

Dissecting the 'MAC' Universe
Multi-Asset Credit
March 2016



bfinance is an independent, privately owned, financial services firm that provides advice and solutions to companies and institutional investors around the globe.

We combine specialist expertise with a global perspective to help our clients develop, implement and manage best-in-class investment programmes. Our in-house capabilities span all traditional and alternative asset classes. We deliver customised services.

Our teams have earned a reputation for innovative research, reporting and fund selection. Increasingly, as our clients' needs evolve, we also act as a specialist advisor.

bfinance is headquartered in London, with offices in Paris, Amsterdam, Munich and Montreal.

The firm has advised over 300 of the world's most sophisticated institutional investors across over 25 countries and with total assets in excess of \$2.5 trillion.

Table of Contents

04	Summary
05	Background
05	Categorisation
07	Characteristics
10	Quantitative Review
12	Considerations when Selecting Managers
14	Conclusions

Summary

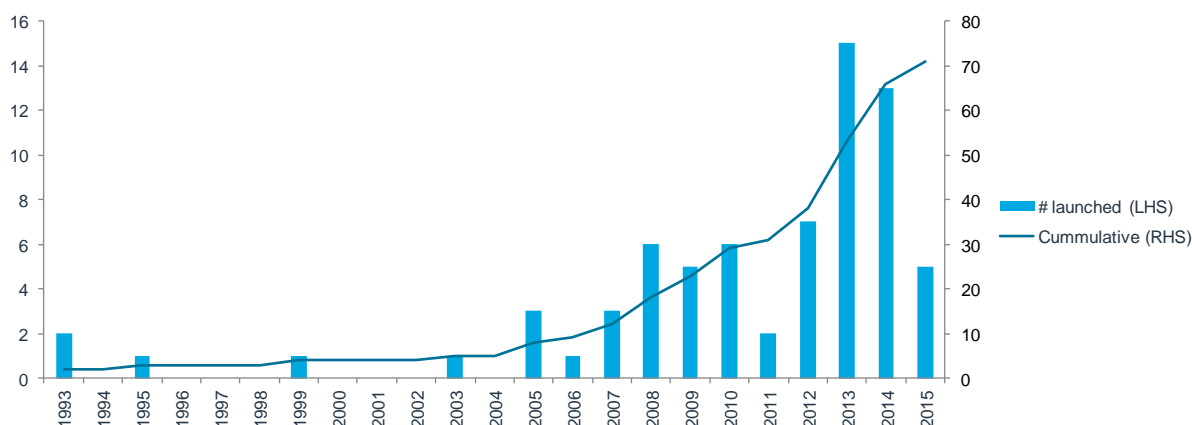
- > Multi-Asset Credit (MAC) strategies can play an important role in investors' portfolios. From a pension fund perspective, a constrained duration MAC strategy can add return through credit beta and security selection whilst adding only modest risk. From a growth portfolio perspective, the expected risk adjusted return may be higher than for equity, thus allowing for diversification and an opportunity to de-risk without giving up excessive return. From an insurance perspective, customised strategies may help optimise the use of risk capital.
 - > MAC strategies have generally performed in line with their objectives in the last three to five years in terms of risk and return targets, but this however has occurred in an environment where spreads have generally fallen. Over the last year, returns have been negative, in line with negative returns in most fixed income sectors.
 - > Due to the diversity in products currently in the market, investors should place a greater emphasis on the suitability of the strategy for the broader portfolio. This is done by understanding the biases of the product and the potential sources of return. This is important because:
 - > Managers tend to classify other strategies under MAC; and, even within MAC strategies, there are differences in composition and management style. This makes a comparison across products very challenging.
 - > MAC strategies tend to have credit beta and typically replace interest rate risk for credit risk. As a result, they are not expected to generate positive returns in all market conditions, unlike absolute return strategies. These strategies are likely to perform well in an environment where credit spreads are expected to narrow and interest rates to increase but are likely to perform badly when credit spreads are expected to widen and interest rates to fall. As a result, understanding the purpose of the allocation is critical to the overall portfolio.
 - > Over the last year, some managers kept their sector allocation fairly constant. While others were more dynamic. In a year where we saw significant volatility, it is important to select a manager with the ability to be dynamic in the asset allocation or at least the credit beta to generate or protect returns.
 - > There is significant dispersion in the volatility and returns of managers with similar strategies. Selecting the wrong manager can lead to significant differences in the risk/return profile.
 - > The analysis in this paper seeks to aid effective comparison of products by classifying the products received into three broad categories based on the risk/return profile and liquidity of the underlying sectors. The categories are Defensive (cash + 2 - 4%), Intermediate (cash + 5 - 7%) and Aggressive (cash + 7% and above). Multi-Asset Credit strategies typically fall in the intermediate category.
-

Background

Multi-Asset Credit strategies have gained popularity in recent years and remain to be at the forefront of our clients' and prospects' minds. Institutional clients such as pension funds, sovereign wealth funds and insurance companies continue to increase their allocation to these strategies in their broader portfolios. Pension funds typically use MAC from a growth portfolio perspective as the expected risk adjusted return may be higher than for equity, thus allowing for diversification and an opportunity to de-risk without giving up excessive return. From an insurance perspective, customised strategies may help optimise the use of risk capital.

