RESEARCH PERSPECTIVES

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FOREWORD

Our first issue of *Research Perspectives* in 2015 covers a wide variety of investment topics. We begin with one that has been receiving a fair amount of attention lately: liquid alternative investments - that is, the appeal (or lack thereof) of hedge fund strategies that are available through more easily accessible and liquid vehicles, such as mutual funds. We then make a case for actively managed global small-cap equities based on their attractive performance, diversification, and alpha generation potential. Our third piece introduces a new study on climate change and an upcoming paper on portfolio decarbonization. Both are intended to help investors better understand the investment risks and opportunities of climate change.

This edition also features an article on the rapid growth of the Chinese bond markets, which to date have had limited accessibility to foreign investors. Like the article on global small-cap equities in this issue, our fifth piece argues the case for an active currency management portfolio because of its potential for long-term return enhancement. We close with a Q&A with Stefan Hepp, who recently joined Mercer through the acquisition of SCM, a private markets research firm headquartered in Zurich, Switzerland.

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LIQUID ALTERNATIVES - A HEDGE FUND INNOVATION OR A FAD?





ROBERT HOWIE MARGARET D'ANNUNZIO

We have a long and deep understanding of Alternative Investments at Mercer, Liquid Alternatives. which we define broadly as investments that follow alternative strategies and are available as commingled/ pooled funds that trade at least weekly, is a market that has been growing rapidly and is receiving much press. Much of the popularity is due to the liquidity, the transparency, and the regulated nature of the vehicles.

Interest in these products is coming from several areas - notably, organizations focused on individual investors (including wealth management firms and defined contribution pension schemes), but also some institutional investors who, due to liquidity constraints, can only access similar strategies through such vehicles. In any structure or investment we recommend, we take special care to research that the assets' liquidity matches the liabilities. As hedge funds often take advantage of illiquidity premia and can deliver alpha by dealing in lesser-tracked

investments, our preference is for investors to make use of the broadest possible universe of hedge funds. However, there are some cases in which liquid alternatives are not only the most practical option but also the best.

This article explores the liquid alternatives landscape that covers hedge fundlike strategies and examines whether these investments have a valid role and what their merits and potential drawbacks might be.

GROWTH AND PERFORMANCE

Many types of liquid alternatives vehicles exist, but this article focuses on two in particular: US mutual funds that are registered under the US Investment Company Act of 1940 (40 Act funds) and European domiciled funds that comply with the UCITS¹ legislation (UCITS funds). Whereas 40 Act funds all trade daily, UCITS only need to have weekly liquidity. Both types of funds have grown rapidly in recent years. Morningstar estimates that assets in alternative 40 Act funds increased to over \$300 billion in 2014 from under \$50 billion in 2008. Similarly, the publication Absolute UCITS estimates that the alternatives UCITS sector had grown to nearly \$200 billion in 2014 from just \$20 billion in 2007.

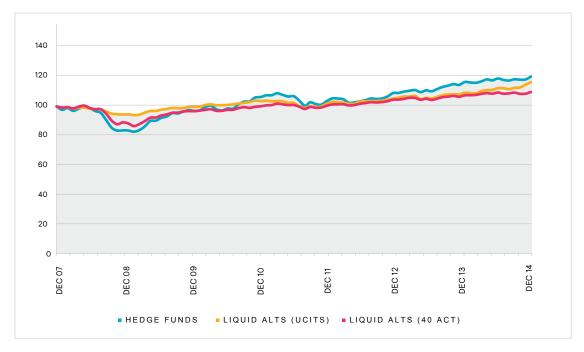
So how have these newer funds performed compared with their more established less liquid, offshore, hedge fund peers? Of course, past performance is not a guide to future performance, and hedge fund data, in particular, are susceptible to various biases. Also, given the relatively recent arrival of liquid alternatives in the commonly traded market, there is a corresponding lack of data history. With all these caveats, Figures 1 and 2 show how said funds have fared (all returns are shown net of fees).2

... Assets in alternative 40 Act funds increased to over \$300 billion in 2014 from under \$50 billion in 2008.

¹ UCITS are "Undertakings for Collective Investment in Transferable Securities" that are governed by the various UCITS Directives of the European Union.

² HFRI Fund Weighted Composite Index for hedge funds; Wilshire Liquid Alternative Index for 40 Act Funds; HFRU Hedge Fund Composite USD Index for UCITS; and MSCI World for equities.

FIGURE 1 TOTAL RETURN INDICIES (IN USD)



Source: HFRI Fund Weighted Composite Index for hedge funds: Wilshire Liquid Alternative Index for 40 Act Funds: HFRU Hedge Fund Composite USD Index for UCITS: and MSCI World for equities. All returns are net of fees.

FIGURE 2 RETURNS OVER FIVE YEARS TO END FEBRUARY 2015

	Hedge funds	40 Act Funds	UCITS
Annualized return	5.1%	2.9%	3.7%
Volatility	5.2%	2.7%	3.2%
Sharpe Ratio	1.0	1.1	1.1
Beta to equities	0.3	0.2	0.1

Source: HFRI Fund Weighted Composite Index for hedge funds: Wilshire Liquid Alternative Index for 40 Act Funds: HFRU Hedge Fund Composite USD Index for UCITS: and MSCI World for equities. All returns are net of fees.

Based purely on past performance, traditional hedge funds outperformed liquid alternatives over the five-year period. However, although liquid alternatives' absolute returns have been lower, liquid alternatives have delivered lower volatility and also lower beta to equity. We note that in the 2008–2009 financial crisis, liquid alternatives actually outperformed hedge funds, but this reflects the steeper declines in the values of less liquid assets at that time and should not be expected in most periods.

DEMAND FOR LIQUID ALTERNATIVES

The vehicle structures of liquid alternatives are important to some groups of investors – such as individuals, defined contribution schemes, some insurers, and also defined benefit schemes in a number of European countries (as a result of the need for tax transparency or other regulations).

FOCUS ON WEALTH MANAGEMENT

Over the past couple of years we have seen increasing interest in liquid alternatives products from our wealth management client base, whose individual clients are seeking to invest beyond traditional funds comprising equities and bonds. Many individual investors are not comfortable investing in products that are not fully regulated by their domestic regulator, or where they cannot divest quickly, which rules out typical offshore hedge funds as an option. Others may be prevented from investing in hedge funds because of the minimum investments imposed.

To improve the risk/return profile of their portfolios, investors look to their advisors to provide them with options that have a low correlation to traditional asset classes, yet are available in a vehicle they feel comfortable investing in. This is where liquid alternatives can play an important part. While investing in these products may result in a lower return vis-a-vis hedge funds, for investors who don't have offshore hedge funds that deal monthly or less frequently as an option, these products can still play a role in dampening portfolio volatility, and mitigating downside risk, while not detracting from growth prospects. Working with our wealth management client base to identify which types of strategies lend themselves well to liquid structures, as well as helping them to select suitable funds, will result in better outcomes for their end clients.

Beverley Sharp
Global Head of Retail Research

THE IMPACT OF LIQUIDITY ON THE INVESTMENT STRATEGY

Some hedge fund strategies can work well in a liquid format — notably, trading strategies and long/short equity. This is because the underlying instruments that they trade are naturally liquid and matched to the liability of the structure (see Figure 3). Strategies that trade less liquid assets often have significant constraints applied in these liquid vehicles and can change the profile of the strategy materially. The resulting 40 Act fund/UCITS product may still be attractive, but it may differ significantly from the flagship strategy from which it is derived.

In addition, some strategies may have longer time horizons even if they trade liquid securities (for example, event-driven strategies that identify catalysts that are months or even years away).

