

**2014 HEDGE FUND**  
NB Alternative Investment Management Team

**STRATEGY  
OUTLOOK**



## Introduction

Since the 2008 financial crisis and subsequent European sovereign debt issues, markets have largely been driven by macroeconomic concerns, policymakers and sharp shifts in investor sentiment. This dynamic has made it difficult for those who seek to predict or follow market trends to find reliable sources of return. For managers seeking to capitalize on differences among individual securities, higher correlations driven by macro-focused markets have generally made alpha generation more challenging.

Today, with the tapering of U.S. quantitative easing beginning and the potential for future interest rate increases, the implications are mixed. Hedge funds have generally done well in tightening cycles. However, trend followers—specifically, commodity trading advisors—who benefited from the secular decline in rates over the last 20 years—may be left adrift as they search for the next “long-term trend.” On the other hand, higher rates should help drive increased performance dispersion among companies—something that could help long/short equity and other fundamentals-focused investors.

In this publication, we discuss some of these developments and their ramifications for key segments of the hedge fund universe.

### **Chapter 1: Long/Short Equity—A Return to Alpha**

With the exception of 2013, the last several years have been challenging for long/short equity hedge funds, as persistently high correlations across stocks created headwinds for the strategy. However, conditions began to change in the second half of 2012 as correlation levels generally declined and have remained at moderate levels since. In this chapter, we discuss our positive outlook for long/short equity in 2014, as we believe the strategy will continue to benefit from lower correlation levels. In addition, we expect an environment of positive economic growth, higher levels of corporate activity, rising interest rates and increasing differentiation in stock valuations to provide additional tailwinds for the strategy going forward. Finally, in the event of a market pullback, we believe the meaningful short exposure of a typical long/short equity fund should help minimize downside participation.

### **Chapter 2: Global Macro—A Mixed Bag**

Macro-focused investing is broadly defined as profiting from changes in market prices that arise from any number of factors, including turning points in macroeconomic cycles, changes in the outlook for economic growth or inflation, and market price reactions stemming from the actions of policymakers. In this chapter, we discuss our views on the opportunity set for various sub-strategies under the broader Global Macro/CTA umbrella.

### **Chapter 3: Do Opportunities Remain in Structured Credit?**

Since 2009, spreads within the structured credit universe have tightened considerably across nearly all sectors, geographies and parts of the capital structure. Improving fundamentals, supportive technicals and capital inflows have contributed to this trend. In this chapter, we provide an update on each sector (e.g., non-agency residential mortgage-backed securities including U.K.

non-conforming), collateralized loan obligations and commercial mortgage-backed securities, among other more niche areas of structured credit. We also explore the 2014 opportunity set, including the relative value of some European asset-backed securities over U.S. counterparts. We examine whether there is value left in the structured credit trade in 2014 and where specifically we believe hedge fund managers can find the most compelling risk/reward.

#### **Chapter 4: Hedge Fund Performance in a Rising Interest Rate Environment**

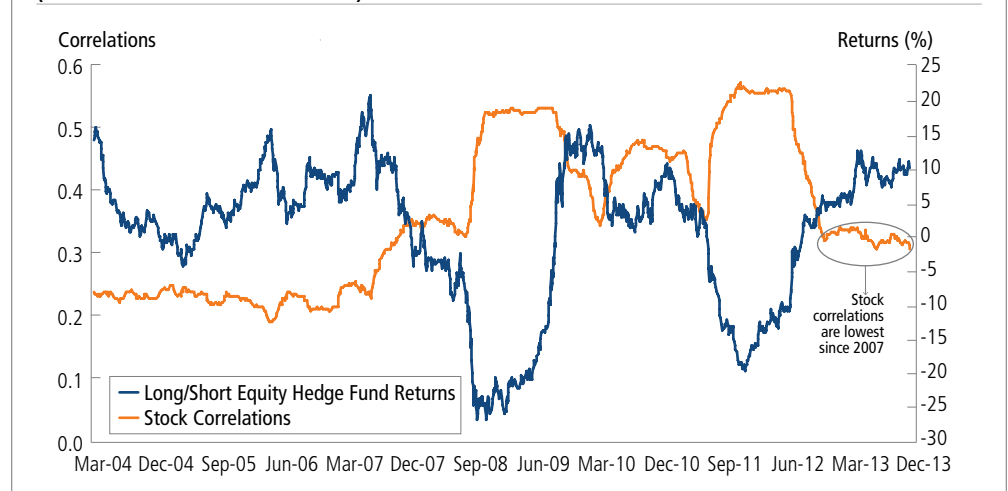
The rising interest rate environment through the second and third quarters of 2013 was particularly painful for long-only fixed income investors with long duration portfolios, and is likely only a glimpse of what is to come. Given the Federal Reserve's stated intention to begin normalizing interest rate policy over the coming years and the consequent likelihood that interest rates continue to rise across the yield curve, we believe that the upcoming period will be challenging for fixed income investing. This chapter discusses how investors can potentially achieve absolute returns and a low beta to the broader markets by diversifying across hedge fund strategies and building a conservatively positioned portfolio with a robust short book and modest gross and net exposures.

# Chapter 1: Long/Short Equity—A Return to Alpha

## Introduction

With the exception of 2013, the last several years have been challenging for long/short equity hedge funds. Persistently high correlations across stocks have created headwinds for managers seeking to generate alpha by having long positions rise and short positions decline in value. Higher correlations in 2011 and much of 2012 reflected stock performance that was less a function of company-specific fundamentals than of macroeconomic developments and changes in market sentiment (i.e., with “risk on, risk off” price movements). In our view, long/short equity managers are typically better at analyzing company-specific factors than exploiting a whipsawing macroeconomic landscape. As a result, fundamentally-driven managers generally struggled during this period. However, conditions began to change in the second half of 2012 as European policymakers made it clear that they would take action to preserve the monetary union and the stability of its financial markets. These assurances helped lessen market fears about Europe, and subsequently, correlation levels generally declined and have remained at moderate levels.

**Figure 1.1: Rolling One-Year Stock Correlations vs. HFRX Equity Index (March 2004 – December 2013)**

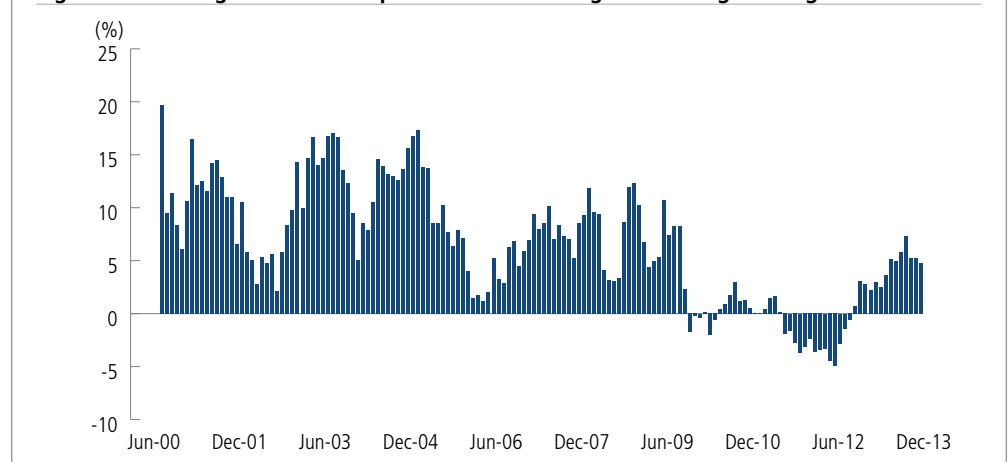


Source: Bloomberg. Stock correlations are calculated as the rolling one-year average pairwise correlations between stocks in the S&P 500 Index. Long/Short Equity Hedge Fund Returns represent the rolling one-year returns of the HFRX Equity Hedge Index.

*Lower correlations seem to provide a better environment for long/short equity managers, as this dynamic implies an increase in the significance of fundamentals to stock performance.*

As Figure 1.1 indicates, lower correlations seem to provide a better environment for long/short equity managers, as this dynamic implies an increase in the significance of fundamentals to stock performance. Indeed, hedge fund long holdings resumed outperforming the market for much of 2013.

**Figure 1.2: Rolling 12-Month Outperformance of Hedge Fund Long Holdings vs. S&P 500**



Source: FactSet, as of December 31, 2013.

We believe the moderate correlations in 2013 are likely to persist in 2014. This environment should be helpful to long/short equity hedge funds.

We believe a rising interest rate environment is ultimately constructive for long/short equity.

### Looking Ahead

Given a more benign macroeconomic landscape and a commitment by global policymakers to avoid negative economic and capital market tail risk scenarios, we believe the moderate correlations in 2013 are likely to persist in 2014. This environment should be helpful to long/short equity hedge funds.

In 2014 and beyond, one of the more significant developments for investors to adjust to is the end of the multi-decade bull market in fixed income. While the consequences of this development are broad, we believe there are specific implications as it relates to long/short equity.

### The Impact of Rising Interest Rates

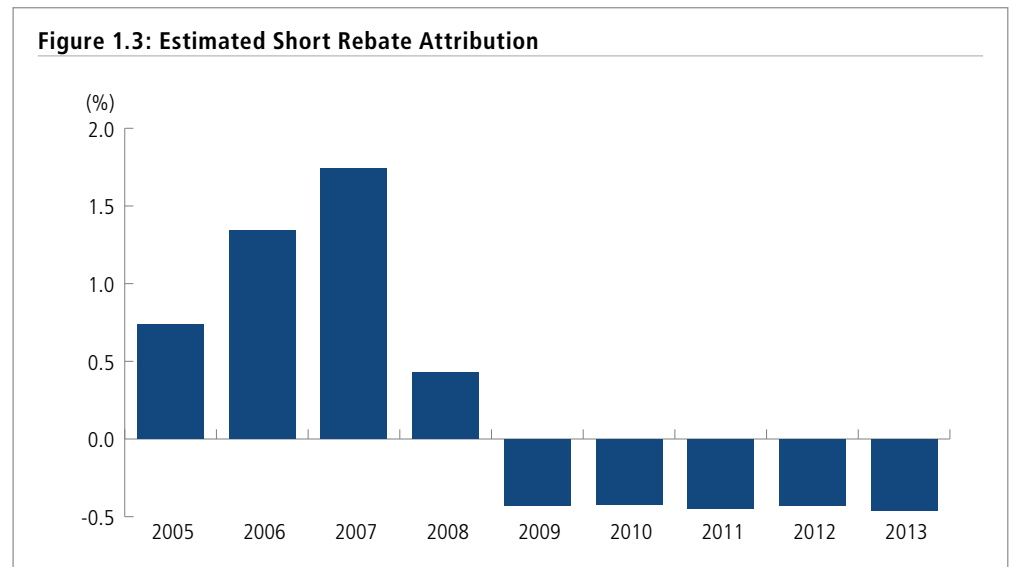
Over the medium term, as the Federal Reserve continues to taper its quantitative easing program and the market begins to price in a smaller central bank balance sheet over time, interest rates will likely rise. We believe a rising interest rate environment is ultimately constructive for long/short equity for a number of reasons.

