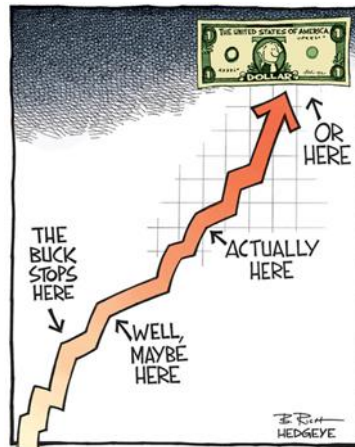


Global Macro - Definition of Strategy



The favourite lunch option on a hot summer day? Of course, a salad! Crisp lettuce, tomato mozzarella, with crispy bacon - the choice is yours! The menu is long. This beautiful range resembles the universe of Global Macro managers. The common denominator uniting macro managers is a freedom to use all financial instruments in whatever manner they want: Equities, government bonds, corporate bonds, commodities, currencies, derivatives, credit default swaps, binary options... Everything goes! Traditionally, liquid assets are preferred and certain type of assets maybe be usually avoided: Loans, structured assets, physical commodities and a large segments of the corporate credit markets are usually avoided. The exception proves the rule.

Therefore it is extremely hard to separate between different types of managers. We will proceed to explain how we separate them according to our own investment interests. We are not attempting to provide a global definition of macro universe. We're just clarifying which ones we prefer and why.

Global Macro - A Discretionary Strategy

The classic Global Macro manager is, almost by definition, discretionary. Global Macro managers cut their teeth trading way before the computer appeared in the trading floors. The most prominent managers distinguished themselves by making directionally bold trading decisions. George Soros "against" the British Pound, Louis Bacon in fixed-income markets, the list is long. More recently many more managers have joined the fray. Some making bets on the equity markets, some on commodities or oil. There is an important difference between them: although George Soros' trade on the British Pound was considered a macro trade, it was in reality a credit view. The view that England was not strong enough to maintain the value of its Pound or in other words the Pound did not reflect the creditworthiness of England. He did not attack the Pound as the popular view goes, the Pound attacked itself and George Soros just expressed the view that the economic situation did not justify the price of the Pound. Invariably

the most notable Global Macro trades follow a similar logic. This is very different to the generic trades, which a less grounded type of macro manager makes between two sectors of the equity markets for instance. An example would be betting that tech is going to be doing better than healthcare in the immediate future for instance.

We call the first types of trades educated credit decisions. The second are genuine prognostications, which require a crystal ball. We clearly prefer the first type. The type whereby, through strong and deep research a manager determines that a country or an economy is going to be doing better than another one and that therefore that is going to affect the relative FX market and the fixed income the markets of the countries involved.

The decisiveness of these traders enabled the most successful to amass large fortunes over time. However, they were running extremely large risks. Such profiles are not prevalent anymore. The advent of computers and mathematics softened the edge of this set. They have learned to apply more substantial diversification to their portfolios and more advanced release management techniques.

With the focus on dislocations, discretionary managers are likely to be value investors as they anticipate the next big move in the market. The entry point is usually prior to market moves as they anticipate future moves. Discretionary managers have a tendency to not always be fully invested. They prefer to remain on the sidelines and watch and keep dry powder to invest, when an opportunity arises. But when it arises, the resulting portfolio leverage might be substantial. That is why risk management is an essential part, the alpha and the omega of any investment decisions: size, correlations, CVARs (conditional value at risk), net and gross leverage are the main ingredients. These type of manager are easy to recognize and are the type we call Macro.

Systematic Arbitrage - The Addition of Systematic to Discretionary

Some Global Macro traders migrated not only to another segment of disciplined, diversified portfolio management, but combined in addition systematic models and algorithms into their strategies.

At this stage we would like to clarify an essential distinction. The market has tended to classify any strategy that embeds algorithms as CTAs (commodity trading advisors). This is misleading and simply wrong. Trend following funds are just one part of the systematic universe. The signals for a trend following fund are pure price data, which usually results in a directionally positioned portfolio. The focus is on momentum. Money is allocated on the basis of the strength and the sustainability of a financial trend. We would purposefully exclude CTAs from this conversation. We understand CTAs in this context as managers who implement a derivative of trend following strategies. These are not strategies we tend to invest in at this point in time since central bankers are today actively acting as trend neutralizing machines. The most dangerous enemy of generic trend followers is a choppy market with its numerous trend reversals. We only used them prior to the beginning of central bank intervention and up to start of quantitative easing.