FIGURE 3 STRATEGIES AND LIQUID STRUCTURES

STRATEGIES MORE SUITED TO LIQUID STRUCTURES	STRATEGIES LESS Suited to liquid Structures	
Long/short equity	Credit and distressed	
Global macro, currency, and commodities (40 Act*)	Commodities (UCITS*)	
Managed futures*	Complex event-driven strategies	
Volatility	Illiquid multi-strategy	
Fixed income (sovereign)	Funds of funds allocating to the above strategies	
Liquid multi-strategy		
Funds of funds allocating to the above strategies		

* There are constraints on the use of commodities in the UCITS framework, although this doesn't apply in the 40 Act space.

FOCUS ON LIQUIDITY IN CREDIT MARKETS

The alignment between the liquidity of the traded markets and instruments, the underlying strategy/investment approach (such as traded instruments, portfolio structure, and time horizon of trades), and the liquidity terms provided to clients are critical to the success of liquid alternative strategies over the long term. Some strategies invest in securities that are frequently traded in normal circumstances but for which trading can dry up during periods of market stress. Likewise, some others may invest in over-thecounter contracts or other less liquid instruments. When looking for more liquid fund terms, investors should bear in mind the potential risk of a liquidity crisis similar to that experienced in 2008. While it might be assumed that global liquidity is still abundant after years of monetary easing by central banks, the reality is that market liquidity (the ease and cost of trading) has gone in the opposite direction.

Credit-focused hedge fund strategies, unlike equity related ones, are not easily replicable in a UCITS or 40 Act format. Since the 2008 financial crisis, market liquidity has declined across all asset classes, especially in fixed income and derivatives, where traditional liquidity providers such as broker-dealers and banks have drastically reduced their activity as a result of new regulations on capital requirements, proprietary trading, and risk assessments. Meanwhile, the credit instruments held by hedge funds and mutual funds have more than doubled since 2007, as can be seen in Figure 4.

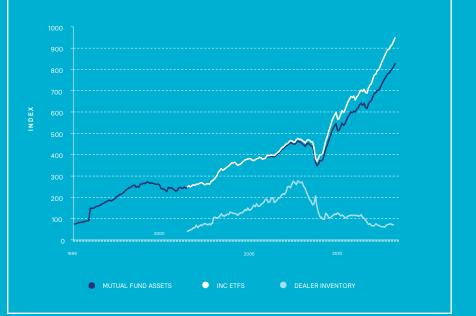
Although the appetite for yield from institutional investors acts as a stabilizer, there is a risk that, especially at this stage of the cycle, rising rates could dampen investors' enthusiasm for corporates bonds. The full extent of this new market environment will not be tested until the next big dislocation occurs, and it is critical that managers oversee their funds appropriately. Some liquid alternative strategies can include mechanisms such as anti-dilution levies, penalty fees, or gates. While some of these may appear in contrast with the daily or weekly redemption terms, they should actually provide some comfort to investors, as they allow the fund manager to

Source: ICI, NY, Bloomberg, haver analytics, CITI Research, 2013

manage the portfolio in periods of market stress and protect the interests of and treat fairly both redeeming and remaining clients. Considerations about the composition and diversification of the portfolio, and about the quality and concentration of the underlying client base, are also important to assess the potential liquidity mismatch of liquid alternative strategies.

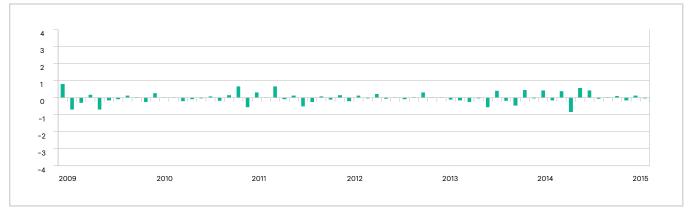
- Daniela Doria

FIGURE 4 US CREDIT MUTUAL FUND ASSETS VS. DEALER INVENTORY (\$BN, IG + HY)



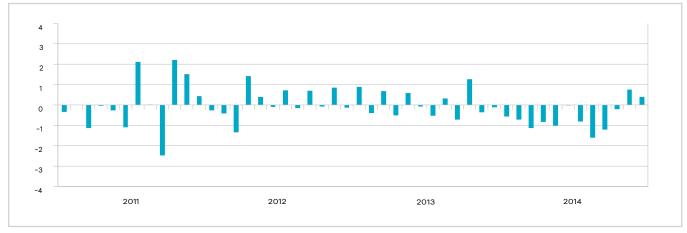
To illustrate the point, let's look at two real examples comparing the performance of the flagship offshore vehicle versus the liquid alternative version. Flgures 5 and 6 show the performance of two strategies highly rated by Mercer. The first (Manager A) is a macro strategy that is available in both offshore Cayman Islands and UCITS vehicles. The second (Manager B) also offers both types of vehicles but is a multi-strategy manager whose flagship can make allocations to less liquid securities. As can be seen, for Manager A there is limited tracking error — reflecting the transferability of the strategy from offshore to UCITS form. By contrast, the tracking error between Manager B's UCITS strategy and the flagship fund is high.

FIGURE 5 MANAGER A - UCITS VS. CAYMAN



Source: MercerInsight.

FIGURE 6 MANAGER B - FLAGSHIP VS. UCITS



Source: MercerInsight.

OTHER FACTORS INVESTORS NEED TO BE AWARE OF

While the constraints placed on the strategy by the regulatory rules may influence the risk/return profile of the product, investors should be aware of other factors at play when selecting liquid alternatives:

LACK OF ILLIQUIDITY PREMIUM

A natural corollary of these strategies being more liquid is that they will be less able to capture returns from less liquid assets. From time to time, some capital market participants are unable or unwilling to hold particular securities for non-economic reasons. For example, when an issuer defaults on a coupon payment, many investment policy-bound institutional investors are forced to sell that issue. It is the hedge fund manager that steps in and provides these sellers with the liquidity they need, at a right price. Outside of trading strategies such as managed futures and global macro, some element of capturing an illiquidity premium permeates most, if not all, hedge fund strategies. In merger arbitrage, longonly investors who owned the stock pre-announcement frequently seek to cash in their gains, rather than bearing deal risk. Again, hedge funds can provide the necessary liquidity. Indeed, many arbitrage strategies are predicated on owning the less liquid of two related instruments and shorting the more liquid. This type of basis risk can impact even very liquid hedge fund strategies, such as long/short equity.

MANAGER SELECTION BIAS

The pool of strategies available in liquid alternative form is significantly smaller than that available via traditional offshore hedge funds, and as such the pool of high-quality talent is smaller still. Although the choices are increasing as the industry grows, the liquid alternatives space will always offer fewer choices. This is not only because strategies might be unsuitable for the format but also because some successful hedge funds will not have the inclination to go down this route, even if their strategy would work well in a liquid alternatives format.

POTENTIALLY

HIGHER FEES/COSTS

Either explicitly or per unit of risk, these products can often have higher fees/costs than an investor would expect to pay for the equivalent offshore fund. This might simply be the additional operational costs of wrapping the strategy in a liquid vehicle or reflect the higher fees typically charged to retail rather than institutional investors. We note that platform/distribution costs can sometimes be significant, so we recommend that investors consider the total expenses of vehicles not just the headline fees. Mercer's institutional clients are often able to negotiate these fees to more palatable levels. For investors who have no choice other than to invest via liquid alternatives products, the fee may be higher, but this may be their only way to diversify their investments.

HOW TO ASSESS AND SELECT LIQUID ALTERNATIVES

The addition of constraints means that in some cases liquid alternatives have lower potential compared to the manager's unconstrained flagship vehicles. However, when assessing products, we do not compare the liquid alternative product just to its flagship equivalent. The bottom line is that good liquid alternative strategies should, in essence, be able to improve the risk/return profile (net of fees) of investors' portfolios compared to portfolios of traditional assets only. Our aim at Mercer is to identify the best possible investments in the liquid alternative universes.

Consequently, judgment on products should be also made, in part, relative to a universe of liquid alternatives strategies. As part of our initiative in liquid alternatives, Mercer created six new product groupings in our Global Investment Management Database (GIMD[™]) in 2014. These universes will continue to expand as the industry grows and client demand for these products increases.