### Short Rebates

When a long/short equity manager shorts a stock, he borrows the stock from another investor, sells it at the current market price, and posts the cash proceeds from the sale as collateral against the borrowed stock. Meanwhile, he hopes that the stock will decline in value so that he may buy it back at a lower price to return to the original lender.

The collateral is typically placed in a money market account with high quality, short duration investments. As such, the Federal Funds rate is a suitable proxy for the interest rate earned on short collateral. The stock lender charges a fee based on how difficult it is to secure borrow on a particular stock, which reduces the interest income going to the broker. The broker also takes a fee and the net proceeds, or the short rebate, are passed on to the long/short equity manager.

For relatively easy-to-borrow stocks (i.e., “cold” stocks), the total fee charged by the lender and the broker has been relatively consistent both before and after the crisis. Harder-to-borrow stocks, however, can have a much higher fee, which varies significantly from stock to stock. Post-crisis, brokers have somewhat increased these fees to compensate for lower profitability in the cold borrow business amid declining volumes; however, the primary variables in determining the impact of short rebates on performance for long/short equity funds are the level of short rates and short exposure as a percentage of assets under management. Using the Federal Funds rate as the measure for the interest rate received on short collateral and the average short exposure of long/short equity funds, we can estimate attribution from short rebates over time.



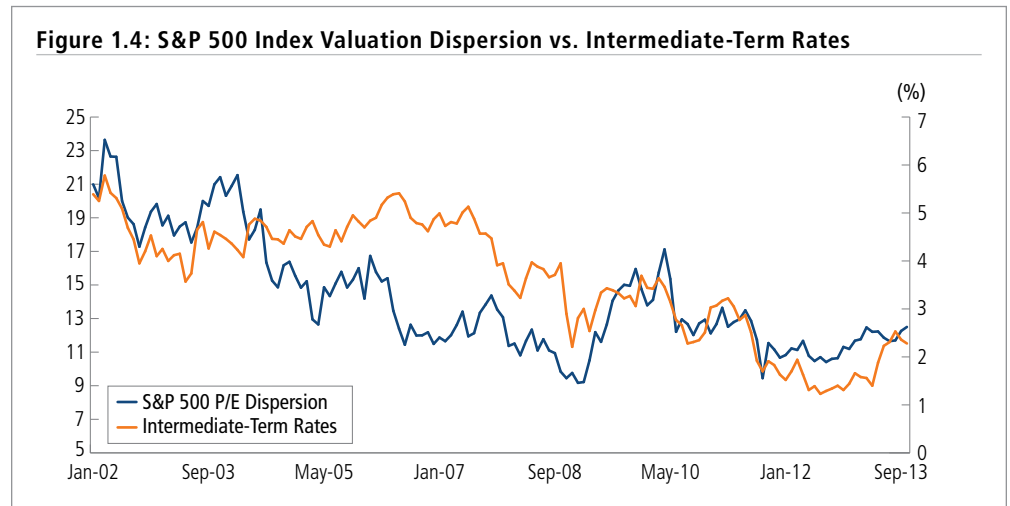
Sources: NB Alternative Investment Management and Morgan Stanley.

*The average long/short equity manager would enjoy incremental returns of ~150–200 basis points per annum in a normalized short rate environment.*

To the extent that the Federal Funds rate normalizes over time back to the ~4% level seen pre-crisis from its current near-zero level, managers with substantial short exposure (and that do not employ significant leverage in their long books) should benefit from higher short rebates. Indeed, the average long/short equity manager would enjoy incremental returns of ~150–200 basis points per annum in a normalized short rate environment.

**Cost of Capital and Valuation Dispersion**

Higher interest rates increase the cost of capital for businesses, leading to increased differentiation in the performance of companies based on their capital structures and operating margins. An over-levered company with relatively thin operating margins may be able to generate a profit when interest rates and its cost of capital are low. As rates rise, however, this company’s debt burden becomes increasingly difficult to manage as it will eventually face higher interest expenses. This may reduce cash flow and net income, putting stress on its ability to do a number of things in the future, including service debt and invest in its operations. Compared to a competitor with less debt and higher operating margins, the first company’s going forward business prospects begin to look much worse in a higher cost of capital environment. This differentiation should eventually manifest itself in company valuations as it becomes more clear which companies have strong, healthy businesses worthy of higher multiples and which do not.



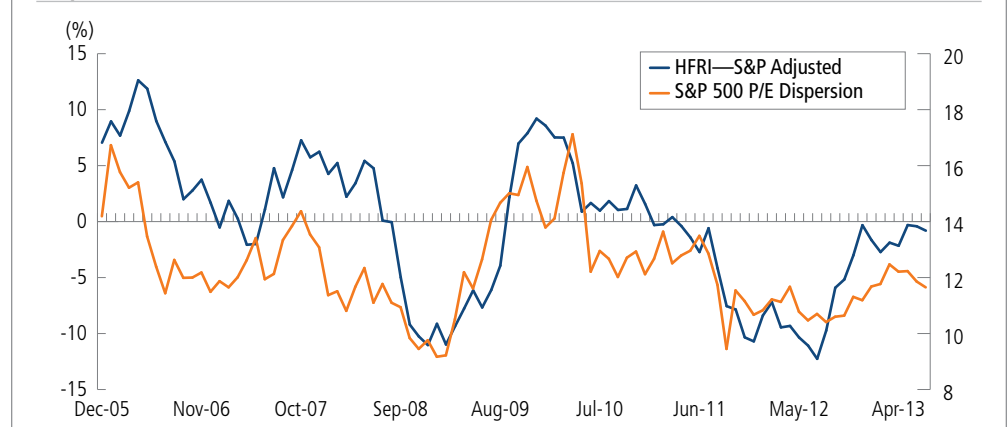
Sources: Bloomberg and Barclays, as of October 31, 2013.

*A market environment with higher levels of valuation dispersion is beneficial to long/short equity managers because the payoff for picking the right stocks to be long or short increases.*

Looking back over the last 10 years or so, we see a positive correlation between intermediate-term interest rates (a key component of corporate capital costs) and the amount of dispersion in valuation levels ascribed to companies by the market. In general, higher interest rate environments tend to see more dispersion while lower rates are accompanied by less dispersion.

A market environment with higher levels of valuation dispersion is beneficial to long/short equity managers because the payoff for picking the right stocks to be long or short increases. As demonstrated in Figure 1.5, the ability of long/short equity hedge funds to outperform the market (adjusted for the average long/short hedge fund net exposure) is tied to the level of valuation dispersion in the equity markets.

**Figure 1.5: Outperformance of Long/Short Equity Hedge Funds vs. Valuation Dispersion**



Sources: Bloomberg and PerTrac, as of July 31, 2013.

### Equity Market Environment

Although individual stock selection is central to long/short equity performance, broader market trends and the fundamentals that drive them are also important—especially since most long/short equity managers have a modest net long bias. To that point, while equities have made significant gains since the trough of March 2009, we see various reasons to be constructive on equities going forward. Positive, albeit slow, global economic growth, significant corporate activity driven by high corporate and private equity cash balances (but also by difficulty in generating organic earnings growth) and a friendly environment for capital market financing could prove supportive to equity markets in 2014.

At the same time, the degree of recent equity market gains suggests the potential for pullbacks. In such an environment, we believe that long/short equity managers with meaningful, active short books should offer some insulation, and could potentially outperform simple index hedges given their focus on identifying individual, company-specific shorts. In addition, short exposure has historically helped reduce volatility and offered investors a smoother return stream and better risk-adjusted performance over time.

### Conclusion

We remain constructive on long/short equity in 2014. We believe the recent trends of lower stock correlations and higher valuation dispersion will continue, aided by a higher interest rate environment over the medium term. This should prove beneficial to the ability of long/short equity funds to generate alpha. We also see a number of positive factors for the equity market, but in the event of a pullback, the meaningful short exposure of a typical long/short equity fund should help minimize downside participation. As such, we believe investors should have a meaningful allocation to long/short equity in 2014.

*We also see a number of positive factors for the equity market, but in the event of a pullback, the meaningful short exposure of a typical long/short equity fund should help minimize downside participation.*



## Chapter 2: Global Macro—A Mixed Bag

### Introduction

Macro-focused investing is broadly defined as profiting from changes in market prices that arise from any number of factors, including turning points in macroeconomic cycles, changes in the outlook for economic growth or inflation and market price reactions stemming from the actions of policymakers.

In Figure 2.1, we segment the Global Macro strategy into three broad categories: Discretionary, Systematic and Commodity Trading Advisor (CTA)/Managed Futures, with more granular sub-strategies underneath each.

**Figure 2.1: Macro-Focused Investing**

Macro-Focused Investing								
Discretionary				Systematic		Commodity Trading Advisor/ Managed Futures		
Global	Emerging Markets/ Regional Focus	Multi- Asset Class	Asset Class Specialists	Global	Emerging Markets/ Regional Focus	Trend Following	Mean Reversion	Pattern Recognition

### *Discretionary Macro*

These managers execute their strategies by establishing directional positions at the asset class level to express a positive or negative top-down view on a market. Of all of the hedge fund strategies, discretionary macro affords the manager the most flexibility, with managers able to express either long or short views, across any asset class, in any region, globally. Some discretionary macro managers may focus on a more narrow set of asset classes or on a specific geographic region.

### *Systematic Macro*

The systematic macro strategy is something of a hybrid between discretionary macro and CTA/managed futures. Most often, the signals that the manager uses to enter into positions are based upon an analysis of fundamental data, similar to the discretionary macro funds, but the determination of those trades is based on a systematic, or model-driven process, as is the case with CTAs.

### *CTA/Managed Futures*

The instruments that CTAs trade tend to be very similar to those that discretionary macro managers trade. However, the manner in which they arrive at those long or short positions could not be any more different. The vast majority of the CTA universe applies priced-based trend-following algorithms to the trading of equity index, fixed income, currency and commodities futures contracts.

*Our view is that discretionary macro funds are the best-positioned macro sub-strategy. We are less constructive on CTAs.*

All three of these sub-strategies can be correlated, or they can exhibit wildly different behavior depending upon the environment. As we begin 2014, we believe that the latter outcome is more likely, and our view is that discretionary macro funds are the best-positioned macro sub-strategy. We are less constructive on CTAs.

It is not a controversial statement to say that we have been living in a policy-driven world since the global financial crisis in 2008. Since that time, central banks have employed various forms of monetary easing, first in the U.S., then in Europe and Asia. Five years later, with the U.S. leading the recovery in developed nations, policymakers are now searching for ways to draw the largest quantitative easing program in history to a close. Their actions will continue to have implications for the success of various Global Macro strategies and will continue to present fertile trading opportunities for select sub-strategies.

In addition, we believe that consideration of a discretionary macro strategy is timely, given the reduction of global proprietary trading desks spurred by the Volcker Rule. Many talented traders have launched their own funds.

