot of the same information that a discretionary global macro manager would. The main difference is that we are going to process that information using models. Using statistical models allows us to be very unemotional, very disciplined, and to be able to analyze many markets simultaneously.

...Our program is 100% systematic, 100% model driven. It is best to think of the model as fixed. We do update the parameters every six months to a year but the basic structure to the models are fixed.

How do you differ from other quantitative global macro managers?

Adam Dunsby: We're completely model driven - we have no discretion in our approach. Within the context of other systematic global macro traders, it is difficult for me to say exactly how we

Continued on page 4 column 2

LARRY ABELE

Auriel Capital Management

How did Auriel get started?

Larry Abele: Auriel was founded by three partners – myself, Anoosh Lachin and Asif Noor. We ran a similar strategy within Deutsche Asset Management for 39 months with assets under management of $900 million. We left in April 2004 and launched the Auriel Global Macro Fund with $20 million in seed capital from two London-based firms. We built that up to $170 million at the end of the first 12 months. We are now in our sixteenth month of performance.

How do the three partners share responsibilities?

Larry Abele: Auriel is committed to continual research and development which takes up the majority of our time and effort. Additionally, I focus on risk management issues, Anoosh concentrates on trading and execution systems and development and Asif is responsible for portfolio engineering and the day to day running of the strategy.

Additionally, we have two other quantitative researchers and an office manager.

How does running a smaller firm compare to being part of a larger organization?

Larry Abele: Early on, we were often asked how we were going to cope in a small company given that at Deutsche we had all this infrastructure and support. But asset management is not a heavy capitalized business. Computer hardware costs very little nowadays. It is really the intellectual capital of the people that creates the firm's balance sheet.

I would argue that our five-person research team has better systems than any other firm I've worked at. At a big organization, you might have 100,000 employees worldwide so you can't roll out the latest operating system every time it comes along. But because we're small and flexible, we can be more reactive to changes in technology.

Describe your strategy

Larry Abele: We take a longer term, relative value tactical asset allocation approach to global macro investment. Our average holding period is 29 days. In contrast, some of our peer group (CTAs and managed futures funds) could have a three-day holding period.

Our whole strategy is traded in the futures markets - 23 futures contracts. We trade seven currency markets, six 10-year bonds,

Continued on page 4 column 1

LAURENCE SMITH

Third Wave Global Investors

Describe the company, your background, assets, track record

Larry Smith: Third Wave Global was created based on the notion that a sophisticated investment process that generated consistent absolute returns met the needs of a growing list of investors – this is at the core of what people call the institutionalization of the hedge fund business. Today's story is about creating an investment process which gives investors confidence that returns achieved in the past will continue to be achieved into the future. That is what Third Wave Global is all about. It is literally the third wave of hedge fund management - pulling together sophisticated risk management tools with diversified insights about returns to create a process that generates consistent absolute returns.

What is your background?

Larry Smith: I spent 22 years in the investment management industry. The first 18 years were at JPMorgan Investment Management. During my last five years there, I was the global head of asset allocation responsible for all the macro processes for all the products around the firm. I then left for Credit Suisse Asset Management, where I spent four years as the Global Chief Investment Officer.Robert and I met at JPMorgan in 1989 and worked together for nearly a decade. Then I joined Robert at Credit Suisse about nine months after he joined the organization.

We started trading our fund on September 27, 2004.

What is your edge? How do you differ from your peers?

Larry Smith: Our edge is the way we go about processing information which follows the philosophy of leaving no stone unturned. That means utilizing sophisticated quantitative tools to the fullest extent possible, but at the same time understanding that the world cannot be fully quantified. You can't fit the world into a box. Our process is a combination of quantitative and qualitative insights.

The quantitative model that we built operates as the core of our investment process. The quantitative model identifies signals from four different categories – valuation, technical, macro and interaction terms – that are specifically geared toward relationships across five different decision modules. These decision modules differentiate us from many of our competitors.