CONCLUSION

Liquid alternatives are not a fad, as the better liquid alternative funds that match assets with liabilities and the right fee balance are a good solution for certain types of investors. But not all types of hedge fund strategies are suited to liquid alternatives 40 Act and UCITS structures. Consequently, investors need to understand that, by selecting investments only from within the liquid alternatives universe, they will likely not capture the full illiquidity premia inherent in many hedge funds or take full advantage of the entire suite of manager talent. We expect, however, that some of these disadvantages will have less impact given the innovation already apparent in this rapidly developing market.

Successful hedge fund investing is predicated on investing with the best active managers in the world, so manager selection is key. Of the thousands of hedge funds in the universe, we believe that only a small proportion of them represent good investments (and an even a smaller proportion of the liquid alternatives universes). Therefore, proper due diligence — from both investment and operational perspectives — is a necessary condition for success in hedge fund investing. Such thorough due diligence, we believe, can deliver research on some of the most compelling investments in the liquid alternatives space.

ABOUT THE AUTHORS

Rob leads manager research and the generation of intellectual capital for alternative assets in Europe, focusing on hedge funds, insurancelinked securities, multi-asset, and other liquid alternative strategies. Additionally, he advises institutional investors on the use of alternative assets, including manager selection and portfolio construction.

Margaret is a principal in Mercer's Alternatives Boutique and leads Consultant Research for Hedge Funds in New York. She has advised institutional investors on specific investments, strategic and tactical asset allocation, and portfolio construction. She has 25 years of experience as an asset management professional, having worked as a portfolio manager at BlackRock and JPM Alternative Asset Management. Margaret graduated from Princeton University.

SMALL CAPS WITHIN A GLOBAL EQUITY ALLOCATION SMALL WONDER?



SINGAPORE

Remarkably, standing at the investment universe's metaphorical cocktail bar, many investors have yet to indulge in one of the most delectable signature drinks — the full-bodied, well-integrated and occasionally zesty blend of alpha and beta: small-capitalization equities (small caps).

Since the early 1980s, academic and mainstream financial industry discourse has frequently pointed to the existence of a small-cap return premium, postulating various behavioral, economic, and structural rationales for such a premium to persist over time. The empirical evidence is mixed, however, with considerable variability in the returns to small caps in relation to larger caps – both unadjusted and adjusted for various dimensions of risk – over time and between markets.¹ While we are highly skeptical about the portrayal of small-cap beta returns as some sort of "free lunch" or "anomaly" — and note the interfusion of value and company size characteristics driving small-cap returns — we strongly believe that clients gain from incorporating smallcap exposure within a diversified portfolio. The debate about the existence of a return premium, which is likely to continue, may be an unconstructive distraction from less controversial benefits of the smallcap asset class category.

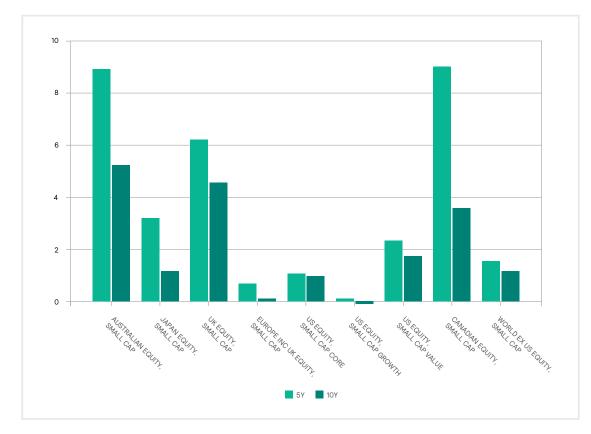
Even from the relatively neutral starting point of modern portfolio theory, for all its flaws — which suggests that rational mean-optimizing investors must hold the global market portfolio — small caps should represent a non-trivial component of an investor's equity allocation. Many clients should consider a strategic allocation to active, unconstrained small-cap equity strategies.

1 We will be issuing a detailed research paper on small-cap equities later in 2015. But the case for small caps extends well beyond modern portfolio theory, offering high excess returns from active management and diversification benefits within a global equity portfolio.

Academic research and Mercer's own experience evaluating equity strategies suggest that prospects for excess returns within the small-cap space are particularly favorable. High dispersion and low correlation in stock returns within the asset class category represent a meaningful tailwind for alpha generation over time. The evolution of the brokerage industry over the past decade or so — in response to both commercial and regulatory pressures — has reduced the focus of sell-side research on small caps. Investment management resources and skill are spread relatively thinly across the many thousands of small-cap companies, fragmented across markets, resulting in a less competitive hunting ground for alpha. Figure 1 illustrates the annualized excess returns generated by Mercer's A-rated small-cap strategies across all of the small-capuniverses for which longer-term value-added data exists.

FIGURE 1

ANNUALIZED VALUE-ADDED (VS. BENCHMARKS, %): A-RATED STRATEGIES IN SMALL-CAP UNIVERSES²



Source: Mercer, at year-end 2014. Gross performance data.

And although it may not be considered prudent to assume significant excess returns from active management in forecasting returns, it may be equally imprudent to dismiss the legitimate and intuitive basis for such outperformance in forming capital allocation decisions.

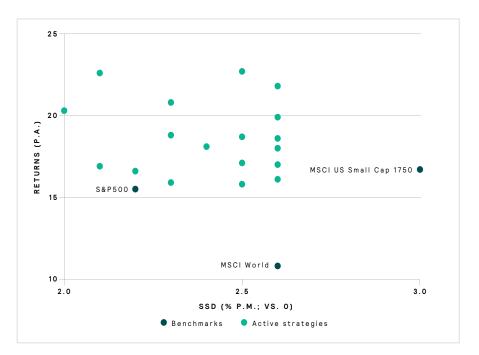
² Median managers within small-cap universes typically achieve high excess returns, but we use Mercer's value-added data to illustrate the point as they eliminate any potential survivorship bias from the median manager data. Full copies of Mercer's value-added reports are available on request.

At the implementation level, although median manager volatility/downside volatility in a universe of small-cap strategies is typically higher than that in a corresponding all-cap or largecap universe, some actively managed small-cap strategies (for example, quality-focused approaches) are much less volatile than small-cap/midcap and large-cap indices, and also the relevant small- and larger-cap peer medians. It is therefore possible to access the asset class category without the elevated volatility commonly associated with small caps.

As illustrated by Figure 2, a relevant US small-cap benchmark such as the MSCI US Small Cap 1750 Index exhibited greater downside volatility than a US large-cap benchmark such as the S&P 500 or a broad developed markets benchmark such as the MSCI World Index. However, a number of active strategies in the US Small-Cap Core universe have exhibited downside volatility similar to or lower than these larger-cap benchmarks, while delivering superior gross returns, over the five-year period to the end of 2014.

FIGURE 2

DOWNSIDE VOLATILITY AND RETURNS: US SMALL-CAP CORE EXAMPLES³



Source: Mercer, MSCI, S&P, gross US\$ performance, 5-year period to year-end 2014

While stock prices and earnings streams of small-cap companies are generally more volatile than those of large-cap companies, no doubt shaping common risk perceptions toward the asset class category, holistic approaches to risk must take into consideration more than just the volatility in isolation.

Diversification potentially provided by small caps – driven by a combination of less-correlated (to large and mid caps) beta and alpha components – may also enhance a global equity portfolio.

Diversification characteristics may become more important in mitigating rising correlations as markets become more integrated globally, with large caps influenced substantially by global factors and small caps driven more by local and idiosyncratic factors.⁴

Although the addition of small caps to large- and mid-cap allocations typically leads to modest increases in aggregate volatility, it may lower volatility in some cases.

Viewing global equity allocations from a style factor perspective — as we advocate in the recent update of our equity portfolio construction framework — size is quite highly correlated with value but typically exhibits lower correlations with other factors, such as profitability, momentum, and low beta.⁵ Small caps may provide meaningful style factor diversification benefits.