As a result of this increased demand, Asset Managers have responded with a spate of product launches in the last five years and the pipeline of planned product launches in 2016 remains strong.

With many products now approaching a three-year track record, we decided to take the opportunity to review the universe, not only focusing on performance and risk characteristics versus their objectives, but also assessing the composition of these products and best practices in selecting the right product.



To enable us to accomplish this, we reached out to our network of Asset Managers who currently have capabilities in this space. We requested information such as monthly performance history, fees, current and historic portfolio breakdown, investment objectives and guidelines to enable us to get a good understanding of the products and their objectives.

We received 75 track records from 60 different Asset Managers. These confirmed the view that this is a very heterogeneous universe, with no two products alike. The only similarity we could find between some products was their risk/return targets and the sectors employed. Products differed widely in terms of sector breakdown, duration profile, credit quality, regional bias, investment philosophy and investment approach.

Interestingly, though we requested data for MAC products, we got a wide variety of strategies which should not be classified as MAC.

Categorisation

One of the cardinal sins in selecting a product as an investor, especially in this diverse universe of products, is to select a product based on its name alone. Formerly, a product named Global Core or Global Core Plus used to give a high degree of certainty that it was going to include mainly Investment Grade Government, Corporate and Securitised bonds, because it was benchmarked to a Global Aggregate index. In addition, the market value weights did not differ wildly from the benchmarks as there were tracking error constraints in place.

With the new generation of products/styles of investing, it is prudent to do your due diligence when selecting a product or manager. Products such as Absolute Return Bond, Unconstrained Fixed Income, Multi-Sector Total Return Bonds, Strategic Income Bond and Multi-Asset Credit are suggestive of a particular strategy but may be at odds with what a manager is actually doing in practice.

There has been some disappointment in these products from investors who did not understand clearly the risks and objectives of the strategy invested in. For example, some allocated to MAC with a view to protecting capital, others in order to lower the correlation across the broader portfolios. However, an absolute return product may have been better suited to meeting those objectives.

Against this backdrop, the only way to compare the products in the universe is to create categories. However, there is no perfect approach or consensus in the investment community on categorising this diverse universe. As one size does not fit all and the suitability of a product to an investor's unique needs is important, we feel the starting point in selection should always be from the investors objectives. Before selecting a suitable product, the investor needs to address questions such as: What are the risk/return preferences? Is there a preference for a defensive (low risk, low return) or aggressive (high risk, high return) approach? Is protecting against interest rate risk your focus? Do you want a product with low beta to the market? What else do you have in your portfolio? And do you want to minimise the capital charges on your investments.

To simplify the task and to categorise in line with the preference we have typically seen from investors, we decided to divide the universe into three categories (with the understanding that there will be some grey areas and overlaps): Defensive, Intermediate and Aggressive. We approached this categorisation based on risk/return objectives and liquidity profile. The return targets can be customised based on an investor's risk tolerance. Although we used cash plus, some MAC strategies are managed to benchmarks.

Defensive

These are products with a return target of typically cash + 2 – 4% and mainly hold investment grade liquid securities such as corporate, government and securitised debt. These products will typically have better drawdown characteristics, lower correlation to equity markets, lower yield to maturity and higher turnover. Of the universe analysed, 15% of the products were classified in this category. These are the typical Absolute Return strategies.

Intermediate

These are products with a return target of typically cash + 5 – 7% and are fairly balanced between investment and sub-investment grade securities such corporate, bank loans, securitised debt. These products will typically have more correlation to equity markets than the Defensive category. Of the universe analysed, the bulk of strategies (60%) fell in this category and these are the products the market typically classifies as MAC.

Aggressive

A return target of cash + 7% and above. These products typically invest in illiquid and equity-like securities to generate returns. Sectors such as CLO equity, convertible bonds and in some cases private debt are more prominent compared to sectors used in the Intermediate category. Some 25% of the track records fell in this category.

Within each of these categories there are further sub-categories to differentiate the style bias of the products. Whether the strategy has a cash target or a debt benchmark is particularly important for instance as the style of management and risk profiles are different.

Cash versus Benchmarked

65% of the products analysed were either managed to a cash benchmark or had no benchmark at all. Of the remaining 35%, a variety of indices were used but the global aggregate, high yield and bank loan indices or a blend of these indices seemed to be popular.

Global versus Domestic

Regional biases also exist between products, but only to a smaller extent. Global products dominated, providing 90% of the products, with domestic regions such as UK, Europe and US accounting for the remainder.