While most of our competitors will ask what it is that drives the S&P 500, we are far more interested with what drives the relationship between the S&P500 and European stocks or the S&P500 and US bonds. Those relative relationships are at the

Continued on page 5 column 2

AURIEL CAPITAL MANAGEMENT

- Total Assets: $154 million
- Inception: August 2004
- Headquarters: London

LARRY ABELE

- Position: Founding Partner, Managing Partner, Risk and Investment Mgmt
- Prior Experience: DeAm, BGI, First Quadrant

11 equity indices. The equity indices are those of developed markets such as S&P500, Nikkei 225 and FTSE100. Our universe comprises the most liquid financial futures other than short term interest rates futures.

We are starting to model some of the large cap names in continental Europe to get a better handle on the indices. If you look at the Swiss Market Index, the top five names in the index account for more than 70% if the capitalization. But we don't trade individual equities – just equity indices.

What is your edge within the slow-moving global macro managers?

Larry Abele: We have a good mix of skills and backgrounds from other quant shops. I was previously at First Quadrant and Barclays Global Investors. Anoosh was previously at IKOS and Asif at Barra. We've been able to incorporate these different backgrounds at Auriel. Our skills are complementary.

Our edge is rigorous empirical testing. We're an empirical research shop. We put on trades based on this research. We spend 90% of our day testing hypothesis. We'll have a hypothesis like 'Every time the price breaks its 20-day VWAP, it will trigger sell signals.' That is a simple one. Sometimes gathering the data for more complex hypothesis could take up to two to three months.

We also get a lot of ideas on market breadth, put-to-call ratios, the option smile, the P/E ratio, book value. We'll go and test which one helps predict the markets. The strategy is a combination of these indicators.

What are the factors in the models?

Larry Abele: Our factors can be divided into three styles – technical, sentiment and valuation. Roughly equal risk allocations are given to these three style buckets of factors. Within the technical factors, 1/3 are momentum-based indicators. In other words, momentum factors account for roughly 11% of our overall strategy. The remaining 2/3 of the technical factors focus on capturing mid-term mean reversion.

The valuation-based factors seek to capture some classic value indicators such as GDP, real yields, earnings yield and yield curve shapes. On the other hand, our sentiment-based factors look for anticipated flows between assets based on the perception of the level of risk in the markets. To achieve this, the factors consider various series of data from the option markets.
The underlying holding periods of these factors range from 9 to 95 days, with the technical indicators at the lower end of this range.

Continued on page 5 column 1

CORNERSTONE TRADING

- Total Assets: $425 million
- Inception: 1995
- Headquarters: New York

ADAM DUNSBY

- Position: Principal

differ since we generally don't swap stories with other managers. I am confident in saying that we have more focus on the short end of the yield curve. And more recently, we have a greater focus on real commodities. We also don't currently invest in equities as we have a mild desire to remain a clear alternative to equities and the equity strategies we've tested have not substantially improved our Sharpe ratio.

What are some of the key factors you consider? What is your current asset allocation and market view?

Adam Dunsby: We are about 80% fundamental or value driven and about 20% technical or price driven. The fundamentals are fairly straightforward and intuitive. One example is the level of real interest rates. If the level of real interest rates is much lower than it typically has been, as has been the case for much of this year, then we would be inclined to go short the fixed income markets rather than go long.

In general, we expect to make about 60% of our profits in fixed income, about 30% in currencies, and 10% in real commodities.

Currently, we are bearish in the fixed income markets- partly because rates have been low. But as rates have increased, we are not quite as bearish as we were a few months ago.

In the currency markets, we are neutral right now. We don't see any great opportunities in any direction. In the commodity markets, we are quite bearish, especially in the energy sector. As the memory of recent supply shocks start to fade, people will see that the recent very high prices were not justified. And prices have come down quite a bit recently.

Another theme - from the middle of 2002 through the beginning of this year, we were short the dollar.

Have you added any new features to your program recently?