As computers brought their mark on the markets, deep, profound, systematic analysis began to take hold. Discretionary macro managers applied the power of computers to identify dislocations or tension in markets. Mean reversion, price behaviour patterns, temporary dislocations, technical signals, flash trading - the list is long. Macro traders embedded their macroeconomic analysis into algorithms to identify the patterns in the state of the world and identify entry and exit points. The result was a hybrid mix of the discretionary with the systematic. The managers

who we favour in this space are the ones who retain an element of discretion. This is because we believe even the best algorithms require “adult” supervision.

The input data for algorithmic models may include also economic variables. Importantly, a quantitative approach is used for analysing *fundamental data* as well as price data. The underlying data which is the basis for the manager’s analysis may be very similar to the one used by a discretionary manager. However the process of coming to a conclusion is model assisted rather than based on the manager’s subjective option. This set of model assisted Macro portfolios invest in highly liquid instruments and usually trade on a regular basis.

As we have seen there are many types of systematic strategies applied to many types of markets. The sheer diversity of strategies is staggering. Any attempt to group systematic strategies in one bucket would be misleading. Since it would not reflect the sheer amount of diversification the different algorithmic strategies applied to different markets bring to a portfolio in terms of de-correlation.

The common thread is that they invariably represent an element of relative value. They focus on applying the same discretionary logic to more constrained divergences. Instead of making a big bet against the Pound, mathematical algorithms scout the market for small, localized dislocations. Many such positions are taken invariably with an overlay of diversification to reduce the downside risk. It could imply traditional diversification, passing by stop loss mechanisms and on to more sophisticated downside protection options and derivatives. Implementation of trades requires the weighing of pros and cons to diversify and hedge exposures two soften the traditional directional nature of macro portfolios.

The result is a more neutral, relative value exposure and approach. We will group them for now in the Systematic Arbitrage bucket. One must remember that this group can focus on volatility, fixed income, futures, equity, equity indices, FX, commodities and trade these markets with extremely different approaches and resulting risk. Managers in this bucket result in an extremely diversified exposure, with extremely low correlation to each other and to every other sector in the market. As a matter of fact, they offer highest degree of de-correlation available in alternative markets.

Systematic Arbitrage strategies result, after the optimization and diversification embedded in the algorithms, in some of the following relative value biases:

- Relative Value Volatility
- Relative Value Sovereign
- Relative Value Diversified
- Relative Value Term Structure
- Relative Value Trading

Driving Elements of a Global Macro Portfolio

Some of the factors which trigger Global Macro managers to initiate new trades or change the current portfolio are well known and fill the headlines of financial papers. Others are less evident and may be very specific to the hedge fund manager’s portfolio and his research.

- **Central Bank Activity**

Monetary policies remain key in any macro analysis. The impact of the change in monetary policy has multiple effects on the economy. The yield curve as well as the currency of a nation feel the immediate effects of alterations. The consumers' purchasing power, which is reflected in inflation / deflation figures, weighs on central bankers' minds...

Examples of measure of monetary policy, which had a strong impact on markets, are for example the central bank decision to launch quantitative easing programs in Japan in 2013 or by the European Central Bank in January 2015.

Former central bankers are high in demand with global macro hedge funds. Laurence Summers (formerly US Secretary of State), Sushil Wadhvani (formerly with the Bank of England) and Ben Bernanke (formerly Fed Chairman) are all advisors to Global Macro hedge funds.

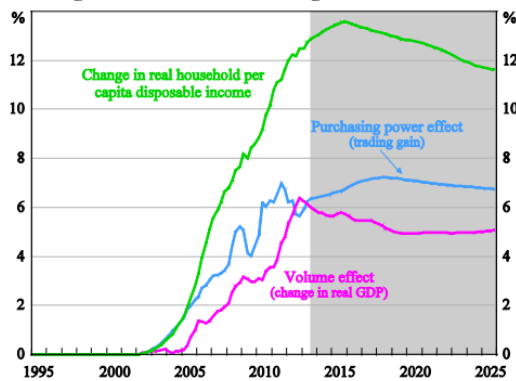


- **Economic Country Specific Factors**

The balance of payments of a country provides insights on the various components of a country's economy. The strengths and the weak spots of an economy and the shifts among its sectors become apparent with a continuous analysis. A prolonged trade deficit, for example, shows numerous negative effects: when consumers and companies prefer to shop abroad rather than domestically, the currency is likely to be affected. Moreover, economic growth figures as well as employment figures are key contributors to sound economic analysis.

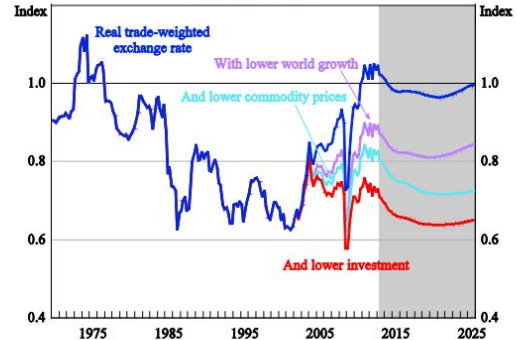
The strong mining boom in Australia, which was initiated by Chinese demand, strongly affected the per capita income. In 2013 it was 13% higher than it would have been without the mining boom. Moreover, the Australian Dollar rose strongly over time.