Category	Return Target	Liquidity/Turnover	Top Sectors	Average IG Exposure	Correlation with S&P ¹	Drawdown (3 yr Average)	Main function in portfolios
Defensive	Cash + 2-4%	High	Government IG Corporate Securitized	72%	0.30	-2.58%	- Protection against a rise in interest rates - Reduction in the overall risk of the portfolio - Diversification benefits due to low correlation with markets
Intermediate	Cash + 5-7%	Medium	High Yield Banks Loans Securitized	45%	0.56	-2.36%	- Replacement for IG corporate exposure for higher return and similar risk - Replacement for equity exposure, lower risk profile - Capturing credit beta, with limited interest rate risk
Aggressive	Cash + > 7%	Low	High Yield Banks Loans Convertibles	23%	0.55	-3.25%	- Replacement for equity exposure, lower risk profile, high single digits return - Capturing credit beta, with limited interest rate risk

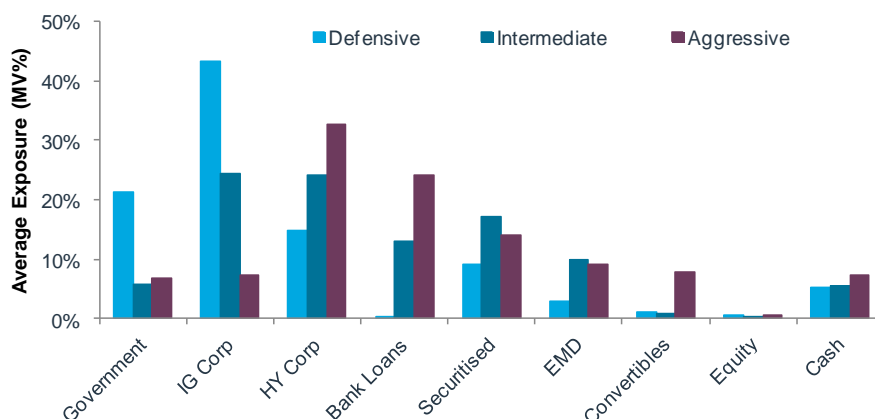
¹ 1 year rolling correlation averaged over the last 3 years
 Data as of September 2015

Characteristics

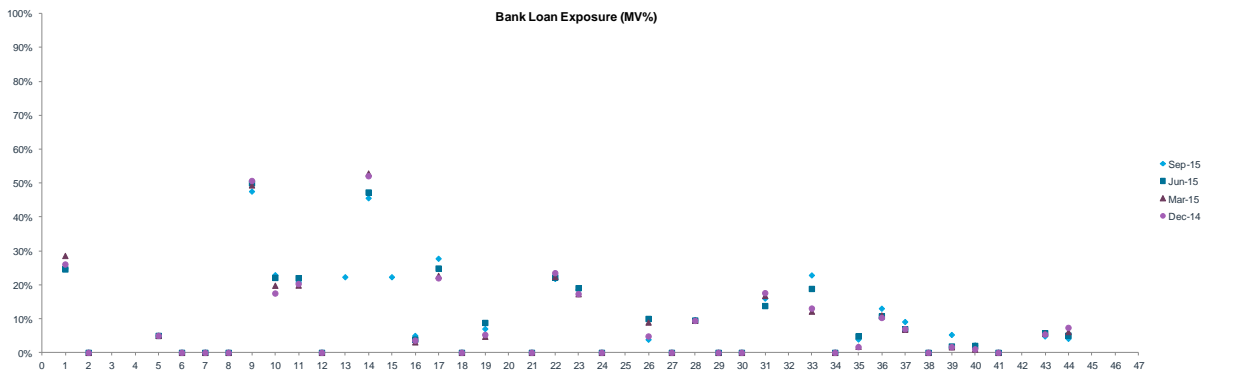
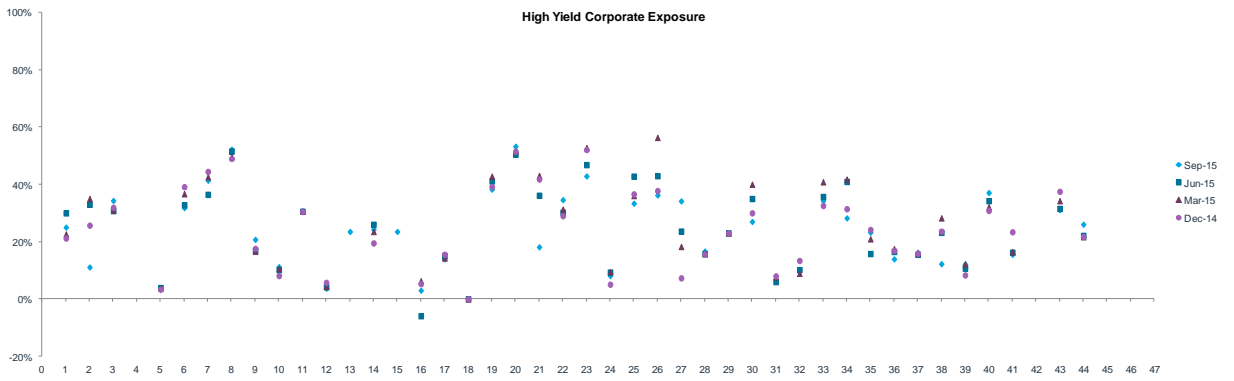
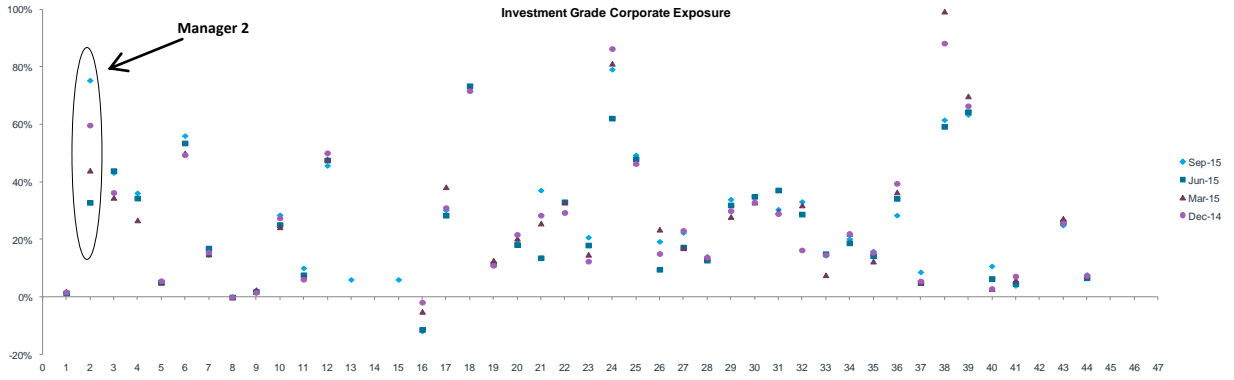
Bucketing all the track records into one of the three categories described above, we calculated the average characteristics to give an indication of what a typical portfolio in each of these categories looks like. We used an average of the quarterly exposures per product presented by the managers over the last year and equally weighted across all products within each category.