Adam Dunsby: The most recent development is our Real Commodity Analysis program. We've been trading real commodities for over a decade in our short-term trading and in our trend programs. Since we're modelers at heart, it was a natural progression for us to develop a fundamental-based approach to investing in these markets. We currently offer the Real Commodity Analysis program as a stand-alone program and it also makes up 10% of the International Value Program.

We think with all the money pouring into the passive long-only indices, this provides an opportunity for those people who are willing to take a fundamental approach and really analyze what's going on in these markets. This may be a rare case where lots of

Continued on page 6 column 2

ABELE *(continued from page 4 column 1)*

The valuation indicators tend to be slower-moving. This eclectic combination of signals of different styles are very lowly correlated and therefore provide great diversification to the strategy.

What are the models showing now? Are there certain themes?

Larry Abele: In our world, the themes are the underlying indicators we employ. We simply put on trades that capture these themes or factors. There are no typical themes like a discretionary trader might have. One cannot meaningfully take out any themes from looking at the overall portfolio positions. The 12 factors we trade have almost no correlation with each other. We simply net all the models together and trade the net portfolio. So the positions we take are really a weighted average of the 12 factors, each of which has an underlying premise or theme behind it.

In fixed income, we have been long Japanese government bonds against North American bonds. On the other hand, our currency model is currently shorting Yen and Euros. In equities, our models are taking a short position in Dutch equities against UK equities.

We've had a good September and October. We were up just under 10% in those two months (+4.45% in Sept, +5.42% in Oct). Our JGB and Yen positions have been particularly profitable, accounting for about 6% performance in the last two months.

Does the strategy have an expected rate of return?

Larry Abele: We approach this in terms of Sharpe ratio given our systematic model-based approach, we do not believe that time variant skills among factors can be reliably captured. With our constant risk target set at 15% and our aim to deliver a Sharpe ratio of around 1.0, the implied net annual return of the strategy is around 12-15%.

Is volatility a concern?

Larry Abele: The portfolio is leveraged on average nine times to reach our volatility target of 15%. We believe ex-ante risk management is one of our key strengths. The well-established developed markets that we trade in and the relatively simple return characteristics of exchange traded futures also make volatility management more effective.

We've chosen to run our portfolio at a relatively aggressive level of 15%. It was an arbitrary decision in many ways. We could have easily chosen 10% or 12% instead. At the end, we arrived at this risk target by looking at our peer group and chose a competitive level that provides investors with better value for money.

How do you manage risk?

Larry Abele: For us, risk management is building a robust set of positions. Given our long holding period, we find that stop-losses are of little use. We ensure our portfolio is both beta neutral and duration neutral. We have position limits on each of the 23 markets we trade. Additionally, we run risk cluster analysis to make sure none of our spread trades are highly correlated which might cause a pocket of risk that exceeds a limit. It is a matter of keeping that 15% volatility spread out amongst all the assets and making sure we're not taking on any systematic risks.
We recently carried out some research looking at our strategy around some very volatile periods - particularly event risks such as September 11 and the Russian default – to see how our strategy performed. We looked at days where assets moved more

Continued on page 6 column 1

THIRD WAVE GLOBAL INVESTORS

- Total Assets: Not Disclosed
- Inception: 2004
- Headquarters: Greenwich, CT

LAURENCE SMITH

- Position: Co-Founder, Chairman, Chief Investment Officer
- Prior Experience: Credit Suisse Asset Mgmt, JP Morgan Investment Mgmt

core of our quantitative process. It affords us the opportunity to identify signals that are much more reliable and consistent. Our quantitative model will generate a very high level of return for a given level of risk because of the way in which we model the markets.

We also recognize that the world cannot be fully quantified. My experience strongly suggests we are able to add value above and beyond the model we've developed. The goal of our qualitative insights is to make a good model better, to take the output of the model and change it on the margin in order to improve it on the margin. We are not trying to replace the model but rather to supplement it in a disciplined way that allows us to add a little bit of return and to reduce risk a little bit. The net result since inception has been exactly that – increased return versus the model itself and reduced risk versus the model itself.