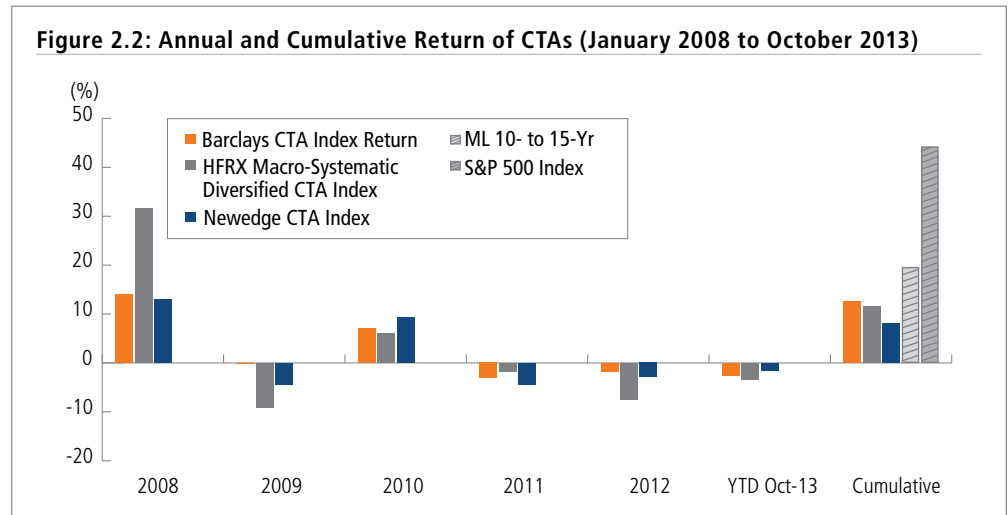
In the following pages, we explain the rationale for our view in more detail.

### Have CTAs Lost their Touch?

Historically, performance and lack of correlation to credit and equity markets have made CTAs popular. There are several types of CTA strategies, including trend-following, mean reversion and pattern recognition. The vast majority of managed futures assets under management (greater than 85%, by our estimates) are trend followers; we are currently bearish on this class of CTAs.

Trend followers do not actively predict the direction of markets, but instead respond to changes in market prices. If the changes do not turn into a persistent trend or if the prevailing trend reverses direction, the algorithm will incur losses. Typically after initiating a trade, the algorithm will instruct a sell (or a cover for a short position) if losses exceed predefined limits. As such, trend followers perform poorly when markets trade sideways and when trends are frequently interrupted by factors such as government policy or intervention that can result in sharp turns in markets—precisely the type of environment we have been in since quantitative easing was initiated. And while we are starting to see signs of easing in certain markets, this process will likely take years to fully complete.

The deficiency in performance since the global financial crisis has been supported by empirical data on CTA returns. In Figure 2.2, we can see that the annual returns of three commonly referenced CTA indices, the Barclays CTA Index, the HFRX Macro-Systematic Diversified CTA Index and the Newedge CTA Index have been muted since 2009. Even when taking positive performance in 2008 into consideration, the indices' cumulative returns from 2008 to October 2013 are lower than that of the S&P 500 Index and the Merrill Lynch Fixed Income Index.



Sources: Bloomberg, Newedge, Bank of America Merrill Lynch and HFRX.

Besides overall performance, the other key benefit of investing in CTAs has been their low-to-negative correlations to equity and credit markets. Particularly over the last decade, CTA returns have been flat or positive in difficult months for the broader markets. However, upon closer examination, a significant factor driving this return pattern was large gains due to net long positions in fixed income. The 30-year bull market in U.S. Treasuries since 1980 has been one of the more prominent trends in tradeable markets. Despite this, we believe developed nations are more likely to experience a secular period of rising rates going forward (witness the yield on the U.S. 10-Year Treasury backing up from 1.6% in May 2013 to 3.0% by the end of 2013, as well as the recent start of tapering by the Federal Reserve).

*We believe that over the next several years, CTAs are more likely to be net short government bonds than to be net long government bonds. With that positioning, CTAs may not necessarily provide the same diversification benefits on a consistent basis going forward.*

In fact, many CTAs have already made the adjustment from being long to short government bonds. Regardless of this recent change in positioning which may be temporal, we believe that over the next several years, CTAs are more likely to be net short government bonds than to be net long government bonds. With that positioning, and when a pickup in market volatility leads to a flight to quality, CTAs may no longer be negatively correlated to traditional asset classes. As such, CTAs may not necessarily provide the same diversification benefits on a consistent basis going forward.

In Figure 2.3, we can see that on a three-year and five-year basis, CTAs have underperformed most asset classes. On a 10-year basis, CTAs have generated sizable returns, but that pales in comparison to longer-dated Treasuries, where we believe they held long positions for a significant part of the past 10 years.

**Figure 2.3: Cumulative Return of Various Benchmarks Relative to CTA Index**

	Barclays CTA Index	S&P 500 Index	DJ-UBS Commodity Index	Dollar Index	ML 1–3 Yr. Treasury	ML 7–10 Yr. Treasury	ML 10–15 Yr. Treasury
3 years	-7.2%	39.7%	-24.1%	2.3%	2.3%	15.1%	17.3%
5 years	-0.8%	94.5%	5.1%	-0.6%	5.5%	18.4%	21.9%
10 years	61.9%	53.0%	38.4%	-30.8%	38.8%	96.8%	112.7%

Sources: Bloomberg and Barclays.

On the subject of fees, many investors believe that hedge fund fees have historically been too high. For CTAs in particular, 63 managed futures funds that reported to the SEC generated \$11.5 billion of gains between January 1, 2003 and December 31, 2012; 89% of that went to fees, commissions and expenses.<sup>1</sup> Perhaps as a result of such observations and criticism from investors, a number of CTAs have moved to launch lower-fee versions of their trend-following strategies, a development we applaud. While the lower-fee vehicles may fare better than their full-fee cousins, we still believe that the current macro environment will continue to present challenges for the strategy.

*We believe that discretionary global macro managers are better suited to generate profits in the current policy-driven market environment.*

On the other hand, we believe that discretionary global macro managers are better suited to generate profits in the current policy-driven market environment. Also, because their playbook is much broader than that of CTAs, they should be better positioned to exploit a wider variety of opportunities. Macro managers use several trading strategies that we believe have the potential to generate returns in the current market:

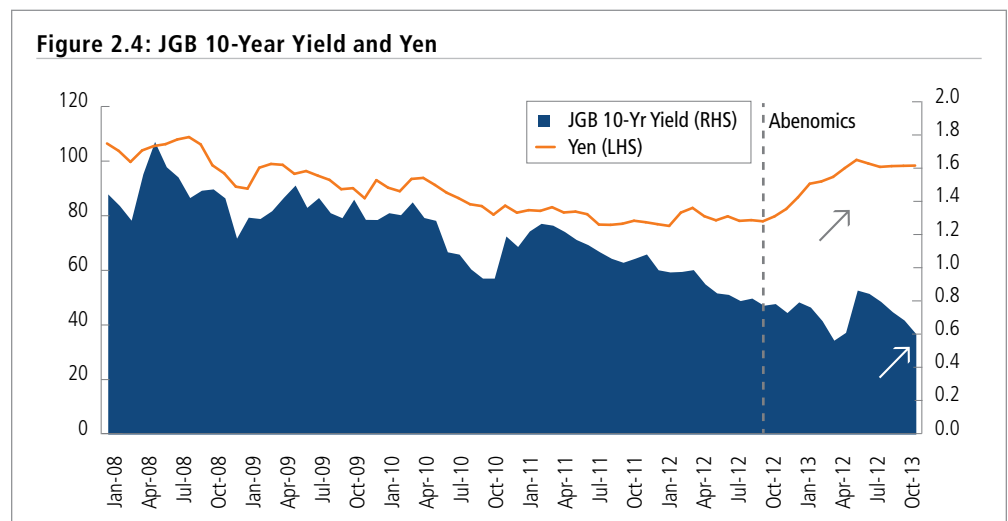
**1. Momentum:** Predicting the direction of an asset class and taking long or short positions to generate returns while that momentum lasts. This is similar to a CTA trend-following strategy, but the macro manager overlays more discretion as to which trends to follow and can actively risk-manage positions to seek to avoid losses from trend reversals. CTAs, on the other hand, tend to be purely systematic and are therefore less able to assess the increasingly important qualitative context and market positioning around potential trades.

<sup>1</sup> "How investors lose 89% of gains from Futures Fund" Bloomberg Market Magazine, October 7, 2013.

- 2. Carry (or anti-carry):** These include borrowing from a low interest rate currency to fund the purchase of high yielding currencies or assets. Managers can find similar trades in the fixed income and commodities markets as well.
- 3. Relative Value:** The manager sets up trades to profit from the normalization of related currency, commodity, equity and/or fixed income securities, which often trade at spreads to each other that can fluctuate due to short-term news, events or technical factors.
- 4. Mean Reversion:** Identifying dislocations across markets based on top-down fundamental analysis and asset class valuation.

At a more granular level, we currently observe a wide array of thematic opportunities that discretionary macro funds can attempt to exploit. These themes have and will continue to spawn trading opportunities across all four of the strategy types listed above. While these themes will lead to directional price action, that price action will likely not occur in a straight line, thus emphasizing an approach that can remain dynamic, nimble and flexible in the face of a changing opportunity set.

- 1. Fed tapering in the U.S.:** The implications of the Federal Reserve withdrawing \$85 billion a month of bond buying could lead to opportunities in the fixed income and currency markets.
- 2. Timing and magnitude of eventual Federal Funds rate hikes:** It is commonly accepted that a Fed Funds rate tightening cycle is on the horizon. The timing and magnitude are subject to intense debate and are creating trading opportunities in the forward rates space within the fixed income market.
- 3. Deficit reduction:** The mandate to reduce deficits across developed economies is leading to opportunities in the interest rate markets, due in part to the supply of government debt outstanding.
- 4. Commodities:** The commodities markets were among the worst-performing asset classes in 2013. Each individual market is subject to its own particular fundamental and technical value drivers, but if the modest pickup in global growth continues, these markets may be due for a change in direction.
- 5. Japanese monetary easing:** Under the leadership of Japanese Prime Minister Shinzo Abe, Japan has engaged in a broad scale reflation program. “Abenomics” has had tremendous effects on the country’s currency and equity markets, which should continue going forward. Managers have profited from this shift in Japanese monetary policy through momentum and relative value trades. Directional positions have included short Yen, short Japanese Government Bonds (JGB) across various maturities, or long equities in Japanese exporters, real estate and construction companies and financial institutions. Relative value positions include short Yen versus long JGB, as the latter is backstopped by Japan’s bond purchasing program. While many of these markets have already had substantial moves, managers continue to focus on Japan and are monitoring the next stage of the program (i.e., structural reforms such as domestic wage increases), which could revive momentum.



Source: Bloomberg.

**6. Global deflation:** Term structure trades, also known as flatteners or steepeners, are a common relative value tactic employed by global macro managers. Over the past several years, developed nations' long-term interest rates have been at their lowest levels in a very long time. As the Federal Reserve embarks on tapering its quantitative easing program and developed economies continue to improve, long-term interest rates are expected to rise. As such, interest rate term structures will steepen, but the process is unlikely to be in a straight line. This could create both tactical and long-term trading opportunities for macro managers specializing in the fixed income space. In addition, many managers also feel that European interest rates will follow a path similar to that of the U.S., but with a lag. This should broaden the universe of investable markets for macro managers who understand the factors that affect the relative value of fixed income securities across different maturities and denominations to capitalize on.