Sector exposure

The primary sectors used in these products include but are not limited to: governments, corporate (IG & HY), bank loans, securitised (MBS, ABS, RMBS, CLO, etc), emerging markets (sovereign, corporate in local & hard currency), convertibles and some equity. As per the chart below, you can see the higher quality sectors (governments and IG corporates) are dominant in the Defensive category, while the less liquid sectors such as high yield and bank loans dominate in the Aggressive category. The Intermediate category is balanced between liquid and illiquid. It is important to note that the products we received were a mixture of segregated and mutual funds. For the mutual funds and in particular UCITS funds, bank loans are limited and as a result, would not be expected to be a large exposure in the fund.

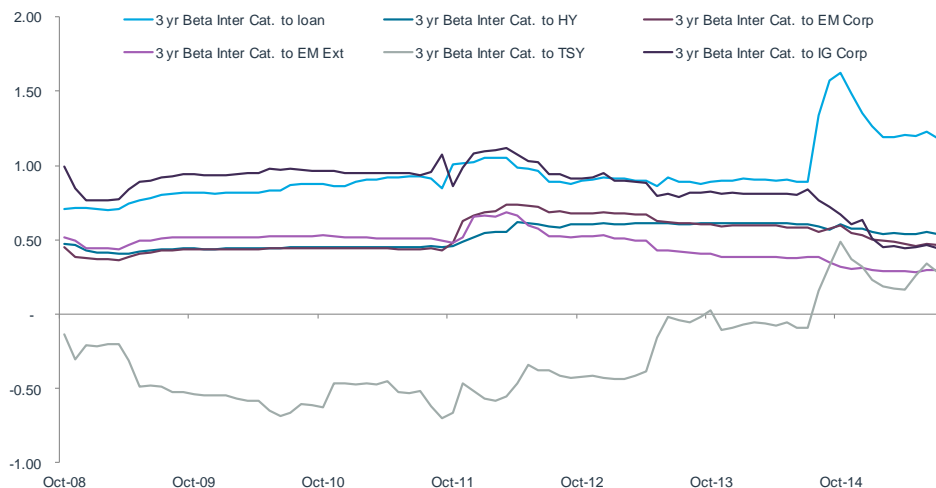


The charts below show the evolution of the sector exposure per manager for investment grade, high yield and bank loans, for managers in the Intermediate category. Each number on the x-axis represents a manager and the dots shows the exposures at each quarter end. For example, from the investment grade corporate chart, Manager 2 (circled) had an exposure of 75% in September 2015 and 33% in June 2015. As can be seen from the charts below, there are some manager who actively shift exposures, while others keep it fairly constant. In addition, as you move to the less liquid sectors, the changes in exposure becomes less prominent.



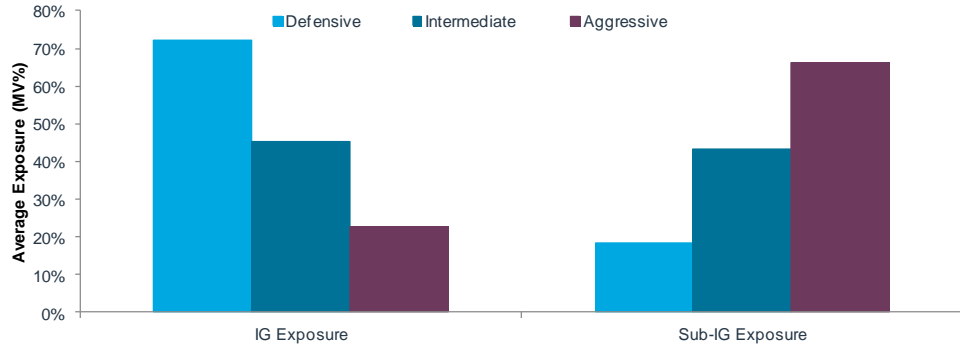
Beta exposure

Looking at the three year rolling betas of the Intermediate category to the major spread sectors, they remained fairly constant, with the exception of the beta to treasuries and loans. Starting from July 2014, there seemed to be a shift to a decrease in the spread sectors in favour of loans and treasuries. The beta to treasuries is more dynamic as managers typically utilise duration for hedging and active purposes also.