³ This chart is based on data from a subset of the strategies in the US Small-Cap Core universe.

⁴ This is discussed, for example, in Eun CS, Wang, and Lai S. "International Diversification With Largeand Small-Cap Stocks," (2006) The Journal of Financial and Quantitative Analysis, 43, 2.

⁵ Mercer. Equity Portfolio 2.0 - Evolving our Guidance (September 2014).

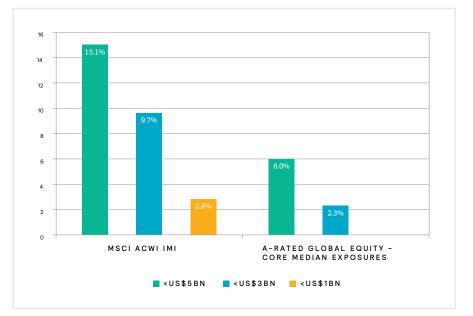
Fees are generally higher for active small-cap strategies than larger-cap strategies, and although this does not radically impair the strong case for small-cap exposure, the certainty of fee levels should be appropriately balanced against the relative uncertainty of prospective excess returns when making allocation decisions.

TOO BIG TO IGNORE

Although liquidity, investment time horizon, as well as other risk, governance, and implementation parameters may legitimately preclude exposure to the asset class category for some investors, small caps can enhance an equity allocation's risk/ return profile and should be a core building block within a diversified portfolio for many investors.

Despite the uncontroversial merits of small caps, Mercer observes that many investors - particularly outside North America and Australia - have negligible exposure to this segment of the market. Equally, small caps are often under-represented outside an investor's home market equity allocation. For some investors, small-cap exposure may largely be an unintentional outcome of the broad market strategies held in the portfolio. Broad market strategies offer varying but typically low levels of smaller-cap exposure. Figure 3 details median exposures to companies within various market capitalization limits across Mercer's A-rated Global Equity – Core strategy portfolios; this contrasts against significantly higher exposures within a broad global all-cap benchmark - the MSCI ACWI IMI Index.

FIGURE 3 PERCENTAGE EXPOSURES TO COMPANIES WITHIN MARKET CAP LIMITS



Source: Mercer, MSCI (free-float adjusted); medians ranked separately, as at the end of September 2014

Mercer recommends that clients access small caps via active strategies that capitalize on inefficiencies within the asset class category. Although an allcap strategy theoretically allows for more dynamic relative value decisions across the market cap spectrum, in practice - and for a variety of reasons – most traditional long-only strategies provide only limited access to this relative value return lever from adjusting smallcap exposures. Dedicated small-cap strategies may offer broader and deeper access to the opportunity set. Investment teams managing all-cap approaches may not be as focused on uncovering smallcap ideas as dedicated small-cap managers, and they may lack some of the specialist skills, experience. or networks required to extract maximum value from the space. Equally, as all-cap strategies become successful and arow assets under management, the latitude to invest in small caps diminishes.

TIMING ISN'T EVERYTHING

Although some rule-of-thumb generalizations on how to time smallcap exposures may have predictive power, the potential tactical benefits of shifting capital into and out of the asset class category should be balanced against other considerations, such as liquidity, limited capacity with skilled managers, and the strategic risk of being heavily underweight if tactically driven decisions are predicated on flawed assumptions.

We believe that investors should build toward strategic small-cap exposures with an awareness of shorter-term issues; this may, for example, warrant a staged reallocation over time.

CONCLUSION

Neglecting small-caps equated to a material sacrifice in historical returns for some investors, and continues to represent active risk and meaningful opportunity costs for many. Mercer advocates an active, unconstrained approach given the market inefficiencies available to skilled managers. Exposure can be obtained via dedicated small-cap strategies, all-cap strategies, global and single-country/ regional approaches, or combinations thereof. Mercer has identified and maintains coverage of a wide range of highly rated single-country, regional, and global small-cap strategies.

We adopt a holistic approach to incorporating small-cap exposure within a global equity portfolio, taking into consideration a client's risk tolerance, return objective, and any structural aspects of the existing portfolio that must be accommodated in determining incremental allocations.

ABOUT THE AUTHOR

Simon is a member of Mercer's Equity Boutique and the Asia Pacific Equities Ratings Review Committee. He is also responsible for covering a range of multi-asset strategies and chairs Mercer's Asian Fixed Income Ratings Review Committee.

CLIMATE CHANGE AND PORTFOLIO DECARBONIZATION WHAT CAN INVESTORS DO?



SARIKA GOEL London

While there is an abundance of quality scientific literature on the subject, the investment implications of climate change remain hazy. Investors addressing climate change are taking various approaches, ranging from pursuing low-carbon investment opportunities and engaging with underlying managers and portfolio companies to outright divestment of fossil fuel companies.

In the latter case, some financial institutions are coming under increasing pressure to divest their portfolios of investments deemed to significantly contribute to global warming, notably those in the fossil fuel and mining industries. Reputational risk is clearly at stake, but there are other uncertainties associated with navigating a portfolio as investors consider divestment. Investors need to understand the investment implications of climate in a manner that maintains or enhances long-term objectives and responds to shareholder concerns. Mercer is currently undertaking a major new study looking at strategic asset allocation in a time of climate change to build on our original study from 2011. The study frames several plausible climate scenarios with distinctive economic and market impacts, modeled out to 2030 and 2050, and will relate these scenarios to the risk and return characteristics of key asset classes, regions, and sectors to produce investment data that investors can draw on. Furthermore, our upcoming paper on portfolio decarbonization opportunities will focus specifically on how clients can pursue a range of actions to better understand climate risks and policy issues and implement their objectives around climate change.

ARE CLIMATE CHANGE ISSUES A MATERIAL RISK TO INVESTMENT PORTFOLIOS?

Mercer regularly reviews research on environmental, social, and governance (ESG) factors - including climate change - as part of our monitoring of investment performance. Our research has identified a substantial body of evidence¹ that suggests that climate change risk could have the potential to impact a fund's investments over the long term. Further, Mercer's research on the impact of climate change on asset allocation in 2011 found that climate risk could potentially represent up to 10% of portfolio risk for a hypothetical investor.²

Evidence includes the 2005 report A Legal Framework for the Integration of Environmental, Social and Governance Issues Into Institutional Investments (Freshfields Bruckhaus) and Pension and Superannuation Trustees and Climate Change by Baker and Mackenzie.

² Climate Change Scenarios – Implications for Strategic Asset Allocation Public Report (2011), Mercer LLC Carbon Trust and International Finance Corporation, February 2011.

The first key step in our view is a discussion with clients about the nature of the risk and opportunity presented by climate change. More broadly, we believe that investors should review the potential exposure to, and impacts of, ESG issues, where material, on future fund performance. Mercer's Sensitive Investment Topics Analyser (SITA) is a tool Mercer is designing for use by clients to identify where they stand on sensitive investment issues, such as investment in fossil fuels. SITA helps investors determine the most appropriate method to address the risks and opportunities as they relate to them. A number of approaches then exist for clients to consider.

Review existing manager approaches and engage with managers

Investors can review whether/how their investment managers consider sustainability issues in the context of managing portfolio risk or improving returns. This can most easily be done by using Mercer's ESG ratings. For example, clients can ask managers whether they consider future carbon pricing scenarios when assessing investment opportunities.

Access sustainable investment themes

These strategies offer exposure to long-term growth beyond renewable energy and build in downside protection against future carbon pricing. Such strategies are increasingly available across most asset classes and can be particularly attractive in real assets.

Vote your shares

How does your manager vote on your behalf on climate-related resolutions? Alternatively, if you use a proxy service, proxy voting guidelines can be amended to actively respond to shareholder votes on climate risk disclosure, political lobbying, and sustainability. Surveys suggest that an increasing number of investors globally are establishing policies with regard to voting considerations on shareholder resolutions related to climate change.