### Conclusion

In this chapter, we outlined why we favor discretionary global macro strategy and underweight CTA/managed futures. While we feel most strongly about these strategies, we also continue to find other, more niche macro-focused investment opportunities (e.g., co-investment opportunities with commodity-focused managers, fixed income relative value-oriented hedge funds that at times appear macro-oriented, and systematic global macro hedge funds that trade on longer-term signals) appealing.

As we previously noted, macro-focused investing can come in many forms. Selecting the appropriate manager and investment strategy requires a strong understanding of the investment approach and instruments used. One can benefit from monitoring and evaluating a large number of funds across all sleeves of the macro-focused investment space. Ongoing discussions with the investment team managing the fund, thorough analysis of its portfolio, including reviewing the specifics of individual trades and evaluations of the investment team's risk management process and systems can help build conviction in specific managers.

In general, we continue to believe that the macro-focused investing space will present attractive opportunities for investors, but as always, will require careful evaluation and selection at both the sub-strategy and individual manager levels.

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## Chapter 3: Do Opportunities Remain in Structured Credit?

### Review of Hedge Fund Performance in 2013

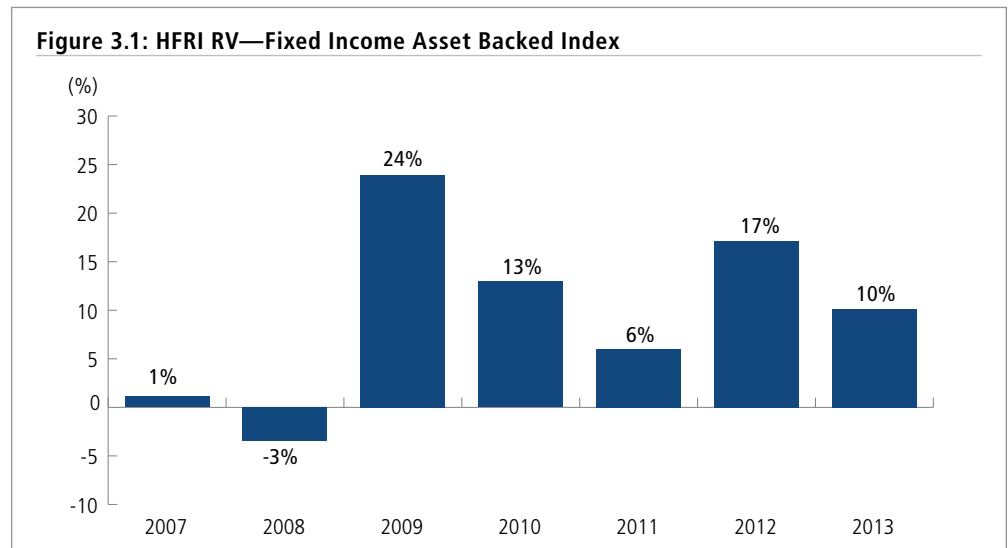
Since 2009, spreads within the structured credit universe have tightened considerably across nearly all sectors, geographies and parts of the capital structure. A combination of improving fundamentals and supportive technicals as capital has flowed into the space has contributed to this trend. This chapter examines whether there is value left in the structured credit trade as we enter 2014 and where specifically we think hedge fund managers will find the most compelling risk/reward.

Demand for asset-backed securities (ABS) did not abate last year, with an estimated \$5.1 billion flowing into mortgage-backed hedge funds alone.<sup>2</sup> Although the rate of new structured credit hedge fund launches slowed, the peer group continued to grow. Performance within the group varied, with the overall HFRI Fixed Income Asset-Backed Index up 10.2% in 2013<sup>3</sup>—a solid figure but much lower than the 17%-plus advance of 2012.

The slowdown is partly due to the performance drag from funds with exposure to agency mortgage-backed trading. Many of these managers lost money last spring due to a confluence of factors, including the extension of the Home Affordable Refinance Program (HARP), expectations that the eligibility date would be extended by one year, increased interest rate volatility around tapering (leading to a selloff in the “to be announced” space) and fears that a new head of the Federal Housing Finance Agency (FHFA) might pave the way for principal reductions on mortgages.

Managers without exposure to this space and with a broader overall exposure to the asset class (in particular non-mortgage exposure such as European ABS, collateral loan obligations (CLOs), collateral debt obligations (CDOs) and other ABS), generally performed better than the index—in some instances in the high double digits. That being said, with spreads in some assets back at pre-crisis levels, the beta trade in the most popular ABS sectors such as non-agency residential mortgage-backed securities (RMBS) and mezzanine tranches of CLOs may have run its course.

In this chapter, we provide an update on each sector and explore the 2014 opportunity set, including the relative value of some European ABS over U.S. counterparts. The sectors covered are non-agency RMBS (including U.K. non-conforming), CLOs, CMBS and other, more niche, areas of structured credit, including Troubled Asset Relief Program (TARP) preferred securities and regulatory capital trades.



Source: HFRI.

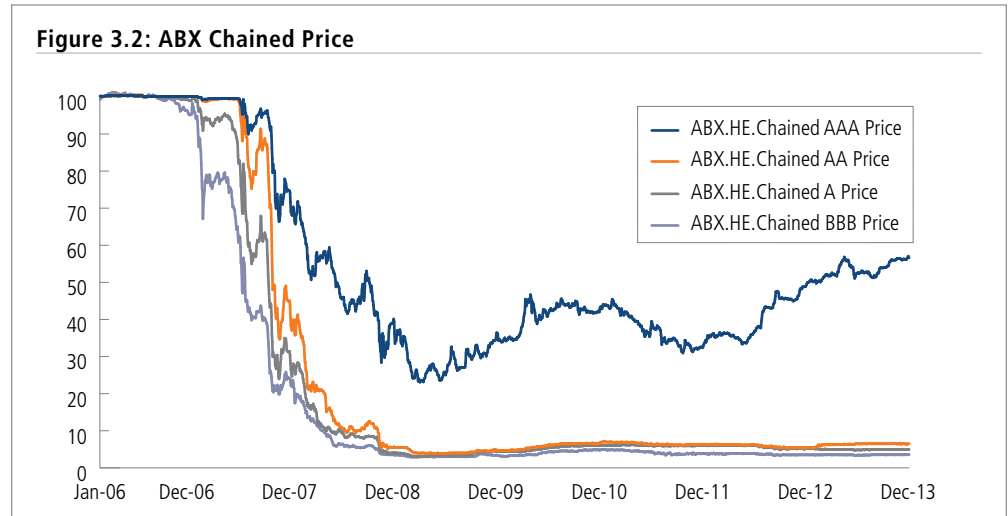
<sup>2</sup> eVestment.

<sup>3</sup> As of November 30, 2013.

## Non-Agency RMBS, U.K. Non-Conforming, Periphery RMBS: Where We Are Now

### Non-Agency RMBS

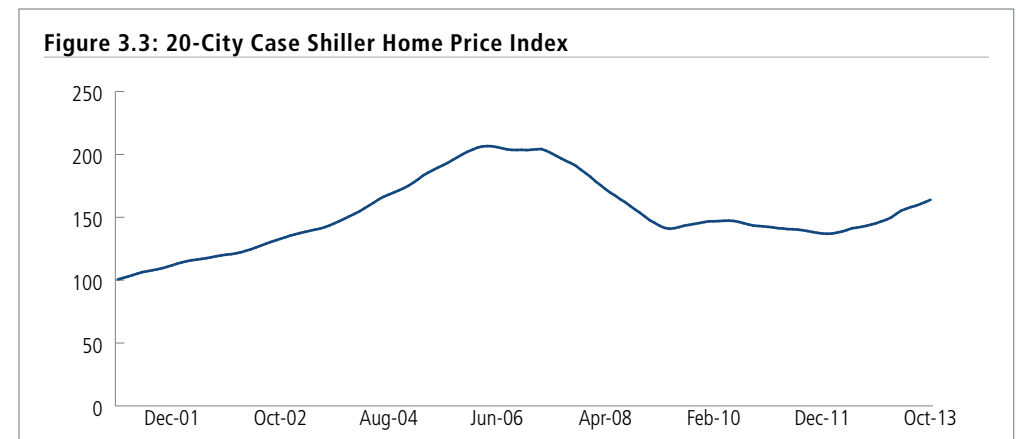
Non-agency spreads generally tightened in 2013 with prices moving higher, particularly in more senior paper, while junior tranches remained relatively static.



Source: Barcap Live, as of December 31, 2013.

*U.S. housing market fundamentals continue to improve. Home prices were estimated to have risen by 11% in 2013, with this positive momentum expected to continue in 2014 helped by the continued economic recovery and relatively low levels of housing supply.*

U.S. housing market fundamentals continue to improve. Home prices were estimated to have risen by 11% in 2013,<sup>4</sup> with this positive momentum expected to continue in 2014 helped by the continued economic recovery and relatively low levels of housing supply.



Source: Case Shiller Home Price Index: 20-City, as of October 1, 2013.

*Although the space has rallied significantly, non-agency RMBS still looks attractive on a pure yield basis relative to other U.S. fixed income instruments.*

The percentage of distressed sales as a proportion of overall sales peaked in 2009 at 50%, but by September 2013, had materially decreased to 14%.<sup>5</sup> The percentage of 60-day and 90-day delinquencies and homes in foreclosure has also continued to decline. These numbers peaked at over 10% in 2009 and have fallen to 6% today.<sup>6</sup> Although the space has rallied significantly, non-agency RMBS still looks attractive on a pure yield basis relative to other U.S. fixed income instruments. However, the opportunity set now appears less compelling, with more potential for material downside than in recent years. While housing prices look set to continue appreciating, the consensus is that the pace will be slower. A potential rise in rates could impact house prices as well as mortgage affordability at higher rates. U.S. mortgage rates were up approximately 100 basis points (bps) in 2013 and the NAR Housing Affordability Composite Index is trending down from January 2013 highs (this index still remains significantly above pre-crisis levels). That said, historically, the correlation between mortgage rates and house price appreciation has not been

<sup>4</sup> Case Shiller Home Price Index: 20-City.

<sup>5</sup> Goldman Sachs: Housing Monitor, November 2013.

<sup>6</sup> Goldman Sachs: Housing Monitor, November 2013.

strong. We believe that refinancing activity will most likely decline in a rising rate environment, with the voluntary prepayment rate already seeing a reduction since September 2013.<sup>7</sup>

Other negative factors include less attractive supply and demand dynamics as compared to 12–18 months ago. A Barclays research report predicted that the non-agency space would see an estimated \$30–35 billion in new issuance in 2014 compared with \$13–15 billion in 2013.<sup>8</sup> While total outstanding non-agency RMBS has experienced a sharp decline since the highs reached in early 2008 (which has been supportive of price technicals for the asset class), these dynamics now look set to slow.