We have a very well diversified set of inputs leading to a well diversified portfolio. If our goal is to generate consistent absolute returns, the only way to do that is by diversifying our decision risk. We don't want to rely solely on a couple of good ideas a year, as many macro managers do, because that falls more in the category "if you live by the sword, you die by the sword." We want to have a number of smaller trades on a regular basis – again giving us an opportunity to perform well. And by having signals that are diversified across those four different categories, it gives us a wonderful opportunity to perform well regardless of the market environment.
In October, we did fine. In April, we did fine. In January, we did fine. To do well during those three months speaks of how different our process is versus other hedge funds.

What percent does discretion represent?

Larry Smith: That will change with time. We tend to say the model is two-thirds to three-quarters of our expected alpha. But there may be points in time where it is 100% model and there may be other times where it is less than 50%.

What are some of the quantitative factors in the model?

Larry Smith: The five decision modules are inter-country equity decisions, inter-country bond decisions, currency decisions, stocks versus bonds and bonds versus cash.

We have a valuation factor for each of the five modules. We also include a technical factor when we are able to identify one that adds value and does so in a way that diversifies the exposure coming from our valuation factor. We've been able to do that in four of the five modules. Then we have macro factors that speak about changes in the macro environment and the impact it will

Continued on page 7 column 1

ABELE *(continued from page 5 column 1)*

than five standard deviations. We do very well during these crisis times.

We also looked at our correlation to other types of strategies. Our correlation was significantly lower during other strategies' drawdown periods. For example, historically we have zero correlation to the CSFB multi-strategy index (a proxy for a typical fund of funds). But when you look at periods when the multi-strategy index is falling, our correlation falls to -0.3. We think we provide diversification when people need it most. October was a good case in point - we had our best month since launch.

Are there capacity constraints?

Larry Abele: Capacity is a fascinating topic. Strategy capacity depends on your tolerance with respect to liquidating your portfolio. If we want to be 99% certain that we can liquidate our entire portfolio in a single day, we can make assumptions about capacity dependant on daily traded volume in the instruments we trade. Using these assumptions, we believe we can manage just under $1 billion in the strategy. If you are willing to live with 95% certainty, capacity jumps up to $1.5 billion.

There are some people running $6-8 billion in this type of strategy. If they had to liquidate, it would probably take them 4-5 days to do so.

From a manager's viewpoint, you are looking at the trade-off of diluted Sharpe ratio or simply additional management fees versus less performance fees. As you try to run more and more assets, you have more and more market impact. It's going to dilute your returns.

Who are your typical investors?

Larry Abele: We have a good geographic mix. We have over 20 investors the majority of which are funds of funds.

DUNSBY *(continued from page 4 column 2)*

money pouring into an asset class actually gives more opportunities for those who are willing to analyze that asset class more carefully.

What is your expected rate of return and risk?

Adam Dunsby: We target the 15-20% range. Historically, we've had around a 17% annual return.

How volatile are the markets?

Adam Dunsby: The markets are volatile by nature. What we do is no more volatile than an investment in an equity index.

What is your risk management approach?

Adam Dunsby: Risk control is extremely important. We have three levels of risk control. Our primary method of risk control is Value-at-Risk. We use forward-looking forecasts of return and volatility to calibrate our portfolio so that a 5 ½% or greater loss will occur no more frequently than one month in twenty. Our second level of risk control is our historical Value-at-Risk. We look at how many big losses our current portfolio has experienced historically. Our third level is hard position limits in every market. We think of it as forward looking Value-at-Risk, backward looking historical Value-at-Risk, and hard position limits.

What is your background? What is the infrastructure of the firm?

Adam Dunsby: I received my undergraduate and Ph.D. in finance from the Wharton School of the University of Pennsylvania. John's degree is from Brown in cognitive science. John and I are cousins. Jess Gaspar, our director of research, is a former University of Chicago Business School professor.

Cornerstone Trading started in 1995 with a lot of help from John's father and Henry Luk, who John was working for at the time. Back then, it was just John and me. Mike, our CFO joined us after a few months.