Engage with companies and policymakers

Participate in collaborative initiatives such as the Global Investor Coalition on Climate Change, Carbon Disclosure Project, The Forum for Sustainable and Responsible Investment, and the UN-backed Principles for Responsible Investment. Urge companies, investors, and governments to consider the benefits of climate change mitigation from an economic perspective. These initiatives allow investors of all types to share resources and maximize impact while providing valuable learning and networking opportunities.

Divestment

This is one possible response. However, while this is not a new approach, divestment from fossil fuels is relatively untested and potentially difficult for investors. In our view, divestment is a blunt instrument that generally fails to pierce the core issue, and in respect of fossil fuels, divestment of all fossil fuels is potentially a difficult strategy to implement. Understanding the different types of fossil fuels and their implications on risk and return should be an informed and open exchange exploring the relationship between sustainability and longterm investment objectives so that meeting the goals and objectives of the organization remains the primary aim. An article in Brinknews³ by Mercer's Helga Birgden, published in March 2015, examines this topical issue of fossil fuels divestment in greater detail.

CONCLUSION

Overall, we believe that investors have many options for decarbonizing their portfolios as they consider climate change and a broad range of sustainability issues within the context of their current investment structure and objectives. Portfolio tilting, targeted decarbonization, engagement with management, and investing in solutions to climate change are some of the methods for investors to reflect their objectives.

ABOUT THE AUTHOR

Sarika is a member of the Global Responsible Investment team at Mercer, focusing on manager research. Her primary responsibility is researching ethical, environmental, and other responsible investment-themed investment strategies in the listed equity space. She also works with other researchers across asset classes in assessing the extent to which fund managers incorporate ESG factors into their investment analysis.

³ http://www.brinknews.com/is-to-divest-ornot-to-divest-the-right-question-for-fossilfuel-investors/. May 2015

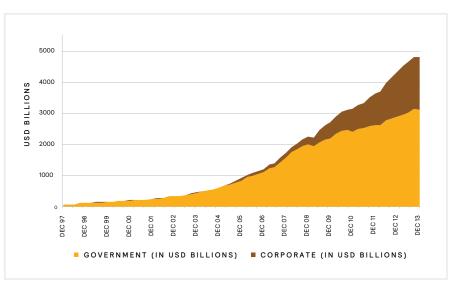
ACCESSING CHINA'S BOND MARKETS



NOEL COLLINS DUBLIN

The fact that China has had rapid economic growth over the last 15 years is well known by investors. In 1999, the Chinese economy was the seventh largest in the world, just behind Italy. It is now the second largest. Maybe less well known is the growth in China's bond markets over this period. In 1999, the total amount of local currency bonds outstanding in China, both corporate and government, was less than US\$200 billion,¹ and just two years earlier, there were no local currency corporate bonds at all.² (See Figure 1.) To put this into perspective, Italy had approximately US\$1.1 trillion in government debt alone in 1999.³ Since then, the bond markets in China have grown at an annual compound rate of almost 30% per annum,⁴ and if China were now part of the World Government Bond index it would be the fourth largest country.⁵The corporate bond market in China, at US\$1.4 trillion, is now bigger than the US high yield market.6

FIGURE 1 GROWTH IN CHINESE BOND MARKET



Source: Asia Development Bank

The sheer scale of the Chinese bond markets surprises many, largely because the market has essentially remained closed to foreign investors. It is estimated that less than 2% of the bond market is owned by foreign investors. The Chinese government, through effective exchange-rate controls, has kept the market shut, but there are now signs that this is changing.

¹ Asia Development Bank.

² Ibid.

³ Dipartimento del Tesoro.

⁴ Asia Development Bank/Mercer.

⁵ Citigroup/Asia Development Bank.

⁶ This was calculated by comparing the corporate debt outstanding in China, as measured by the Asia Development Bank, compared with the market capitalization of the Merrill Lynch US High Yield Index.

FUNDAMENTALS

In theory, China is an attractive bond market in which to invest. The country has an Aa3 credit rating from Moody's and an AA- from S&P. These ratings are well underpinned with a strong current account surplus from the country's vibrant exporters. Currently, the current account surplus is around 1.7% of GDP.7 Inflation is low, with the rate at the end of June 2014 being 2.6%.8 Also, the country has accumulated a very large amount of foreign currency, with reserves totalling US\$4 trillion,9 the largest in the world. Finally, government debt as a percentage of GDP is only 23%.¹⁰ All of these leave China with an excellent ability to pay its sovereign debt.

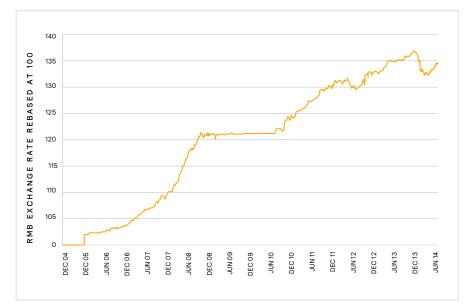
Combined with this is the fact that the Chinese currency is managed by the government, and hence the volatility in the currency is very low by international standards. With China having such large foreign reserves, a persistent current account surplus, and an economy that, despite slowing recently, is predicted to grow at over 7% in 2015, further currency appreciation might be expected. How much further the currency might appreciate is debatable, as it has performed well against the US dollar for a long period. Judged by the simple Economist Big Mac index that compares relative prices of a Big Mac in different countries, the RMB is 43%,¹¹ undervalued in relation to the US dollar. A more complex Purchasing Power Parity evaluation comes out with a similar undervaluation of the Chinese currency.

11 Bloomberg.

Even if the currency fails to appreciate, it appears unlikely that it will fall dramatically given its sound economic underpinning. Figure 2 shows the appreciation of the RMB against the US dollar since the start of 2005. In this time, it has risen in value by around 35%.

FIGURE 2





Source: Bloomberg

The bond market also shows signs of attractive valuation. The current yield on the Chinese government bond market is 4.2%, with a duration of only 3.8 years.¹² This compares to the United States, where the current yield is 1.4% and the duration is 5.1 years.¹³ In theory, this should make China attractive to most global investors. However, there are still risks in the local market. The US still appears to benefit in times of a crisis as a safe haven where investors feel most comfortable putting their money.

⁷ Bloomberg, as at end of June 2014.

⁸ Bloomberg.

⁹ Ibid

¹⁰ International Monetary Fund.

¹² HSBC ALBI China.

¹³ Citibank.

The openness of the US financial markets and the integrity of its financial institutions have been proved over many economic cycles and through extreme events. The same cannot be said of China. However, probably the main impediment to investing in China is the fact that it remains largely closed to foreign investors.

CLOSED MARKET

Since the Chinese Communist Party took power in 1949, the country has largely remained closed to the outside world in terms of investment. When Deng Xiaoping started to introduce economic reforms in 1979, this gradually began to change and slowly the economy began to open. However, when the Chinese government saw the turmoil of the Asian crisis of 1998, during which many countries suffered from foreign investors withdrawing money from local markets, it decided to continue its tight control over domestic investment markets. The government did not want the added instability that foreign investor flows could add to its market. Over time, the rationale for not opening the market has changed. With the Chinese economy being so large, it is hard to believe that outflows of foreign capital could truly destabilize the economy. However, keeping controls in place has given the government firmer control over the levers that drive the economy. As such, the Chinese government has made it possible to access the market only through certain channels.

THE QUALIFIED FOREIGN INSTITUTIONAL INVESTOR (QFII) SCHEME

In 2003, the government set up the QFII scheme, whereby quotas were allocated to certain foreign investors. Applications for quotas had to be submitted to the China Securities Regulatory Commission (CSRC) and were limited to very large institutional investors. The minimum investment amount was US\$20 million. Investors awarded a QFII allocation would take their foreign currency into China, exchange it to RMB currency, and then invest in the government bond market. It was not particularly straightforward to take the money out if the holding was sold down. For example, if repatriation in any one month was higher than 20% of the invested amount, then regulatory approval was needed. This meant that this scheme was more suitable for longer term investors who wanted a quasipermanent allocation to China.