Liquidity has continued to show improvement, but remains highly correlated to macro newsflow. For example, trading volumes in the first half of September 2013 were materially lower as the market awaited the outcome of the Federal Open Market Committee (FOMC) meeting on September 18. If liquidity continues to improve, managers may be able to actively trade around positions to add to their returns, although liquidity air pockets remain a risk to mark-to-market pricing. The most attractive early vintage paper, afforded the benefits of seasoning and more stringent underwriting standards, has all but disappeared as the structures continue to pay down and the space has become more crowded with investors. Within the 2006–2007 vintage paper, select opportunities may exist for managers with the ability to conduct detailed loan-level analysis given the divergence in underlying collateral quality.

### Monetizing “Events” Within Non-Agency RMBS

The most compelling opportunities in non-agency RMBS remain where an extra “event” could potentially add some upside. We have discussed one of these events, mortgage putbacks, in several of our previous strategy outlook publications.

To recap, “putting back” a mortgage loan refers to the legal process of forcing mortgage originators to repurchase distressed mortgage loans due to breaches in the representations and warranties made by the originator. These include, but are not limited to, falsified FICO scores, employment statuses, and owner occupancy or loan-to-values (LTVs). Between 2005 and 2007, loans were often originated without adhering to underwriting guidelines. Post-2008, many of these loans experienced significant losses, causing them to trade at large discounts to par. Pursuing mortgage putbacks is a labor-intensive process, limiting the number of players operating directly in the strategy. An RMBS holder must obtain the underlying mortgage loan files and underwriting guidelines generally accessed through the RMBS trustee. The RMBS holder must re-underwrite the loans in order to determine whether breaches exist. The final putback process is then typically fraught with litigation as the originating banks contest the claim.

2013 was marked by a number of legal successes in the space. In November, J.P. Morgan (JPM) tentatively agreed to a \$4.5 billion settlement with 21 investors in reference to 330 RMBS issued between 2005 and 2008. The settlement could provide additional pressure for other banks to follow suit with other potential representation and warranty settlements on the horizon, including with Washington Mutual/JPM, which was not resolved in the aforementioned case. In June 2011, Bank of America/Countrywide agreed to an \$8.5 billion settlement with investors. This deal is still awaiting court approval; however, the positive outcome is largely priced into these securities and thus offers more limited upside than smaller and more uncertain situations. Smaller cases

*2013 was marked by a number of legal successes in the space. In November, J.P. Morgan (JPM) tentatively agreed to a \$4.5 billion settlement with 21 investors in reference to 330 RMBS issued between 2005 and 2008. The settlement could provide additional pressure for other banks to follow suit with other potential representation and warranty settlements on the horizon.*

<sup>7</sup> Goldman Sachs Non-Agency RMBS Commentary, November 2013.

<sup>8</sup> Barclays U.S. Securitized Product Outlook 2014.



*The market is still undervaluing monoline insurance recovery expectations, particularly in light of a number of recent developments which have enhanced protection features.*

still awaiting settlement include Rescap, Morgan Stanley and Wells Fargo. In addition to more broad-based settlements, banks can also settle on an individual basis. Either way, we anticipate increased activity in 2014 and 2015, although exact timing remains uncertain. Successful settlements could add a few points to the bonds currently yielding 8–10% in terms of investor return expectations, with some further upside optionality, although the timing of settlement payouts will ultimately drive returns.

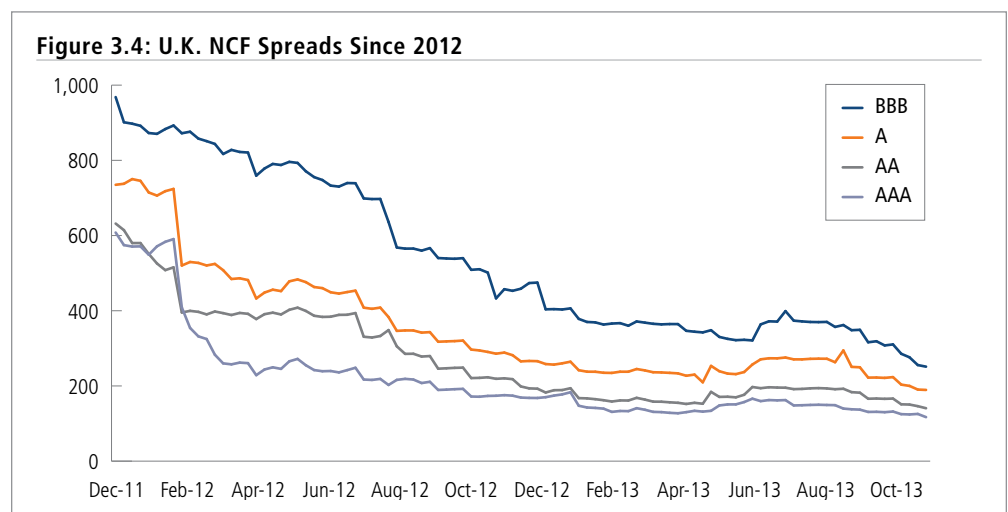
We also believe that monoline-wrapped non-agency RMBS are attractive. The market is still undervaluing monoline insurance recovery expectations, particularly in light of a number of recent developments which have enhanced protection features, such as Bank of America’s settlement in May 2013 with MBIA, increasing the latter’s liquidity profile. Additionally, in August 2013, a supplemental payment by Ambac was approved in excess of 25% of permitted policy claims on certain securities. In June 2013, FGIC agreed to pay Rescap \$253 million for all associated claims, past and future.

Credit Suisse estimates the number of outstanding bonds with insurance wraps is in the region of 1,400. This number represents a total outstanding balance of nearly \$52 billion, of which 55% still receive partial insurance payments.<sup>9</sup> Other sources of return optionality in the non-agency RMBS space include liquidation plays. Since 2009, longer timeframe liquidations have been the theme as servicers struggle with volumes. Currently, the average liquidation takes 32 months, twice as long as in 2008.<sup>10</sup> However, over time, some consolidation in the servicing space is possible with banks looking to sell their delinquent portfolios to servicing companies such as Ocwen. This, coupled with a reduced inventory of distressed properties, could result in shorter and increasingly divergent liquidation timelines.

### **Europe**

*Moving into 2014, the consensus is that house prices will rise a further 5%–10%. Additionally, loss severities on 2005–2007 vintages have continued to improve, while excess spread levels have been stable or improved.*

In Europe, the dynamics have been broadly similar. In the U.K. non-conforming market, spread tightening has been accompanied by improving fundamentals, including strong house price momentum, with prices above levels seen in the fourth quarter of 2008 and not far from 2007 highs.<sup>11</sup> This looks to be further supported by the government’s Help to Buy Scheme, which was launched in October. Moving into 2014, the consensus is that house prices will rise a further 5%–10%. Additionally, loss severities on 2005–2007 vintages have continued to improve, while excess spread levels have been stable or improved. Lower yields compared to this time last year could signal that the space is not particularly compelling for yield-seeking hedge fund investors, although there may be some opportunistic trades around deals which are currently paying sequentially, but will switch to pro rata payments.



Source: Barcap Live, as of November 22, 2013.

<sup>9</sup> Credit Suisse: Modelling and Analytics, October 16, 2013.

<sup>10</sup> Standard & Poor’s Ratings Services.

<sup>11</sup> Halifax U.K. House Price Index.

In 2013, European peripheral RMBS experienced some spread tightening, although it was less pronounced than in other sectors. Looking ahead, the fundamental outlook for Irish and Spanish RMBS paper remains weak, with declining or stagnating house prices and relatively high default rates. Italian RMBS has been stable, with relatively attractive mezzanine yields compared to U.K. non-conforming equivalent paper. In the last few months, investors have grown increasingly interested in the space, and we believe such technical factors could be supportive going into 2014, heralding an entry point for hedge funds with dedicated European expertise.<sup>12</sup>

### U.S. Agency Mortgage Trading

Despite a difficult 2013 for many agency mortgage-backed securities (MBS) focused hedge funds, we believe that 2014 could present opportunities for trading given the likely volatility and prospect of continued Fed tapering. Agency MBS managers invest long or short in agency mortgage derivatives that they expect to have slower or faster prepayments than priced in by the market. Prepayment views are typically expressed by interest-only securities (IOs) or inverse IOs (IIOs). Prepayments accelerate the receipt of principal, which is detrimental to IOs. Interest rates act as the main variable for prepayments (in addition to defaults resulting in involuntary prepayments), determining a borrower's incentive to refinance. Furthermore, IOs prices are negatively correlated to prepayment rates and a rise in rates will decrease a borrower's incentive to refinance (prepay). Therefore, IOs have negative duration as prices increase when interest rates rise and vice versa.

Inverse IOs have a coupon inversely proportional to LIBOR. In the short term, a spike in interest rates should reduce the coupon on IIOs. However, if this dynamic persisted, prepayments would slow. The dynamics of the agency market make it possible for managers to construct negative duration portfolios that benefit from rising interest rates. On the other hand, the withdrawal of Fed stimulus and the absence of any other material players in the space will likely be a key theme in 2014 and unfavorable technicals could result in material mark-to-market volatility. Consequently, we favor managers who manage portfolio risk through diversification and low leverage and who utilize best-in-class proprietary systems to model prepayment sensitivities.

### CMBS: Select Opportunities Remain

#### *United States*

Should the Federal Reserve remove its supportive policies in 2014, the impact will likely be greater on U.S. CMBS than non-agency RMBS. Moderate spread volatility around this uncertainty was already evident in 2013, particularly in AM and AJ paper (see Figures 3.6 and 3.7).<sup>13</sup>

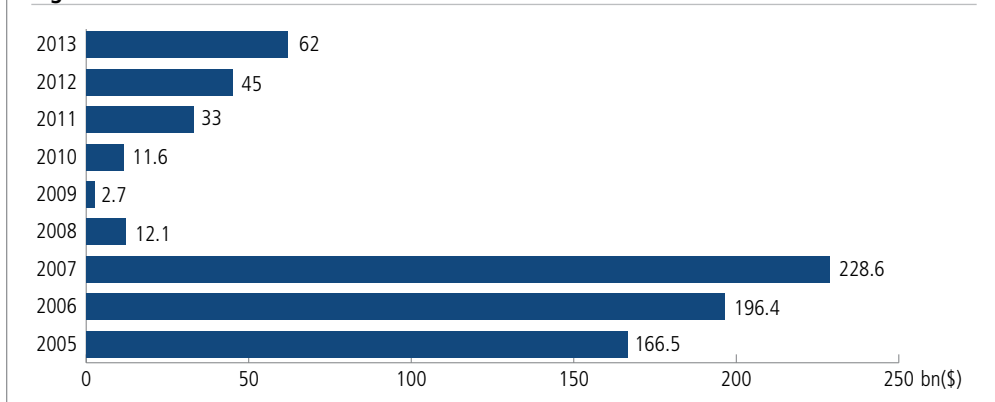
*Delinquency rates have stopped increasing across all property types and in many instances are showing downward momentum (e.g., hotel and multi-family sectors).*

Vintage deal fundamentals continue to be mixed. At the macro level, a modest U.S. economic recovery is positive for occupancy rates and rents. Historically, CMBS has lagged RMBS due to longer leases and transaction timelines. At the micro level, modification volumes are slowly decreasing, offset by increasing re-defaults on modified loans. Delinquency rates have stopped increasing across all property types and in many instances are showing downward momentum (e.g., hotel and multi-family sectors). Refinancing was largely successful in 2013 and we expect this to continue into 2014. The largest wall of maturities is due 2015–2017. These were predominantly originated pre-2008 and have worse financial characteristics; in some cases, these may struggle to refinance. While new issuance remains below historical highs, it has noticeably increased in recent years.