Credit quality

From a credit quality perspective as per the chart below, the Defensive category as you would expect is predominantly investment grade (72%) and sub-investment grade (18%). The investment grade component decreases to 45% for Intermediate and even further, to 23%, for Aggressive.

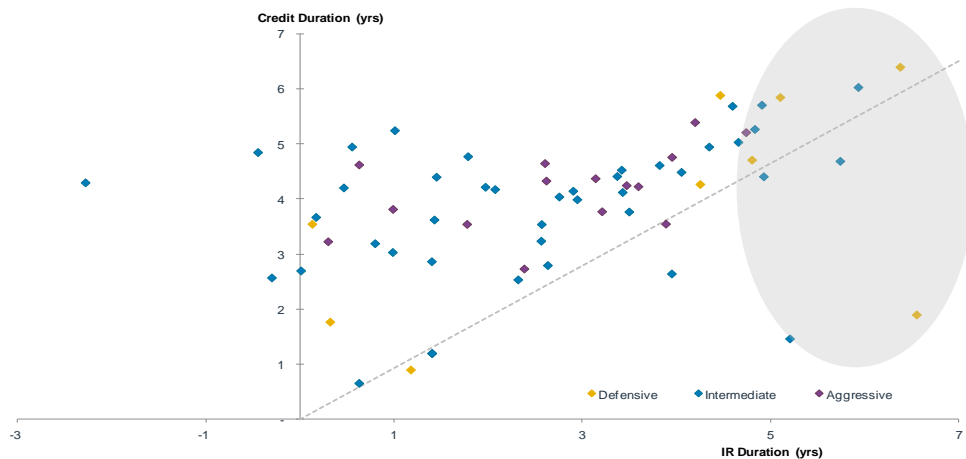


Duration

The chart below plots interest rate duration against credit spread duration. In general, with only a few exceptions, most products have more credit than interest rate duration. However, it's difficult to see a duration pattern for products across the three categories. This is mainly because duration is used as an active source of alpha generation and each manager will have a different view and a different level of conviction.

Three of the track records have negative interest rate duration, expressing the managers' view of a potential rise in rates. From a guideline perspective, only 14 of the products indicated a permissible duration range from negative to positive, with the remainder not having the ability to go negative duration at the aggregate portfolio level.

Furthermore, the duration profiles of the benchmarked strategies differ from those with a cash target. These track records tend to have higher credit and interest rate duration, as indicated in the shaded area at the right hand side of the chart below.



The table below summarises the top level statistics.

Characteristics (Average)	Defensive	Intermediate	Aggressive
Interest Rate Duration (years)	3.52	2.59	2.67
Credit Spread Duration (years)	2.80	2.42	2.43
Yield To Maturity	3.4%	4.3%	5.6%
Inv. Grade Exposure	72.1%	45.2%	22.8%
Sub-Inv. Grade Exposure	18.4%	43.2%	66.2%
EM Local	0.3%	1.7%	1.9%
Government	21.4%	5.7%	6.9%
IG Corp	43.2%	24.5%	7.2%
HY Corp	14.9%	24.1%	32.8%
Bank Loans	0.2%	13.1%	24.3%
Securitised	9.2%	17.2%	14.0%
EMD	2.9%	9.9%	9.0%
Convertibles	1.1%	0.8%	8.0%
Equity	0.6%	0.2%	0.5%
Cash	5.3%	5.4%	7.3%