THE OFFSHORE RENMINBI QUALIFIED FOREIGN INSTITUTION INVESTORS (RQFII) SCHEME

In 2011, the RQFII scheme was set up by the Chinese government to make foreign investment into China easier. This time, it allowed foreign institutions to undertake the change currency (to RMB) in a number of offshore centers (now including London, Singapore, and Hong Kong). This means that currency can be brought in and out of China fairly easily on a daily basis. Also, an investor's quota can be increased on a monthly basis if there is demand for it. The RQFII scheme was aimed more at the retail market and has led to the creation of mutual funds that invest in mainland Chinese bonds. The relative ease of the RQFII scheme has led to its rapid growth. At the end of 2013, the total approved value of approved quotas in the QFII scheme was US\$55 billion, whereas RQFII had an approved quota size of US\$77 billion.

One other advantage of the RQFII scheme is that bonds can be purchased on the Interbank Bond Market. This is the market in which around 75% of the bonds in China are traded and liquidity is best. Under the QFII scheme, special permission was needed to access the Interbank market, and most foreign institutions had to trade on the Onshore Exchange, where liquidity was poorer.

SPECIAL ACCESS

It is worth noting another type of access to the market in China. Certain investors, such as foreign central banks, sovereign wealth funds, and insurance companies that have RMB, denominated liabilities, can apply directly to the People's Bank of China (the Chinese central bank) for an investment quota. This scheme is reserved for investors who have a specific need to hold RMB bonds and is mainly used by central banks who want to build RMB reserves.

DIM SUM MARKET

Probably the easiest option for foreign investors buying RMB denominated bonds is the so-called Dim Sum market in Hong Kong. This market was created in 2010, when the Chinese authorities allowed Chinese entities to issue bonds in Hong Kong that were denominated in RMB; the government also issues bonds there. The market has grown very quickly since its inception, and at the end of 2013 it had around US\$58 billion in outstanding bonds. This market can be easily traded by all foreign institutions and has become a popular way to access RMB assets.

However, even this market is not perfect. As an essentially small window to the Chinese market, the demand for the bonds has meant that most corporate and government issues trade at a premium to equivalent mainland issues. Also, if defaults were to occur, it is questionable what access corporate issuers would have to their mainland assets. Given the short history of this market, there have been very few defaults. The legal language of most bonds makes it uncertain that mainland assets would be accessible by bond holders, and this has yet to be fully tested.

CONCLUSION

We expect the Chinese market to open further over the coming years. The initial reasons for China to control foreign investor access to markets in China now appear somewhat outdated, and for the RMB to become a truly major global currency it will have to become freely convertible and foreign access to onshore markets would need to be liberalized.

The current means of accessing the bond market in China are not ideal and may be of interest only to larger investors.

As the Chinese economy plays an increasingly important role in the global economy, it seems inevitable that the market will open further. The Chinese government certainly appears to be on this journey, but the speed at which it travels is uncertain. We suspect that only when the market truly liberalizes will most investors take a position in the market.

Liberalization would likely pave the way for inclusion in major investment indices, and fund managers would almost certainly expand their investment universe to include China. For those clients with global bond holdings, or even emerging market debt exposures, we believe that it would worth talking to the managers of these assets to see what they are doing to prepare for a further opening of the Chinese market.

ABOUT THE AUTHOR

Noel works in Mercer's Bond Boutique, where he is the lead researcher for European bond strategies. He sits on Mercer's Global Asset Allocation Group and is a member of the European Ratings Review Committee. Prior to joining Mercer in 2000, Noel worked for seven years as a fixed income and currency asset manager with a Dublin-based fund manager.

WHAT ABOUT CHINESE EQUITIES?

Chinese equities may also offer an attractive proposition to institutional investors who hold a longer-term horizon and are willing to withstand some short-term volatility. In particular, China's domestic equity market, China A shares, has a broader universe and, arguably, a more reasonable sector structure than its offshore equity counterpart. With over 2,600 stocks and a market capitalization of around \$6 trillion, the China A share market represents a large opportunity set, although its corporate disclosure practices and shareholder protection rights are generally below the standards observed in developed markets.

Up until recently, foreign investors' access to the China A shares market has been restricted. However, China has enacted several reforms over the past few years that have made China A shares significantly more accessible and potentially more appealing. Given China's rising role within the global economy, the positive outlook of its ongoing structural reforms, and the potential for the market to be better represented in global indices, we believe that there is a viable case for a standalone Chinese equity mandate. Merits of such an allocation would also include strong diversification benefits and improvements to the reward/risk profiles of global portfolios. As a relatively young and immature market, China A shares remain highly inefficient, which creates an abundance of opportunities for savvy and long-term investors. As such, we believe that a compelling argument could be made for active management in this space, with good manager selection further contributing to the potential success of this allocation.

Given China's nature as an emerging market, investors should not overlook the risks of Chinese equities. However, we believe that exposure to Chinese equities could offer a diversified source of alpha for longterm investors in a market that is relatively untapped. We will discuss the case for a standalone Chinese equities mandate in the next issue of *Research Perspectives*.

Ying Tan and Nathan Howes

REVISITING THE CASE FOR ACTIVE CURRENCY



MALCOLM LEIGH

Active currency management may not be a new practice — Mercer has been researching currency managers since 1992 — but its popularity has ebbed and flowed. While we continue to include some of our highest-conviction strategies in our fiduciary portfolios, active currency mandates generally are far less prominent across our client base than they were in the early 2000s. Nevertheless, we believe that active currency can still play a valuable role as a source of incremental returns and diversification.

In this article we set out the basis for an active currency overlay and outline the key risk premia that can help explain the performance of currency managers (including value, carry, and momentum). We also explain why we believe that high-quality active management not only captures the returns from currency risk premia but also enhances them to improve the reward/risk that investors can expect from currency investing.

Overall, we believe in active currency management as a source of returns, both because it is supported by the notion of persistent risk premia and also because of our conviction that the inefficiencies in the market can be further exploited through manager skill. With careful manager selection, we believe that active currency managers can be used as an effective overlay to traditional allocations.

ACTIVE CURRENCY OVERLAYS - WHAT, ACTUALLY, ARE THEY?

In today's globalized investment marketplace, most institutional investors will be exposed to foreign currencies via their equity portfolios and/or their bond allocations. When purchasing overseas securities, investors can be considered to have bought two assets: exposure to the overseas stocks/bonds and exposure to the currency of that market.

It is very common to try to reduce the impact of adverse foreign currency movements by applying a "passive currency hedge," but it is also possible to actively manage the currency exposures. In both cases, the use of derivatives (typically forward contracts) enables the strategy to be implemented with little or no upfront cost. This means that, rather than requiring their own capital allocation within the portfolio, currency strategies can "overlay" the broader portfolio while taking little or no capital from the incumbent managers. In effect, active currency strategies can be seen as an extra alpha generator on top of the portfolio's existing equity and bond managers.

With careful manager selection, we believe that active currency managers can be used as an effective overlay to traditional allocations.

CURRENCY RISK PREMIA

Going back almost a century, academics have been aware of the potential for currency investments to generate positive long-term returns for investors. In today's terminology, three risk premia are commonly recognized:

- Carry This strategy is underpinned by the forward rate bias that academics have observed in the currency markets for almost a century. The forward rate bias is the tendency for the total return on higher interest rate currencies to be greater than for lower interest rate currencies.
- Value While empirical studies have suggested that measures of fair value, such as purchasing power parity (PPP), are poor predictors of short-term currency movements, the academic consensus has shifted to support PPP acting as an anchor for long-term exchange rates.
- Momentum This refers to the tendency for markets to "trend."