<sup>12</sup> "Peripheral RMBS takes centre stage," Structured Credit Investor, September 2013.

<sup>13</sup> AMs are the mezzanine debt tranche and AJ the junior. Both tranches were rated AAA at origination with the AM tranche typically offering 20% credit enhancement and the AJ tranche 12–15% enhancement. These sit below the superior senior AAA tranche with 30% typical credit enhancement.

**Figure 3.5: New Issuance Has Continued to Increase**



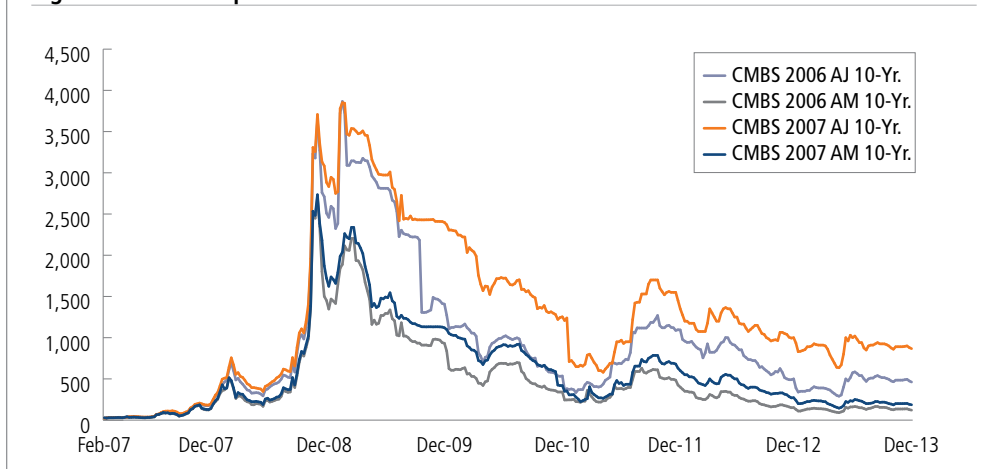
Source: Commercial Mortgage Alert.

Barclays argues that while underwriting standards may have slipped in the first half of 2013, they broadly compare to those in 2005 and are much better than 2006–2007.<sup>14</sup> Consequently, opportunities for hedge funds in new issuance may present themselves in the next 12–18 months.

*CMBS yields are selectively interesting to hedge fund investors with typical ranges of high single to mid-double digits available in select mezzanine tranches.*

An advantage of CMBS versus non-agency RMBS is that the CMBX index provides a relatively effective hedge to CMBS paper, with relatively high correlation between this index and the underlying. The ABX, however, is an imperfect hedge to subprime non-agency RMBS because it is less liquid. Furthermore, the CMBX issued a new series in January 2013, while the ABX has not issued a series since July 2007. Its use can therefore create basis risk in a hedged portfolio. The launch of a new CMBX tranche in January 2014 will reference new issue deals from 2013, further increasing hedge funds’ abilities to construct hedged CMBS portfolios and express relative value views between different vintage paper. CMBS yields are selectively interesting to hedge fund investors with typical ranges of high single to mid-double digits available in select mezzanine tranches. The dispersion in underlying asset quality requires the use of detailed loan-level fundamental analysis, particularly given the relative concentration compared to RMBS, where the top 15 loans account for over 50% of the CMBS loan pool in many instances. This allows hedge funds to create alpha through their detailed fundamental credit work on the underlying assets.

**Figure 3.6: CMBS Spreads**



Source: Barcap Live, as of December 26, 2013.

<sup>14</sup> Barclays CMBS Outlook 2014.

**Figure 3.7: CMBX Index Spreads**



Source: Barcap Live, as of December 31, 2013

### ***Europe***

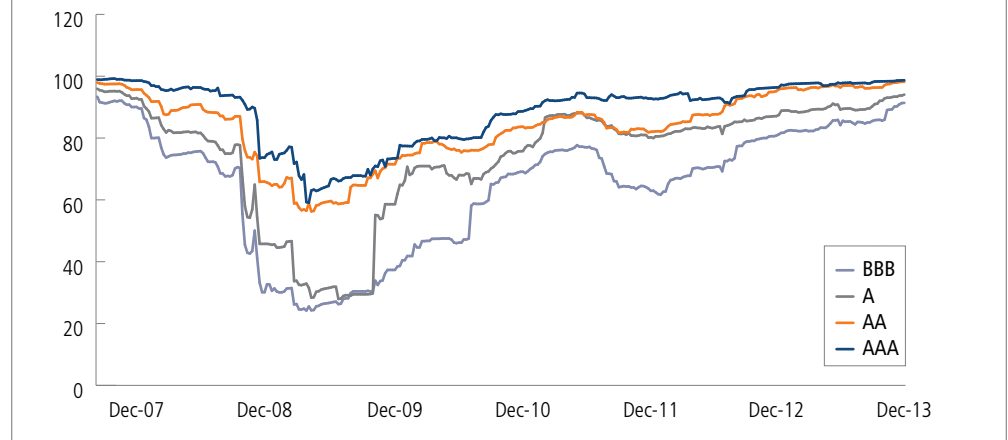
European CMBS spreads tightened in 2013, particularly in the first pay tranches, while second and third pay tranches experienced more price volatility. Through December 2013, new issuance in Europe was limited to Germany and the U.K., but issuance stood at €8.7 billion compared to €3 billion in 2012, suggesting some signs of recovery.

*A spread premium for European CMBS still exists compared to similar U.S. assets, although this has narrowed through 2013.*

Potential themes in 2014 could be evidence of new issuance in the periphery with the possibility of an Italian deal referencing a portfolio of retail shopping parks allegedly close to completion. Spreads have tightened, but have lagged other parts of the structured credit universe in Europe. A spread premium for European CMBS still exists compared to similar U.S. assets, although this has narrowed through 2013. This is partially justified as European CMBS are less liquid than their U.S. counterparts and involve greater fundamental analysis on the underlying assets, as deals are more concentrated than in the U.S. Furthermore, despite this risk being much reduced in 2013, there is a greater degree of macro tail risk in Europe.

Property fundamentals are improving, particularly for U.K. and German multi-family housing, and the weighted average life of deals is declining, helping to remove uncertainty. Higher returns for investors are still possible in European CMBS, but are likely to involve higher credit risk. Relatively low levels of new issuance indicate the universe of outstanding CMBS will continue to decline, which is supportive of supply and demand technicals and could help further spread compression. Managers in the NB Alternative Investment Management peer group currently have a positive outlook on the European CMBS space and it represents a meaningful allocation for many managers. In 2014, we will continue to favor managers with the ability to conduct detailed loan-level analysis given the various complexities of the European CMBS market.

**Figure 3.8: European CMBS Prices**



Source: Barcap Live, as of December 31, 2013.

### CLOs: Review and Outlook

In 2013, U.S. CLO issuance grew to over \$75 billion, representing the third largest year in history.<sup>15</sup> In Europe, new issuance was more muted, just surpassing €6 billion, spread across 17 deals,<sup>16</sup> but reflecting a significant positive trend considering the lack of new issuance since 2008.

*In 2014, the consensus is that new issuance in the U.S. will continue to be strong. New issuance in Europe, however, is likely to remain limited.*

In 2014, the consensus is that new issuance in the U.S. will continue to be strong. For example, Bank of America Merrill Lynch (BAML) predicts a level of \$65–75 billion. New issuance in Europe, however, is likely to remain limited due to a “skin in the game” clause to comply with the Capital Requirements Directive Article 122a and its rules on risk retention. The article requires managers to hold a 5% vertical slice of the capital structure, including the CLO’s equity tranche, which limits the number of institutions who are able to accommodate this on their balance sheets. That being said, BAML anticipates a modest increase in new issuance to around €12 billion in 2014.<sup>17</sup>

U.S. regulators are proposing similar capital requirements, but any changes would not take effect before 2015, which could, in turn, result in a flurry of new issuance in 2014. A study from the Loan Syndications and Trading Association suggested that 63% of current managers would be unable to issue new CLOs if new capital requirements were put in place.<sup>18</sup> Additionally, higher interest rates could stem CLO new issuance. Rising rates do not impact mezzanine or senior bonds, but reduce the equity that benefits from rates being below the loan rate LIBOR floor. Historically, the mismatch of the floor level and the floating rate characteristic of CLOs have resulted in a yield boost for CLO equity holders.

CLO fundamentals remained stable throughout 2013. In the U.S., the junior overcollateralization (OC) test<sup>19</sup> pass rate remained at 100% for the year, while the same number in Europe increased slightly to 70%. A number of recent Moody’s upgrades in Europe were mainly a result of high repayment rates seeing the deals de-lever materially. Furthermore, the number of CCC assets in CLOs still in their investment period has fallen from a peak of 9% in 2010 to 4% as of December 2013. Leveraged loan defaults have increased slightly in the U.S., standing at 2.3%, although this is still below the historical average of 3.2%.<sup>20</sup>

<sup>15</sup> BAML 2014 CLO Outlook.

<sup>16</sup> BAML 2014 CLO Outlook.

<sup>17</sup> BAML 2014 CLO Outlook.

<sup>18</sup> <http://www.forbes.com/sites/spleverage/2013/08/02/dodd-frank-risk-retention-would-dramatically-dhrink-clo-market-managers-say/>.

<sup>19</sup> The OC ratio is defined as the ratio of the portfolio’s notional asset value to the liabilities senior to a given tranche which are still outstanding.

<sup>20</sup> Standard & Poor’s/LSTA Leverage Loan Index.

In Europe, leveraged loan defaults have decreased from 6.6% at the end of 2012 to 3.1%. This is also reflected in the proportion of defaulted loans held within European CLOs, which fell from 2.6% at the end of 2012 to 1.3%.<sup>21</sup> Favorable technicals in the underlying leveraged loan market in Europe have seen strong demand from investors for new paper. Europe has also been helped by the emergence of the high yield bond market, which has helped push out the maturity wall. However, €220 billion of leveraged loans and high yield need to be refinanced by the end of 2016<sup>22</sup> and it is not clear whether this amount can be accommodated by the high yield market, suggesting the possibility of a rise in defaults. The decline in new issuance in the leveraged loan space in Europe (as opposed to the U.S., where new issuance through November 2013 of \$466 billion is set to exceed the previous record in 2008)<sup>23</sup> could create further problems in Europe. The total debt outstanding in the European Leveraged Loan Index in the fourth quarter of 2013 fell from €140 billion in 2008 to €100 billion.<sup>24</sup> This could result in reduced diversification and collateral overlap and higher industry or peripheral Europe exposure.

**Figure 3.9: Secondary U.S. CLO 1.0 Spreads**

	Average Current Spread	2013 Change	2012 Change
Super Senior	60	-50	-80
AAA	70	-45	-105
AA	130	-55	-265
A	160	-155	-300
BB	225	-450	-450
B	475	-75	-625

Source: J.P. Morgan CLO Outlook 2014.