Figure 4: Effects of the Mining Boom on Income



Note: Percentage deviation of baseline estimates from the no-mining-boom counterfactual
Sources: ABS; Authors' calculations and AUS-M model database and simulations

Figure 5: Real Exchange Rate – Actual and Counterfactual
November 2010 = 1

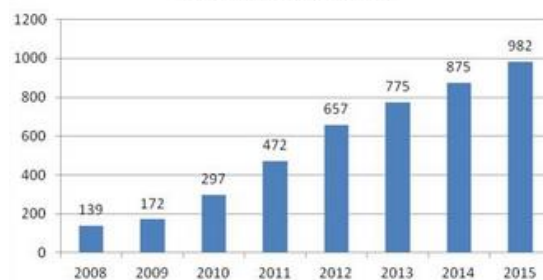


Note: Real trade-weighted exchange rate is the trade-weighted exchange rate adjusted for movements in relative consumer prices
Sources: ABS; Authors' calculations and AUS-M model database and simulations; OECD; RBA

- **Global Changes**

Themes, which affect economies on a world-wide basis, are discussed in macro portfolios. The impact of changes on a global basis have multiple and extensive consequences. The rise of smartphones, for example, influenced the way consumers use the internet and opened up the world of apps. Land-lines further decreased and infrastructure has developed to support the increased internet usage. Various investment ideas emerged to reflect this transformation in a portfolio. Shale drillers are another good example of the impact of technology changes on the financial and real assets.

Smartphone Sales



Source: seekingalpha.com

- **Global Risk Appetite**

Risk appetite is a volatile element. It usually starts off slowly, but gains momentum when it contracts and expands. Once a dark cloud develops on the horizon, investors are quick to leave the market and therefore fundamentally change the setting for an investment, although key aspects of a trade might not have shifted dramatically.

- **Dislocations**

Spotting mispriced assets is probably the best way to describe any Global Macro portfolios. It seems like a blunt excuse to not be any more precise, however, it is indeed a central connecting

element. Dislocations may be on a global level, but way well be in niche markets and specific, sophisticated investment products such as barbell strategies on swaptions are designed to extract the deepest asymmetries from the underlying assets.

One has to keep in mind that it is the Global Macro manager's task to make up his strong opinion and also analyse where he deviates from the perception of his market participants at a given point in time. Moreover his analysis will emphasis on interlinks and spill over effects. The most obvious choice of investment instrument may not be the most rewarding one in the long run.

Features of a Global Macro Portfolio

- One of the key characteristics of a Global Macro investment is its liquid nature. The manager seeks a transparent, easy accessible way to position the portfolio and would usually go for the most liquid instruments.
- The common theme of a Global Macro portfolio is its quest for dislocations in the markets. By nature this leads to a quite diverse portfolio in geographical terms as well as in asset classes. The manager could be invested in Brazilian Real as well as in German corporate bonds.
- With this guiding theme in mind the positioning is rather independent of economic cycles. Economic swings certainly trigger ideas and resulting investments, but they do not affect the portfolios return patterns. The Global Macro manager has the ability to search for the sweet spot in the investment world.
- This flexibility induces less predictability than probably assumed from other hedge fund strategies. On a single hedge fund basis the average volatility is most likely higher depending on the instruments used. Be aware, higher volatility does not automatically translate in higher risk. The mortgage funds that sank in 2007 and 2008 were among the less volatile investments, at that time.

Examples of Global Macro Trades

- **Relative Currency Play**

Economic outlooks and monetary currency expectations influence the performance of currencies. Knock-on effects are very evident when it comes to the movements of the USD. The announcement of the Fed tapering in May 2013, which first raised the topic of interest rate hikes and monetary policy normalization, led to a divergence in the performance of emerging market currencies. Emerging Markets were strong beneficiaries of easy money and those with a weak

economic set-up are vulnerable to currency pressure in a rising interest rate world. As a consequence some emerging market currencies depreciated based on the Fed's tapering talks. The chart below shows the relative performance of the Turkish Lira (white line in the background) against the USD and the Korean Won (yellow line) in 2013 after the announcement of the Fed

Tapering. While both currencies felt the initial shock, the Turkish Lira continued to fall while the Korean Won hit the bottom in June 2013 and rose thereafter. The hedge fund managers went short the Turkish Lira versus the USD and long the Korean Won against the USD.