We know that these concepts have long been exploited by active managers in the currency markets. To illustrate the historic performance of these premia, Figure 1 shows the performance of a set of naïve currency strategies designed by Deutsche Bank. These investible style indices represent the three currency premia, and there is also an index that provides a blended exposure (the "Average" index).



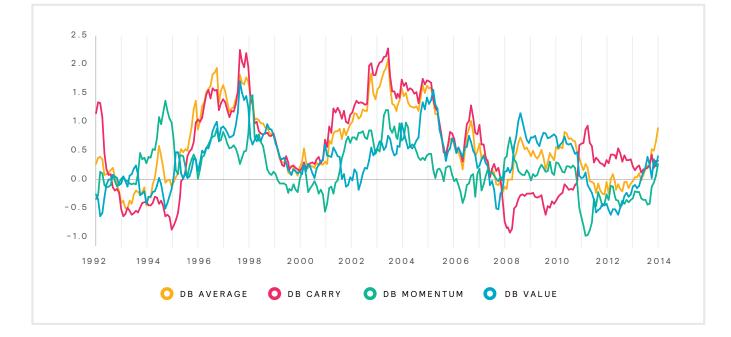


Figure 1 highlights the cyclicality of returns from the various currency premia – including notable periods of weakness (for example, 1990–1994, early 2000s, and post-2008 to the beginning of 2014) as well as periods of strength (such as the mid-1990s, early to mid 2000s, before the global financial crisis (GFC), and the past year. The cyclicality of a risk premium is not unusual —it is present in all forms of risk premia across asset classes and is arguably, at least in part, a manifestation of the risk that justifies the premium.

In recent years we have experienced periods of benign markets (caused by low interest rates), punctuated by the volatility associated with repeated and unexpected government interventions and a risk on/risk off environment alternation. These conditions have made it difficult for many currency managers to establish profitable long-term trades that are not stopped out by the market reversals. As such, we believe that performance of the various premia following the GFC, while disappointing, is nonetheless understandable. Moreover, even with the challenging market environment, the three premia have, on average, been able to avoid material losses on a rolling three-year basis, and as the GFC continues to ebb, performance has recently recovered strongly.

THE ACTIVE MANAGEMENT OPPORTUNITY

While the three risk premia can help explain and characterize the various returns available within the currency markets, we believe that only the highestquality currency managers will provide the most efficient way of capturing these premia, as well as the potential for other return enhancements. In our experience, superior idea generation and risk management both contribute to sustained outperformance by currency managers.

Leveraging Mercer's research process, which has been refined over more than 20 years, we seek to identify the highest-quality active currency managers for use by our clients. Figure 2 illustrates the risk-adjusted performance of an equal-weighted portfolio of our A-rated strategies (the green diamond) relative to the Mercer universe over the one-to-seven-year periods ending in December 2014. It similarly shows the information ratios for the naïve defined benefit (DB) style indices.

	3 YEARS	5 YEARS	7 YEARS
A-rated managers	1.0	0.8	0.7
DB average	0.9	0.2	0.4
Upper quartile	0.9	0.7	0.7
Median	0.5	0.4	0.4
Lower quartile	0.2	0.1	0.2

INFORMATION RATIOS OVER PERIODS OF ONE TO SEVEN YEARS ENDING DECEMBER 2014

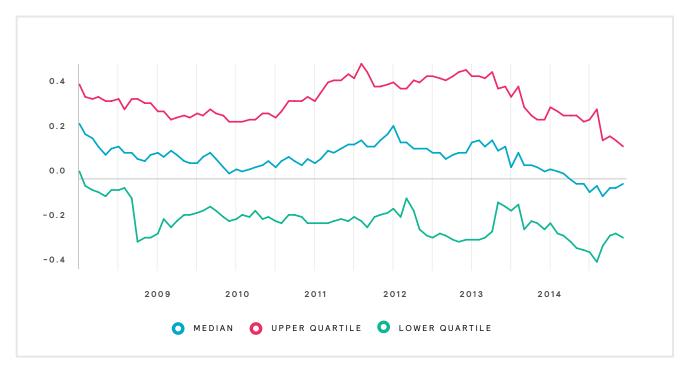
FIGURE 2

As can be seen, the A-rated managers produced positive returns that outperformed the style index over all periods, and they were also in the top quartile. This performance suggests that highly rated active currency strategies provide a good source of risk-adjusted returns.

OTHER BENEFITS

It is also worth highlighting that the sources of return via currency premia have historically proved lowly correlated with other investment strategies (particularly those that have a high beta to equities) suggesting that they can help mitigate the risk of relying on a high equity risk premium for generating long-term portfolio growth. To illustrate this, Figure 3 shows the rolling three-year correlation between the Mercer universe and the S&P 500 over the past seven years. During this period, the correlation of the upper and lower quartile managers against the S&P 500 are relatively stable at +0.3 and -0.3, respectively, while the median manager correlation is close to zero. This reiterates the ability of currency strategies to effectively diversify away from equity risk premium in the long run.

FIGURE 3 ROLLING THREE-YEAR CORRELATIONS OF RETURNS AGAINST S&P 500 ENDING DECEMBER 2014



The low correlation suggests that a currency overlay would be a good supplement to actively managed equity and bond portfolios. Other secondary benefits include a high level of liquidity in currency mandates and typically good transparency. The relative simplicity of many strategies can also be attractive to some investors.

CONCLUSION

While the years following the global financial crisis were challenging for active currency strategies, returns over longer periods and more recently have been attractive. We believe that this is consistent with our view that their long-term potential to generate positive returns makes them an attractive source of incremental returns in a broader growth portfolio. Our experience shows that it is possible to identify high-quality managers who can, in combination, consistently deliver attractive risk-adjusted returns. As fees charged by active currency managers have declined, active currency management should be a valuable source of additional returns, particularly for investors who can negotiate terms.

ABOUT THE AUTHOR

Malcolm is a senior consultant focusing on currency and global macro investment managers. He has 25 years of experience within the fund management industry.

STEFAN HEPP ANSWERS QUESTIONS ABOUT HIS NEW ROLE IN MERCER



STEFAN HEPP SWITZERLAND

Mercer recently acquired Strategic Capital Management (SCM), a firm you founded in 1996 and where you served as CEO. What were some of SCM's products and services?

SCM was a private markets asset management and advisory firm headquartered in Zurich, Switzerland, that conducted manager research and managed commingled investment pools in the areas of private equity, private debt, infrastructure, and opportunistic and value-add real estate. The firm offered portfolio structuring along with investment sourcing, due diligence, monitoring, and reporting services. SCM's ability to offer tailored reporting, custodial reconciliation, and middle- and backoffice client support was a hallmark of the company's services.

2. What geographies did SCM operate within and which client markets did it primarily target?

Clients of SCM are predominantly located in Switzerland and Continental Europe, and the client base consists of corporate and public sector pension plans, insurance companies, foundations, and family offices.

3. What factors led to your firm's decision to partner with Mercer?

Changes in the regulatory environment for financial service providers increased the cost and complexity of doing business and, at the same time, created a client preference for a larger, institutionalsize partner. Given these trends, which are anticipated to continue, it seemed prudent to seek a partner that allowed SCM to leverage a larger platform. Mercer was an ideal partner, as it sought to expand its presence in Europe and had a very successful private markets business in its own right. The investment philosophies of both firms were also very compatible. In addition, our focus on single client mandates and bespoke solutions fits very well with the consulting heritage of Mercer, and the tools and processes that we have developed can be implemented and scaled across the Mercer private markets business. This is a very exciting growth opportunity, and the combined entity has the potential to deliver a truly differentiated proposition to the market. The excitement of this combined offering is shared by the partners of SCM and the team, who have elected to join Mercer in full.

4. When the transaction was completed, you assumed the title of Global Business Leader — Mercer Private Markets. What are your primary responsibilities?