We have seven people in total, which is all we need right now.

Do you have capacity constraints?

Adam Dunsby: No, we trade the most liquid markets on a relatively slow basis so we could handle $1 billion and certainly much more than that.

Top 20 Global Macro Hedge Funds

Ranked by 2005 YTD Returns

	Fund Name	Current YTD Return thru Sep 2005 (%)	2004 Return (%)	Sharpe Ratio	Fund Assets ($ mil.)
1	Clarium Capital Ltd.	66.34	5.59	2.56	1075.8
2	Greater Europe Fund Ltd	42.90	34.07	1.48	197.1
3	Sprott Opportunities Hedge LP	32.16	N/A	3.94	97.2
4	Wexford Spectrum Fund LP A/C	26.98	19.63	1.44	579.2
5	Everest Capital Fund LP	26.36	15.69	0.59	45.0
6	Eclectica Fund GBP	23.84	9.94	1.34	361.7
7	Tell Fund	23.50	10.21	1.16	413.6
8	Julius Baer Global Rates GBP	19.26	8.45	1.45	187.5
9	Trinity Funds Gl. Opportunities LP	18.71	-1.73	0.64	25.0
10	Highlander Fund	17.76	7.50	1.09	12.0
11	Permal Global Opportunities Ltd A	16.55	12.75	0.53	260.0
12	Vega Plus Linnaeus Fund Limited	14.05	N/A	0.05	107.4
13	Newton Capital Partners, L.P.	12.37	8.34	0.74	10.4
14	AIS TAAP Composite	12.33	6.32	0.48	19.6
15	Balestra Capital Partners LP	12.20	11.03	0.46	67.2
16	AIS Balanced Fund LP	12.16	6.08	0.41	14.9
17	GAM Worldwide	11.74	20.15	0.57	123.3
18	Sirocco Fund, LLC	10.86	5.36	0.25	7.2
19	Dynasty Capital Partners LP	10.81	-6.28	0.35	3.1
20	Trinity Funds Div Allocation LP	10.77	5.33	1.54	25.0

Source: Barclay Trading Group, Ltd ◆ *URL: www.barclaygrp.com* ◆ *Past performance is not necessarily indicative of future results.*

SMITH *(continued from page 5 column 2)*

have on the relative relationships within these decision models. Finally, we have a set of interaction factors that speak about the interaction of one asset class on another.

All those signals are quantified and analyzed on a real-time basis. Once we quantify the signals, the next stage of the process is to figure out how much weight you want to put on each individual signal. While we have five different decision modules, we have 92 pair-wise bets that come out of those five different decision modules. For each of those 92 pair-wise bets, we're trying to figure out which of those factors are most likely to be a big positive contributor and which are likely to be less of a contributor. So we have a quantitative way of determining whether a signal is in-favor or out-of-favor. We change the weight we give to that signal accordingly. The weight change is frequent, although it tends to be fairly slow moving as we're trying to pick-up changes in regimes, rather than use it as a very short term stat arb tool. We focus on multi-year returns in trying to figure out if a signal is going to be a good-performing signal over the next 12-18 months.

We have four technical factors, three of which are momentum based. However, the fourth one is the opposite of momentum, recognizing the tendency towards mean reversion across certain relationships. We have found that markets operate in very different ways, especially when viewed in a pair-wise fashion.

Can you give an example of when your combined approach helped you compared with the pure quantitative global macro managers? What about the situation where discretion hurt you?

Larry Smith: Last fall, our model was giving us a very strong buy signal for US bonds and a sell signal for Canadian bonds. We took a look at that pair-wise relationship and found that after analyzing inflation fundamentals, budget fundamentals and current account fundamentals, the case was compelling to buy Canadian bonds as opposed to US bonds. As a result, we kept the North American allocation the same, but we ended up going long Canadian bonds and short US bonds. The correlation of the fund to the model was very high but we ended up performing much better because we chose the right bond market to express that fixed income bet.