Quantitative review

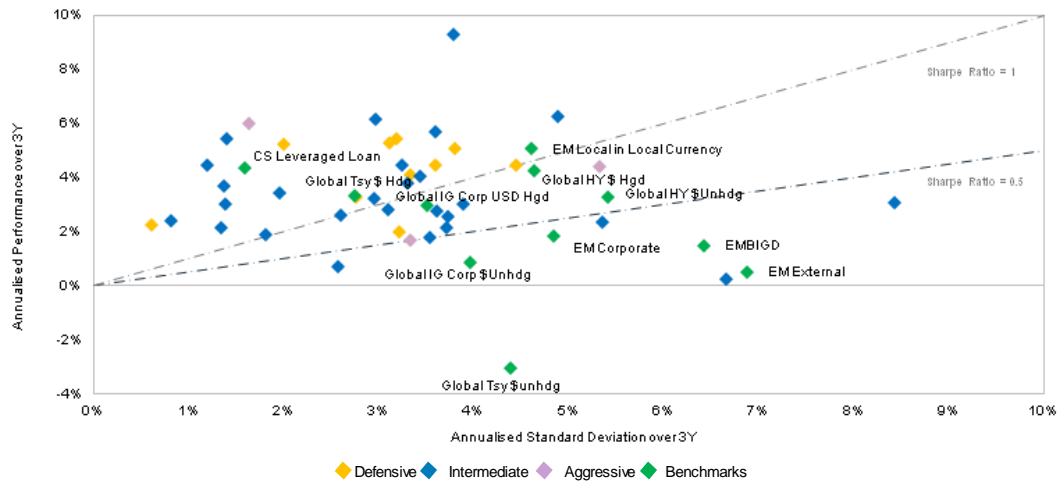
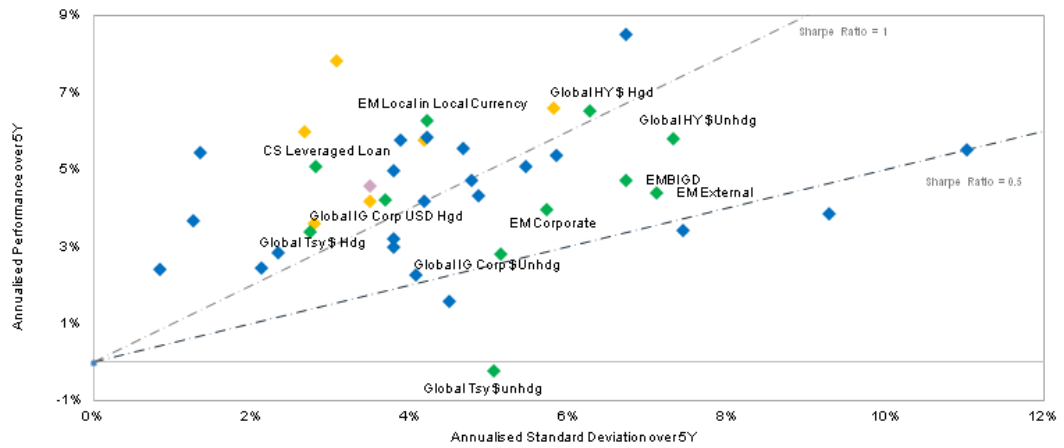
Some of the typical objectives of MAC strategies are listed below. In this section, we review if or whether these products have met their objectives over an investment cycle (i.e. 3 to 5 years). We look at performance, volatility, drawdown and correlation amongst other factors.

Risk/Return Profile

In general, MAC strategies aim to provide a return within the credit space, with lower volatility, but attractive returns, than the individual sectors of the credit market. Unlike Absolute Return strategies, which aim to produce a positive return in all market environments, MAC strategies will tend to have some market beta. As a result, in a period where risk assets sell off, MAC strategies will generally underperform credit markets. To assess this objective, we looked at the risk/return profile over three and five years for all the track records submitted.

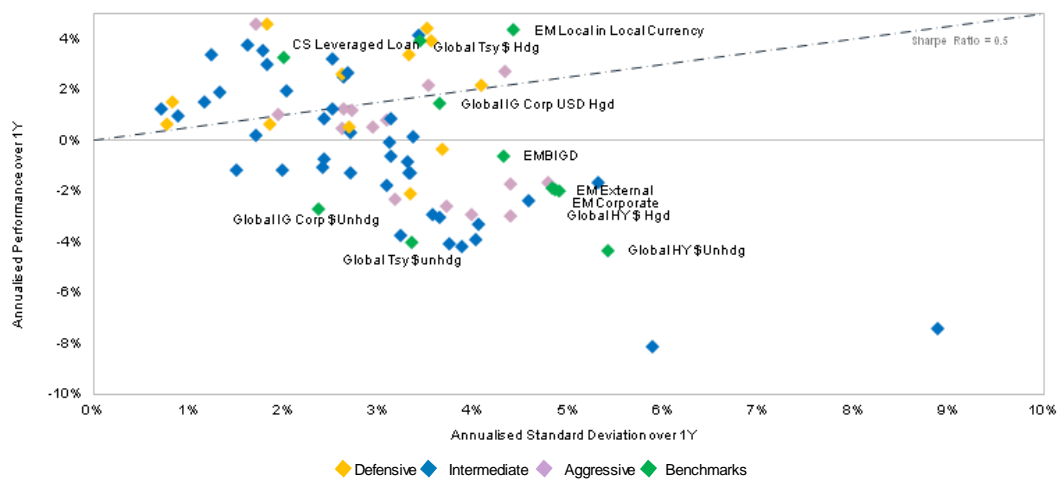
Returns over the last three and five years (investment cycle) to September 2015, have been generally positive for most fixed income sectors. As a result, all strategies analysed delivered positive returns over the period, meeting the objectives of the strategy.

It is interesting to note that there is significant dispersion in volatility and return terms between the products analysed, even within the 3 categories. For example, within the intermediate category, returns ranged from 1.5% at the lowest to 8.5% and volatility ranges from 1% to 11%, based on the five year numbers. Even though the sector exposure of the products within each category look similar, there is still significant dispersion. One reason for this may be a difference in manager skill at generating return. In addition, the duration and currency profile of the underlying products may also account for this dispersion.



Over the 1 year to September 2015, just above 50% of the strategies delivered positive returns. However, this came in an environment where sector and currency positioning was particularly important. Strategies heavily allocated to High Yield, EMD and Global USD unhedged sectors underperformed, while strategies allocated to Bank loans and Global USD hedged sectors outperformed.

This is to be expected for the MAC products as they have market beta and would not preserve capital in a down market.