**Figure 3.10: Secondary European CLO Spreads**

	Average Current Spread	2013 Change	2012 Change
AAA	120	-50	-110
AA	175	-165	-410
A	280	-260	-660
BBB	450	-425	-675
BB	650	-750	-750

Source: J.P. Morgan CLO Outlook 2014.

*Spreads have continued to tighten across all CLO tranches (with some exception in certain new issuance tranches) with compression being most pronounced in Europe.*

Spreads have continued to tighten across all CLO tranches (with some exception in certain new issuance tranches) with compression being most pronounced in Europe. That being said, the tightening did not come without volatility, particularly in May 2013 after the Fed's discussion of tapering. Both the European and U.S. CLO markets have since recovered, with the rate of recovery more pronounced in Europe than the U.S. More generally, both geographies experienced lower volatility when compared to the broader credit markets. BAML believes that mezzanine spread tightening was supported by investors' search for yield.<sup>25</sup> Equity spreads have also tightened, but in some instances paper with yields in the high single digit and low double digits can be found in

<sup>21</sup> BAML CLO Weekly, November 15, 2013.

<sup>22</sup> J.P. Morgan CLO Outlook, November 27, 2013.

<sup>23</sup> J.P. Morgan CLO Outlook, November 27, 2013.

<sup>24</sup> J.P. Morgan CLO Outlook, November 27, 2013.

<sup>25</sup> BAML CLO 2014 Outlook.

both the U.S. and Europe and consequently this still offers attractive investment opportunities for hedge funds. Prior to 2008, European and U.S. CLOs traded with only small spread differentials between equivalently rated tranches but this changed following the crisis. In 2013, European spreads remained at a premium to their U.S. counterparts. U.S. government initiatives such as TARP have been partially responsible for accelerating the tightening in U.S. CLOs; similar government intervention in Europe has not impacted the structured credit space as directly. Other reasons for the current differential include the more uncertain macroeconomic outlook in Europe (and the current higher default environment), although given the built-in structural protection of even the equity tranches this could be unjustified, suggesting that relative value opportunities in Europe still remain.

*In 2014, we believe technicals in the overall CLO universe are likely to be positive from an investment standpoint.*

In 2014, we believe technicals in the overall CLO universe are likely to be positive from an investment standpoint. Most CLOs are close to the end of or out of their reinvestment periods. In Europe, paydowns should outpace new issuance resulting in a shrinking universe. This will not likely be the case in the U.S. given healthy new issuance volumes, but technicals will also be favorable in CLO 1.0.

U.S. hedge funds investing in new issuance CLOs (known as CLO 2.0) can benefit from more attractive structural features including shorter reinvestment and non-call periods, higher levels of subordination, larger equity cushions and more stringent collateral eligibility requirements. For example, credit enhancement for the AAA tranche in new deals stands at around 40% compared to 30–35% in legacy deals.<sup>26</sup>

The CLO label hides a dispersion of fundamentals within Europe. While fundamentals for reinvesting CLOs are improving, those in their amortization periods are seeing an uptick in the percentage of CCC assets held and defaulted balances, due to the managers' reduced ability to manage the portfolio and better quality borrowers repay or refinance. This reinforces the need for detailed loan-level analysis and managers to credit hedge where appropriate.

CLO spreads are also attractive on a relative basis versus the underlying leveraged loans, but with greater credit enhancement. Prior to the crisis, BBB CLO tranches in Europe traded with a negative spread basis to leveraged loans. Although spreads have tightened between the CLO tranche and the underlying, a discount still remains. That being said, we see reasons for concern. European CLOs are still relatively illiquid, especially compared to the underlying leveraged loans. For example, according to BAML, in the week of November 4, only €50 million of CLO traded in the BWICS.<sup>27</sup> (The 2013 average has been closer to \$150 million in Europe, and as high as \$500 million in the U.S.) Much of the supply in 2013 came in May and June, and was accompanied by spread widening as market volatility increased due to concerns over the timing of Fed tapering.

The pockets of opportunity still look most compelling for hedge fund managers in equity tranches where there is a greater certainty over cash flows, OC cushion headroom, longer reinvestment periods with embedded optionality for deals, which can extend the reinvestment period, or in mezzanine tranches with duration-reducing features such as turbo or excess interest sweeps and shorter reinvestment periods. Going forward, more deals are likely to be called in Europe, as was seen in the U.S. in 2013. These optional redemptions will benefit the mezzanine and equity tranches, which will be repaid at par. Small, nimble hedge funds can add value to this process, which can be resource-intensive and requires buying a tranche through the capital structure. Focus will be more on the short side, typically short positions in baskets of high yield names. Despite spread volatility around tapering, CLOs themselves are defensive against rate rises due to their floating rate nature.

<sup>26</sup> BAML CLO 2014 Outlook.

<sup>27</sup> Bid wanted in competition. A process by which less liquid securities are traded through a bond bid list.



### Increasing Regulation Could Bring Opportunities

Increasingly burdensome regulation has been a reality for both Europe and the U.S. since 2008. In Europe, banks are subject to the Capital Requirements Directive IV (European Banking Authority) and, in time, will need to abide by Basel III. This will force banks to substantially reduce their holdings of risk-weighted-assets (RWAs), including structured credit, which carries a particularly punitive risk weighted charge. European insurers, meanwhile, are bound by Solvency II, requiring increased capital charges for longer-dated and mezzanine or lower rated asset-backed securities.

*Basel III and Solvency II are likely to create opportunities for hedge funds in several guises, starting with asset sales.*

Basel III and Solvency II are likely to create opportunities for hedge funds in several guises, starting with asset sales. Royal Bank of Scotland predicts that €3 trillion of bank de-leveraging is still needed in Europe. Bank capital ratios have improved, particularly for Northern European banks which received capital injections from the state and are now above the target Tier 1 equity capital ratio, and now have a greater ability to take losses. As such, banks are likely to begin shedding more non-core assets. For example, in November 2013, ING and the Dutch state reached an agreement to unwind the Illiquid Asset Backup Facility established in 2009.<sup>28</sup> This phenomenon may provide managers with buying opportunities, especially those with strong contacts in the private and relationship-driven European banking community.

Increased bank regulation will also reduce bank appetite for activities such as consumer lending and other previous core businesses. Hedge funds could fill this void, although they would need to utilize less liquid fund structures to ensure adequate matching of assets and liabilities.

*The opportunity set remains strong in the regulatory capital (reg cap) relief trade space.*

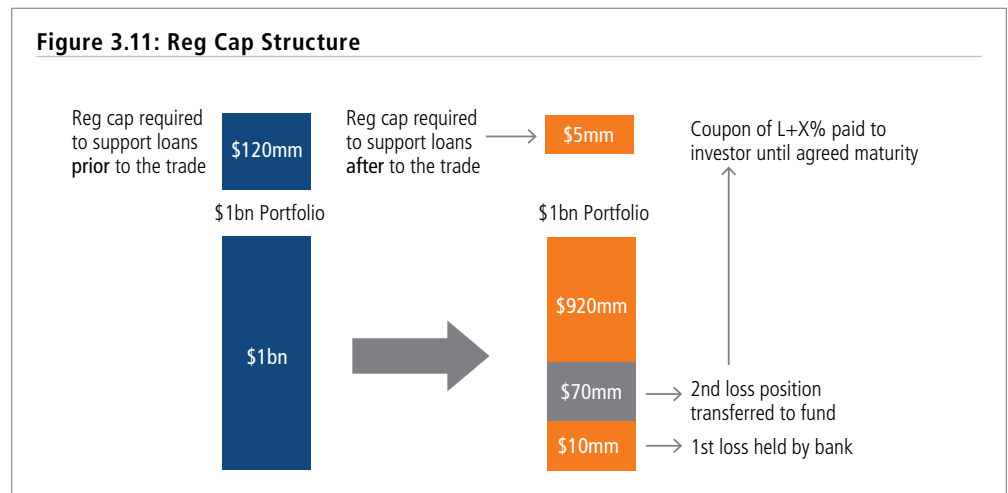
Additionally, the opportunity set remains strong in the regulatory capital (reg cap) relief trade space. Reg cap trades are negotiated credit transfer agreements with banks, stemming from stricter bank capital regulations, particularly in Europe, and are designed to help banks release Tier 1 capital. Private investors, such as hedge funds, will typically negotiate bilateral deals directly with banks, although secondary and club deals exist (with less attractive spreads). Under Basel I and II, banks must hold capital against potential loan losses (under Basel II, unrated tranches attract a risk weighting of 1250%); once Basel III is effective, this will become more punitive, particularly with regard to first-loss treatment and unrated assets. Basel III will also increase bank capitalization Tier 1 requirements from 8% under Basel II to 10.5%.

Deals are typically structured so the private investor takes the second loss tranche with the first loss piece retained by the bank or, if the deal is to comply with Basel III's treatment of the first loss tranche, replicated synthetically through the payment of excess spread. These deals are a more cost effective way for banks to increase Tier 1 capital versus raising capital through traditional methods like equity offerings, which are expensive and dilutive. Selling assets may also force banks to realize losses and limit return generation from more traditional bank activities going forward.

Initially, reg cap deals largely referenced German SMEs, which historically have seen very low defaults. More recently, deals have come to reference CVA and counterparty risks, trading books, stressed VaR, U.K. and other European SMEs, Italian NPLs, equipment leases and trade finance. Spreads of 12–15% are achievable in bilateral reg cap deals and the high barriers to entry, including the need to raise a significant amount of dedicated capital to write meaningful tickets, as well as to have established relationships with the banks, means this space has seen less spread compression. To illustrate, less than five hedge funds are solely dedicated to participating in these trades, although several larger credit managers also allocate to this space. Some managers have put capital to work in this space through secondary and club deals rather than negotiating bilateral deals with the banks directly. However, these trades typically have less attractive yields, and the secondary and therefore tradable space has seen significant spread compression through 2012 and 2013.



**Figure 3.11: Reg Cap Structure**



Source: NB Alternative Investment Management.

### ***Hedge Fund Involvement in Reg Cap***

Reg cap trades are typically structured for upwards of three years, with managers typically utilizing more private equity-like structures with capital lock-ups of 5–7 years. The strategy is at the less liquid end of the hedge fund spectrum. It is important to consider whether the increased return potential compared to other structured credit markets compensates for the illiquidity.

An additional risk would be a decreasing cost of equity issuance as a means to improve bank capital ratios, which could result in less need for reg cap deals. Even with the relatively few number of players in this space, limiting the opportunity set will likely impact spreads. While reg cap deals, particularly those referencing German SMEs, have historically been characterized by extremely low defaults with deals structured to withstand severe shocks, a significant European tail event could result in losses. For deals referencing other underlying assets, detailed and loan-level fundamental analysis of the reference pool is critical, as is the Fund's ability to structure deals with favorable features such as rules around replenishment. The final notable risk is regulatory in nature. The European regulators' sympathy varies toward banks undertaking regulatory relief deals. They also typically reserve the right to retroactively declare a deal to be invalid in a regulatory relief sense. Although this would represent no financial loss for the hedge funds, it could represent opportunity cost, even with a termination fee built into the deal.