Not too long ago when the Yen weakened to the 108 level, I believed its trading range would hold. Our model turned negative and I held on to our small long position too long. One of the things we do to remain intellectually honest is to track the performance of the model itself and then compare it to the fund's performance to see whether our qualitative decisions are adding value, and so far both the model and our qualitative decisions are adding significant value.

Continued on page 8 column 1

SMITH *(continued from page 7 column 2)*

Do you have themes?

Larry Smith: We have two complementary processes, with a pair-wise focus on the quantitative side and a direct approach to individual markets on the qualitative side. This provides another layer of diversification and combines different perspectives into our ultimate decisions.

Our qualitative process has identifiable themes in trying to determine what is driving the markets and how that is likely to change. Right now, our number one theme is the coming end of the Fed tightening cycle. What that means for different markets around the world, especially the US equity market versus other equity markets, is profound. The lesson of 1994 is that the market will not wait until the Fed sends out the "All clear" signal; US equities started to rally a couple of months before the Fed ended their tightening. We believe that this cycle will unfold in a similar manner, and as we enter December, the US equity market will begin to make up a lot of lost ground versus other equity markets. We have adjusted the output of our quantitative model to reflect that theme.

It is interesting to note that oil hasn't had a big impact on equity markets. As proof of that, take a look at two markets that are completely dependent on imported oil – Japan and Switzerland. Those are probably the best two performing equity markets in the developed world this year. That is one of the great misunderstandings out there - people focus on oil and say it has been a major problem, but just take a look at the Japanese equity market, which is up 33% year-to-date, and the Swiss equity market, which is up 31% year-to-date. The massive underperformance of the US equity market this year is clearly traceable to monetary policy of the Federal Reserve.

The second theme, which is related, is that we are in the midst of a mid-cycle economic slowdown, as opposed to returning to a recessionary type of environment. We are looking at a macro economic environment which is fairly similar to what we saw in 1994, where a protracted period of Fed tightening slowed down economic growth from over 4% to 2%. This time around, I think we are slowing down from a peak of 4.7% to less than 3%. The economic slowdown will be led by the consumer, but at the same time, other parts of the economy will provide a counterbalance. This gives me comfort about being bullish on equities as we go forward.

It also gives me comfort about being long bonds at the current time. The concerns that people have about inflation will be alleviated because of what is happening with the price of oil. Crude oil is down to $57 from a peak of $70. It is still up from a year ago but, as it has come off its peak, gasoline prices have begun to fall and the year-over-year increase to the inflation numbers is moderating. So the big concern that bond markets have had, namely that headline inflation will leech into the core inflation numbers – which hasn't happened yet – is increasingly unlikely to happen as the headline numbers fall off with oil prices coming down.

Can you give a few examples of long and short positions?

Larry Smith: We are net long equities, net long bonds and net short the dollar. The net long equity position has increased over the past month and is consistent with the output from our quantitative model and the themes above. However, the most important part of our process is not the net position by asset class, but the inter-country bets that we make within each asset class. That is how we are able to diversify our decision risk – these decisions put more arrows in our quiver. With that, we have been long Swiss equities, long Japanese equities, long European equities, and long emerging markets, and our short positions are in US equities, UK equities and Hong Kong equities. The combination of those positions has been the major factor behind our success on the equity side. Instead of just relying on the net equity position, our process allows us to make money more consistently, and breaks away from the reliance on making directional calls, which are going to be a less reliable source of alpha.

On the bond side, it is interesting to note that our net long position is driven not by the belief that interest rates will be declining in any material way, but rather by the diversification properties that bonds currently offer relative to our long equity position. We've written a research article on the currently negative stock/bond correlation, and while this effect is lessening, it has remained quite significant in certain countries like Japan. This affords us the opportunity to offset some of our equity risk while increasing the overall expected return on the Fund. Within bonds, we have been long Japanese, Swiss and US bonds, and short European and UK bonds.

Within currencies, we have a modest net short position in the dollar. We are long the Australian dollar, short the euro, and now short the Canadian dollar which is a new position driven in part by the weakness in oil.