Considerations when Selecting Managers

Appropriateness of Product

As mentioned previously, there are a multitude of strategies bucketed under the umbrella of MAC. Making like-for-like comparisons between such heterogeneous strategies is not easy. The best way to ensure investors have the right product is to place a greater emphasis on the suitability of the product. An investor should ideally start by defining their objectives explicitly, asking questions such as: Do I want to reduce risk or increase return? How much risk can I tolerate? What are my liquidity constraints and time horizon? Do I want protection in a rising rate environment? Do I want to reduce the capital charges?, do I want to outsource the asset allocation process to a manager? And do I want currency hedged or unhedged exposure?

A MAC strategy can be an important part of the broader portfolio, if the right product is selected with an appropriate function in the portfolio. MAC strategies are not designed with the objective of preserving capital, but rather of dynamically allocating between different sectors of the credit market with a view to delivering higher risk adjusted returns. However, this is accompanied with a beta to the credit markets. In periods of negative credit markets, one would expect MAC strategies to also underperform, though to a lesser extent than the individual components due to diversification benefits. They tend to be unconstrained, and although the product might have a benchmark or a neutral position (e.g. 33.3% high yield/33.3% bank loans/33.3% EMD) it should have the ability to deviate away from the starting position depending on the relative value and the conviction of that view.

For an investor looking to de-risk from equities, MAC strategies can provide high single digits returns with much lower volatility. On the other hand, for investors looking to get extra return, MAC strategies can deliver higher return for the same amount of risk as an Investment Grade Credit portfolio. From the analysis conducted, this is confirmed over 3 years, where the majority of the track records had a similar volatility and a higher return compared to the Global Investment Grade index. However, it should be noted that moving from IG corporate to a MAC strategy would be accompanied by additional risks such as illiquidity and higher default risk.

Investment Team and Process

As with most strategies, the experience, depth and stability of the team are key to delivering consistent and repeatable performance within the framework of a robust investment process. However, in a MAC strategy there are some aspects of the structure/process of the team and the alignment of interest which need to be assessed.

Investment Process: There seems to be three broad approaches to managing the strategy and the approach will typically depend on the size and coverage of the team.

Top down Approach: This is where an asset allocation committee or a lead portfolio manager is responsible for the asset allocation decision across all the subsectors and in some products also responsible for the tail risk hedging overlay. The individual sector teams are then tasked with populating the risk allocated with bottom-up security selection. Big fixed income teams with a very diverse sector allocation in the product tend to follow this approach. Some of the key factors to look out for are the strength of the asset allocation process, the process by which ideas flow effectively into portfolios and communication between the different sleeves in the product. Products in the Defensive category will tend to follow this approach.

Bottom up Approach: This is where the "best ideas" are selected from the universe covered on a security level, with little or no top down input. This tends to be the approach for the more sector constrained strategies, with the portfolio manager having a good grasp of the different sectors to make relative value decisions. Some of the key factors to look out for are the effectiveness of communication between the portfolio managers and research analysts, the percentage coverage of the universe and key man risk, as one portfolio manager typically manages the entire process. Products in the aggressive category will tend to follow this approach.

Mix of both: This is a combination of both approaches outlined above. The team has a top down approach in deciding on the sector allocation and the level of credit risk, while there is bottom up selection across the entire universe to meet the asset allocation and risk targets.

There is no one superior approach. However, the key is ensuring the investment process followed is aligned with the structure and capabilities of the investment team.

Alignment of interests Aligning the success of the investment team to the success of the client is important. As a result, it is important to pay particular attention to how portfolio managers are compensated. With several sector teams contributing to the strategy, an investment team compensated on assets under management can reduce the alignment of interests and potentially the effectiveness of the relative value decisions in the portfolio. For example, a decision by the CIO to reduce exposure entirely to a certain sector for the benefit of the client can be met with some resistance internally if it might have an impact on the team's compensation. In addition, asset gathering can lead to capacity issues and as a result poor alpha generation for clients. Portfolio Managers should ideally be compensated based on risk adjusted performance and over a long investment horizon. Personal investment in the fund also helps strengthen alignment.

Capital versus risk allocation

Though many strategies may seem diversified when looking at the number of sectors invested in, the portfolio may be concentrated in one type of risk in particular. Approaching asset allocation from a risk perspective can create a better diversified portfolio than approaching it from a capital perspective. Ensuring a spread of risk factors such as duration, currency, credit, prepayment/extension risk, liquidity and inflation risk should provide diversification to a portfolio.

Use of Derivatives

Derivatives such as futures (interest rate), swaps (credit default, currency, interest rate and total return), FX forwards and options to name a few, are used in these strategies for efficient portfolio management purposes. In particular, derivatives are used to manage duration, currency and credit risk both for alpha generation and hedging purposes. As with most instruments, derivatives have their benefits, if used properly. Credit Default Swaps for example are a quick and efficient way for managers to reduce/increase their credit exposure without bearing the transaction costs of selling/buying the physical bonds. This is particularly helpful, especially in these markets where liquidity is scarce. However, derivatives do introduce additional risks to the portfolio such as leverage, basis risk and counterparty risk.