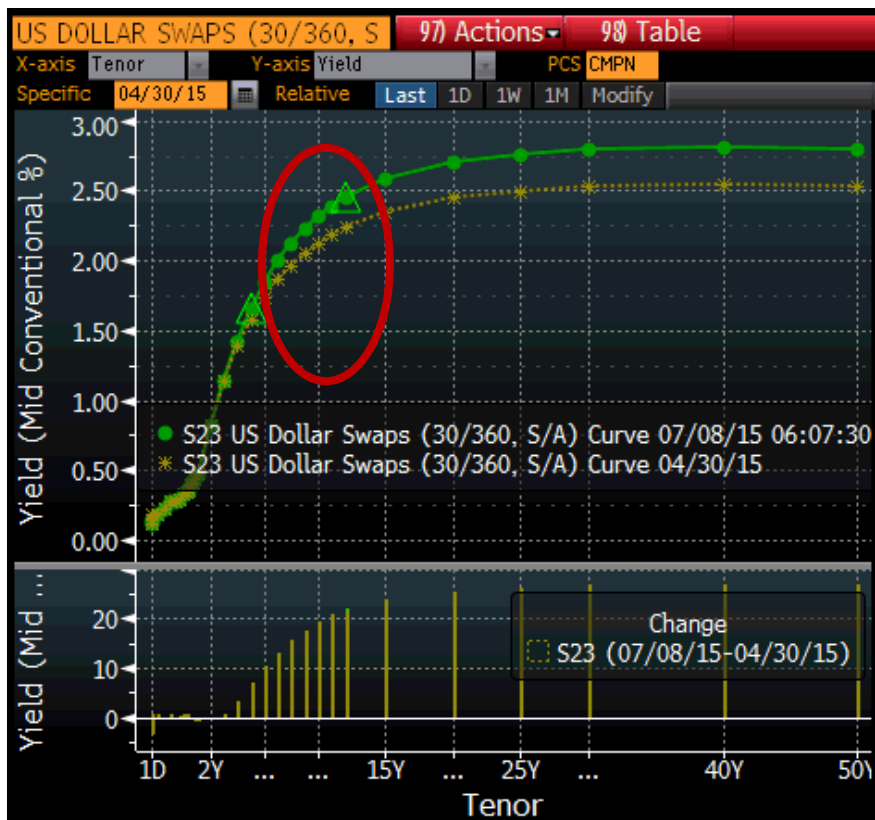


- **Yield Curve Steepener**

This strategy is employed when expectations of short-term growth are lower than the mid to long-term expectations. Medium to long-term interest rates would then be likely to experience a greater upward move than short-term interest rates. To benefit from this situation, a hedge fund would open a long position in a fixed-income paper with a short maturity and a short position in longer dated paper.

This trade is partially in contrast with the expectation theory of the term structure. Based on this theory, the FED, through long term policy commitments, can keep control not only on the front-end of the curve, but on an extended number of tenors. This theory proved wrong during prolonged periods of time before the crisis, but it worked rather well after the QE1 implementation.

The Bloomberg chart below shows the steeping of the US yield curve in the 5y and the 10y segment between May and early July 2015.



Global Macro at Ayaltis

As you can see, we have a strong opinion of what we like in our salad and what does not fit our taste. The Global Macro world includes a discretionary twist and multitudes of systematic spins extremely different from trend following. However we like to go into more details in the way we look at our Global Macro portfolio. To better reflect the Ayaltis' Global Macro portfolio, the following break-down works well

- Macro

This category best resembles what has previously been described as discretionary managers. These are managers who focus on macroeconomic fundamental analysis and built their case for global events. They carefully choose the best suited asset classes and instruments to benefit from the trade. The portfolio is reasonably diversified and liquid. The managers are usually concentrated in less than 10 strong ideas and the high portfolio volatility reflects this lower level of diversification.

- Systematic Trend Followers

Global Macro hedge fund managers pooled in this group mostly overlap with the previous definition of trend followers. We are fully aware that this sub-segment of Global Macro managers

stirs emotions and we too have mixed feelings. However a few extraordinary talents in this space caught our attention and impressed us with their exceptional systematic market models. We traditionally avoid this segments except when we believe trends will be extremely clear.

- Systematic Arbitrage

This unique set of managers has a much shorter time frame than the systematic trend followers. They try to keep a market neutral stance as they focus on long and short ideas at the same time. A statistical approach is used in evaluating market inefficiencies. The focus is very much on single investment instruments and therefore on a micro level rather than on major macro moves. This specific group can be subdivided into the following sub-strategies:

- Relative Value Volatility
- Relative Value Sovereign
- Relative Value Diversified
- Relative Value Term Structure
- Relative Value Trading