I continue operating as I did at SCM (which has been renamed Mercer Private Markets AG); -managing the business on a day-to-day basis and focusing on the delivery of the highquality services that customers have relied on during our 19-year history. In addition, I co-manage Mercer Private Markets with Bill Muysken, the global CIO for Alternatives Investments. Our joint task is not only to integrate the businesses but also to establish a platform – supported by technology and processes - that combines the best of our current capabilities. In doing so, we will create a seamless service offering for our clients worldwide while also ensuring that we remain a preferred partner for our fund managers. An important aspect of this integration is to take advantage of the profound intellectual capital that comes from Mercer's global private markets research group.

... we will combine the best of Mercer and SCM's processes and establish a single integrated platform for the entire private markets business.

5. What should we know about SCM's investment team that has now joined the Mercer Private Markets research group?

SCM's investment team consists of seasoned investment professionals who have focused on private market primary and secondary fund investments for many years. They are based in Zurich and Hong Kong and have joined a team of colleagues based in the UK, the US, and Australia. In addition, we have a portfolio analytics and administration group that has experience in handling single client accounts, commingled funds, and nondiscretionary advisory solutions from both risk management and portfolio monitoring/ reporting perspectives.

6. How will SCM's processes be integrated into Mercer?

As mentioned before, we will combine the best of Mercer and SCM's processes and establish a single integrated platform for the entire private markets business. The leadership of the combined entity involves senior executives from both SCM and Mercer, and the establishment of a common platform will not be a simple rollout of SCM's services but will reflect our combined skills and abilities.

7. Last but not least, how would you describe your private market investment philosophy?

Investors seek alpha, and it is critical to establish whether a manager has delivered alpha in the past and, if so, how it was created. The benefits of diversification and Sharpe Ratio improvement can be realized only if the sources of alpha generation are understood. In order to do that, one needs data — so we have a strong preference for accomplished managers with established track records. We are very cautious when recommending newly formed teams to our investors. Because private market managers have discrete fundraising cycles and not all vintage years are equally good, it is our belief that successful investors tend to have multi-year, sustained commitments to invest and an unremitting focus on managers with proven skills to generate alpha. Private markets are not suitable for market timing or ad hoc investing. These beliefs guide our approach to investing in commingled funds and single client mandates as well as our approach to client interaction. As a trusted provider of unbiased and objective advice, we base our manager selection on robust data and a transparent investment process that allows our clients to understand how managers and their fund offerings are assessed.

ABOUT STEFAN

Stefan is the global business leader for Private Markets in Mercer's Investments business. He is based in Zurich, Switzerland. Prior to joining Mercer in 2014, he was the founder and CEO of SCM Strategic Capital Management AG (now integrated in Mercer's Investments business) for 19 years. Previously, he was with Salomon Brothers and Morgan Stanley in London and Zurich for several years, most recently as a member of the executive board of Morgan Stanley Switzerland, where he was responsible for institutional clients.

ABOUT MERCER

Mercer is a leading global provider of investment services and offer customized guidance at every stage of the investment decision, risk management, and investment monitoring process. We assist with every aspect of institutional investing (and retail portfolios in some geographies), from strategy, structure, and implementation to ongoing fiduciary management.

Our Manager Research team consists of experienced individuals based in various locations throughout the world. There are four specialist boutiques that provide comprehensive research into the strategy offerings in the relevant asset class. Each boutique is staffed with professionals who have research and consulting capabilities; conduct forward-looking, institutional-quality research on investment management products; and work closely with both internal and external clients on manager structuring and selection projects. The research process is consistent across all boutiques and across all regions, providing a common language and a seamless offering to clients.

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MEASUREMENT METHODOLOGY

For most investment strategies that we research, we arrive at a rating on a four-tier scale in which the possible ratings are A, B+, B, and C. When we formulate short lists of candidates for clients to consider in manager searches, these are generally drawn from the list of strategies rated A within the relevant product category. We first began maintaining formal ratings on this basis in 1995, replacing less formal methods in place, and have extended this to cover all product categories that we actively research over the period since.

Our methodology for measuring the performance of our ratings entails calculating the average performance of the strategies that we rated A within each product category each quarter, based on the ratings as they stood at the end of the previous quarter. Therefore, there is no element of hindsight in the analysis. We then compound these quarterly results together to calculate performance over longer periods. Finally, we subtract the return for an appropriate and widely accepted benchmark index for the product category concerned to calculate value added. We also calculate a risk-adjusted measure of the value added, known as the information ratio.

In essence, this methodology tracks the performance of a hypothetical Mercer client that is assumed to split its money evenly between all of the strategies rated A by Mercer within the product category concerned. This hypothetical client is assumed to have reviewed its manager lineup at the end of each quarter, based on the Mercer ratings as they stood at that point in time. A typical client would not invest in all strategies in all of the categories, as some may not be relevant to a particular client for a variety of reasons. Therefore, the actual added value of strategies selected by a client would vary from the results depicted here. The average value added for each product category is detailed in this *Research Perspectives*. Three types of strategy are excluded from the analysis. First, we exclude strategies that are sub-advised by other investment managers, to avoid double-counting. Second, where a manager offers two variants of what is essentially just one strategy, we include only one of these in the analysis (we used to use the one with the longer track record, but in 2011 we assigned the decision on which track record to use to the researcher responsible for the strategy), once again to avoid double counting. Third, if a strategy's track record relates to a benchmark that is materially different to the benchmark used in the analysis for the product category concerned, it will be excluded from the analysis to avoid distortions that could arise solely as a result of the non-standard benchmark.

Where a manager offers equity strategies in a typical long only format and a variant that includes the ability to short, we include only the long-only version.

For some product categories, where the use of custom benchmarks is prevalent, there is no single widely accepted benchmark that can be used as a basis for this analysis. We therefore use a slightly different methodology for these categories. In these cases we carry out the analysis by first calculating value added each quarter for each track record relative to its custom benchmark, then calculating the average of these value-added figures each quarter, and then compounding the quarterly value-added figures to calculate value added over longer periods.

We have carried out these calculations for most of the product categories where we both maintain ratings and for which we have reliable performance data (currently 68 categories), going back in each case to when we first had a reasonable spread of ratings for the product category concerned.

SOME IMPORTANT CAVEATS

All of the value-added figures have been calculated by Mercer but are based upon performance data provided to Mercer by the investment managers concerned. Mercer generally does not independently verify the performance information provided by investment managers.

The methodology described above does not allow for transaction costs that an investor would have incurred if it had actually changed its panel of investment managers every quarter in line with changes to the list of products rated A by Mercer within the product category concerned. We have not attempted to estimate the transaction costs that would have been incurred as this would require assumptions on a number of factors, including the investor's cash flow position and how the changes had been implemented.

All investment performance data used was reported gross of investment management fees and certain other expenses, such as custody and administration. All the value-added figures are also quoted before deduction of such fees. The figures are, however, net of all transaction costs that the managers concerned have incurred within their investment portfolios.

As described above, the results of the analysis are based on performance data provided to Mercer by the investment managers concerned and other sources. While this information is believed to be reliable, no representations or warranties are made as to the accuracy of information presented, and no responsibility or liability, including for consequential or incidental damages, can be accepted for any error, omission, or inaccuracy in this information.

We have endeavored to obtain performance data for all investment products that have ever been rated A by Mercer for inclusion in the analysis, but in some cases this has not been possible. Where data could not be obtained, we have no option but to exclude the product from the analysis. We will continue to endeavor to obtain missing data for future updates of the analysis. This may result in some changes to the historic figures in future updates of the results.

As always, past performance cannot be relied on as a guide to future performance. While Mercer commits considerable resources to manager research, in an effort to maximize the value added through our manager research recommendations, we do not provide any guarantees as to the future performance of the investment strategies that we recommend to our clients.



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France	Peru	United Arab Emirates
Germany	Philippines	United Kingdom
Hong Kong	Poland	United States
India	Portugal	Venezuela