Investors need to keep this in mind when selecting managers and monitor how much derivatives are used in the portfolio. Gross/Net Notional exposure are ways of measuring leverage in a portfolio and comparing across managers, how much derivatives is utilised. However, some of the measures in the market, such as gross notional exposure does not give a good indication of the true leverage and as a result true risk in the portfolio.

In terms of the sector exposure, in most cases it is not enough to look at the headline numbers. Typically, most reports on sector exposure nicely sums to 100% and this shouldn't be the case if derivatives are being used. In these cases, managers report the physical assets and the marked to market exposure of the derivatives. It is important to understand the aggregate long and short notional exposures of the derivatives and physical bonds, to get a better representation of the portfolio.

Beware of liquidity and capacity

Capacity constraints are an important aspect for analysis, especially in the current market environment. Credit focused strategies in particular aim to trade in markets characterised by lower liquidity (high yield, bank loans) for higher return. The volume of assets that these strategies can trade at any one time is limited and they will not be able to grow assets indefinitely without altering their initial investment philosophy (investment universe, portfolio structure). Monitoring of market liquidity and a disciplined closing policy should be expected from strategies subject to capacity constraints. It is also important to link it to the dealing frequency of the fund. For a long-term institutional investor, without the need of liquidity in the short term, strategies with illiquid sectors should ideally have a longer dealing frequency compared to a more liquid strategy. This should help protect long-term investors from forced

selling in portfolios to raise cash in stressed markets. Swing pricing would be an alternative way to achieve this objective.

Watch the costs

Fees can vary significantly from manager to manager. The median fee is 40 basis points for the Defensive sector, 50 basis points for Intermediate and 55 basis points for Aggressive. In determining whether the fee charged is value for money, investors need to assess not only the product, but the team and any other added value received. It is also important to note the style of management. Some strategies hold the core of the portfolio in high yielding assets to generate returns, with limited turnover. For these strategies it may not make sense to pay additional fees over and above a buy and maintain portfolio.

Conclusion

MAC strategies can play an important role in broader portfolios, be it for risk reduction or generating additional returns. It is, however, important to pay close attention to your objectives as an investor before selecting a product to invest in. Understanding your objectives and where the MAC strategy fits should be your starting point. This is made even more complex as the universe has a wide variety of strategies, with many very different objectives marketed as MAC. Significant diversification in products even within the categories presented in this analysis means manager selection is a critical component of selecting the appropriate strategy. Selecting off the shelf products is not the optimal approach and paying attention to your objectives when selecting a suitable product is advised.

Our Public Markets team includes dedicated Equities and Fixed Income / Multi-Asset units that can support our clients with portfolio strategy and design, risk advice and manager search and selection.

Together, this team has helped investors with more than \$65 billion worth of equity searches and \$31 billion of fixed income and quantitative strategy searches.

- > Specialist asset class units with extensive practical experience
- > Flexible ongoing or project-based partnership
- > Direct co-operation with senior staff producing the research
- > Pragmatic approach with exclusively client-centric incentives

John Amoasi, CFA, FRM

bfinance International Ltd
Clareville House
26-27 Oxendon
Street, London WC2E 9HE
T: +44 20 7747 8600

IMPORTANT NOTICES

PROPRIETARY AND CONFIDENTIAL

This document contains confidential and proprietary information of bfinance and is intended for the exclusive use of the parties to whom it was provided by bfinance. Its content may not be modified, sold, or otherwise provided, in whole or in part, to any other person or entity without bfinance's prior written permission.

OPINIONS NOT GUARANTEES

The findings, ratings, and/or opinions expressed herein are the intellectual property of bfinance and are subject to change without notice. They are not intended to convey any guarantees as to the future performance of the investment products, asset classes, or capital markets discussed. Past performance does not guarantee future results. The value of investments can go down as well as up.

NOT INVESTMENT ADVICE

This report does not contain investment advice relating to your particular circumstances. No investment decision should be made based on the information contained herein without first obtaining appropriate professional advice and considering your own circumstances.

INFORMATION OBTAINED FROM THIRD PARTIES

Information contained herein has been obtained from a range of third-party sources, unless otherwise stated. While the information is believed to be reliable, bfinance has not sought to verify it independently. As such, bfinance makes no representations or warranties as to the accuracy of the information presented and takes no responsibility or liability (including for indirect, consequential, or incidental damages) for any error, omission, or inaccuracy in the data supplied by any third party.

Office locations

Amsterdam

Symphony Building, 26th Fl
Gustav Mahlerplein 3 -115
1082 MS Amsterdam
Netherlands
T +31(0)20 2601 265
www.bfinance.com

London

Clareville House
26-27 Oxendon Street
London SW1Y 4EL
England
T +44 20 7747 8600
www.bfinance.co.uk

Montréal

1250 René Lévesque Blvd. W
Suite 2200, Montréal QC
Canada H3B 4W8
T +1 514 393 4899
www.bfinance.ca

München

Promenadeplatz, 8
D-80333 München
Deutschland
T +49 89 55 29 59 00
www.bfinance.de

Paris

3, place de la Madeleine
75008 Paris
France
T +33 1 45 02 64 00
www.bfinance.fr

Sydney

Level 13
135 King Street, Sydney
Australia
T +61 2 8973 7503
www.bfinance.com