### **Niche Areas: TARP and Trust Preferred Securities**

In our *2013 Strategy Outlook*, we commented on TARP preferred securities as an area of opportunity. These were investments made into banks by the U.S. Treasury in 2008–2009 as part of the Capital Purchase Program, and structured as perpetual preferred stock with cumulative dividends. The initial coupon was a 5% fixed rate for the first five years, with most coupons stepping up to 9% by the first half of 2014. In January 2013, the Treasury announced that it would begin to conduct auctions for all of its TARP preferred securities as part of an effort to wind down bailout programs. Banks are not typically allowed to bid on their own TARP preferred shares because bank regulators prefer that they continue to conserve capital. In addition, there are few natural buyers for the paper, which means that these securities have sold at auction at material discounts to par.

The opportunity set is heightened given the high cost of financing once the coupon steps up to 9%. In other words, these securities are likely to be called by the banks before the end of

*These securities are likely to be called by the banks before the end of 2014 or early 2015. The short-term horizon of banks redeeming this paper at par can result in attractive IRRs of 20% and above, assuming they are called.*

*Although TruPS were initially treated as Tier 1 capital, they no longer qualify under Dodd-Frank, which has resulted in no new issuance and a shrinking universe, which is a supportive technical factor for spreads.*

2014 or early 2015. The short-term horizon of banks redeeming this paper at par can result in attractive IRRs of 20% and above, assuming they are called. Other potential trade opportunities include hedge funds negotiating directly with banks to retire shares at a discount to par. Strong underlying fundamentals supportive of this phenomenon has helped the former scenario. Through November 2013, the Treasury sold over \$95 million of TARP investments, with the majority sold at significant discounts to par, and in some instances, as much as 50%–60%.<sup>29</sup> While this opportunity set is compelling, the most attractive component of the trade in the form of a bank redemption at par or a tender will largely be worked through within the next 12–18 months.

Similar to TARP preferred securities, but with a more durable opportunity set, trust preferred securities (TruPS) are hybrid securities issued by financial institutions with equity and debt features. For regulatory purposes, they have been historically treated as Tier 1 capital and are interest-bearing obligations senior to TARP. TruPS pay a tax deductible coupon and are structured as non-amortizing 30-year maturities, although these may be callable. Coupon payments may be deferred for a maximum of five years, but these deferred coupons will continue to accrue interest, which is added to the principal balance. A handful of underwriters have securitized these securities into TruPS CDOs. A typical capital structure ranges from AAA-rated senior debt to unrated equity. CDO technology was first introduced to TruPS in 1999 to help smaller banks access lower cost equity capital by pooling together the individual trust preferred issues and sharing the underwriting costs. The market is small compared to other sectors in the ABS space, with less than \$50 billion outstanding.<sup>30</sup> These securitizations reference over 1,500 banks and 200 insurance companies. The small universe, coupled with the high number of reference institutions, means that barriers to entry are high. It is a resource-intensive strategy with a limited ability to put capital to work. Aside from a small number of dedicated hedge funds, competition is extremely limited. More traditional ABS funds would generally not look to invest, given their scale and the limited capital that can be put to work. Structurally, the instruments appear attractive compared to CLOs or ABS CDOs because ratings agencies used very conservative recovery values limiting the leverage in the TruPS CDO structures. The structures also are conservative with their waterfall structure; senior notes will be redeemed if coverage tests are breached along with the same over-collateralization features used in CLO structures.

Funds investing in this paper seek to benefit from TruPS that re-start paying dividends or those that will continue to keep paying. Fundamentals have continued to improve since the financial crisis as bank balance sheets strengthen and default rates have remained stable.<sup>31</sup> Although TruPS were initially treated as Tier 1 capital, they no longer qualify under Dodd-Frank, which has resulted in no new issuance and a shrinking universe, which is a supportive technical factor for spreads. The senior notes typically trade at a discount of 15%–25% and are likely to repay par given strong fundamentals. The coupon gives considerable upside, although there is uncertainty over timing. Both TARP preferred securities and TRuPS represent a niche area of the structured credit market with a limited number of hedge funds investing in this space.

### **Other Potential Focus Areas for 2014**

In 2013, esoteric or non-traditional ABS, such as shipping container ABS or aircraft leases, saw their highest new issuance since 2007, with a 2013 volume of \$25 billion compared to \$20 billion in 2012.<sup>32</sup> Barclays estimates that the total outstanding in the non-traditional space is \$108 billion and predicts strong growth in interest into 2014 as investors continue to search for yield.

Shipping container ABS saw a resurgence in 2013 with 11 deals totaling \$3 billion. Fundamentals have been strong, facilitating the pace with improving collateral trends such as utilization rates. Shipping loans could see increasing hedge fund involvement. According to the *Wall Street Journal*, the U.K. bank, Lloyds Banking Group, has been looking to hedge funds to try and find a buyer for a £400 million portfolio of distressed shipping loans.<sup>33</sup> Increasing bank regulation also has

<sup>29</sup> NB Alternative Investment Management manager research.

<sup>30</sup> NB Alternative Investment Management manager research.

<sup>31</sup> <http://www.reuters.com/article/2013/09/17/ny-fitch-ratings-trups-idUsnBw176467a+100+BSW20130917>.

<sup>32</sup> Barclays Non-Mortgage ABS Outlook: Back to Basics in 2014, 15th November 2013.

<sup>33</sup> <http://online.wsj.com/news/articles/SB10001424127887323551004578439003012112628>.

made it harder for shipping firms to obtain bank loans and non-bank lenders such as hedge funds are stepping in to fill the void.

Similar dynamics persist in the aircraft leasing and equipment finance space and other project finance. These deals must be assessed on an individual basis for features such as loan-to-value, loan-to-scrap value, trigger or control clauses. Loans are typically in the three-year plus range with limited secondary market liquidity. Coupons are variable, but could be as high as 15%–20%.

Commercial real estate (CRE) loans were another area of increased activity in 2013. According to PWC<sup>34</sup> European banks sold €15 billion of CRE loan portfolios in 2013, up 15% from 2012, with an average discount of 14% for performing loans and 50% for non-performing. The biggest discounts were seen in Ireland. Average IRRs for these portfolios were 18% for non-performing and 15% for performing.<sup>35</sup> An increased supply from the periphery is projected in 2014; expected IRRs have the potential to be higher. BAML believes that demand will continue to outstrip supply on the secondary side. On the primary side, we expect an increase in CRE lenders entering the space. The U.K.-based real estate firm Savills predicts further primary activity in 2014, which could yield interesting opportunities.

Other potential areas of focus include direct, as opposed to securitized, real estate, with funds looking to own properties outright in Europe particularly, and real estate financing. Outside of structured credit, hedge funds are increasingly looking to harness the opportunity in the intermediate liquidity space (duration of one to five years, which has historically fallen into “no man’s land;” too illiquid for traditional hedge funds, but too liquid for traditional private equity investors). Examples include direct or asset-based lending, providing loans to mid-size companies unable to access bank capital, asset-based term loans, cash flow term loans, DIP financings and transaction financing for leveraged buyouts and mergers and acquisitions. The relative absence of competitors in the space allows lenders to negotiate attractive pricing and improved deal structures. Strong returns may be achievable; however, this strategy would require a special investment vehicle with the appropriate liquidity.

### Structural Dynamics and Conclusion

As yields in other credit instruments continue to compress, traditional investors are increasingly looking for alternative sources of relatively higher yields. Investors initially switched out of high yield and into equity, but there is now evidence of flows into ABS. An acceleration of this trend would support further spread compression in 2014. Downside potential is higher today versus the start of the ABS recovery trade, given how far many sectors have rallied. Consequently, it seems likely that managers will look for tools to protect their portfolios in periods of drawdown and volatility. Examples of these tools include active hedging of the portfolio with the relevant indices and, in the case of CLOs, the underlying leveraged credits. It could also include more active cash management and portfolio trading.

The potential for managers to invest in assets with reasonably attractive yields of over 10% still exists, although in some instances, this will require higher credit risk (e.g., moving down the capital structure), more illiquidity (e.g., reg cap trades) or a more event-focused strategy (e.g., mortgage putback trades).

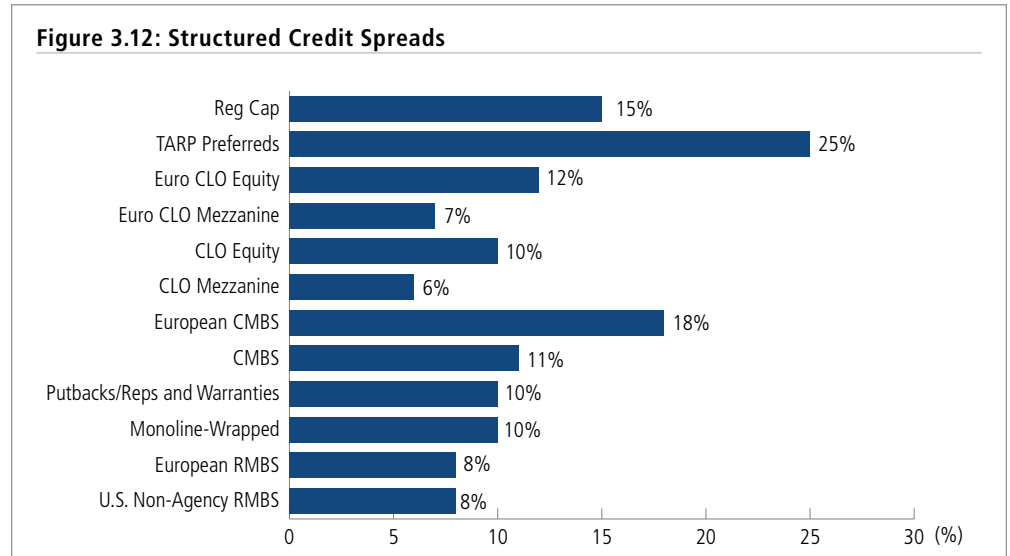
*The potential for managers to invest in assets with reasonably attractive yields of over 10% still exists, although in some instances, this will require higher credit risk (e.g., moving down the capital structure), more illiquidity (e.g., reg cap trades) or a more event-focused strategy (e.g., mortgage putback trades).*

<sup>34</sup> <http://www.pwc.com.cy/en/press-releases/2013/non-performing-loans-europe.jhtml>.

<sup>35</sup> BAML Outlook.

In 2014, we may also see managers starting to utilize modest amounts of leverage, but given concerns about fluctuating liquidity, we believe this needs to be carefully monitored. Federal Reserve behavior and tapering will most likely have a big impact on the structured credit market, with 2013 already highlighting the impact of a rate selloff on spreads across the universe. However, this volatility could act to create buying opportunities for managers with the ability to trade more actively in the space.

We believe that structured credit still justifies a material allocation in portfolios, but we favor managers who can invest outside of the plain vanilla non-agency RMBS/CMBS and CLO space, such as reg cap or TARP preferred securities. Managers in the residential and commercial space, with a more active approach to sector rotation or trading and a focus on downside protection, can also be considered.



Source: NB Alternative Investment Management research.

# Chapter 4: Hedge Fund Performance in a Rising Interest Rate Environment

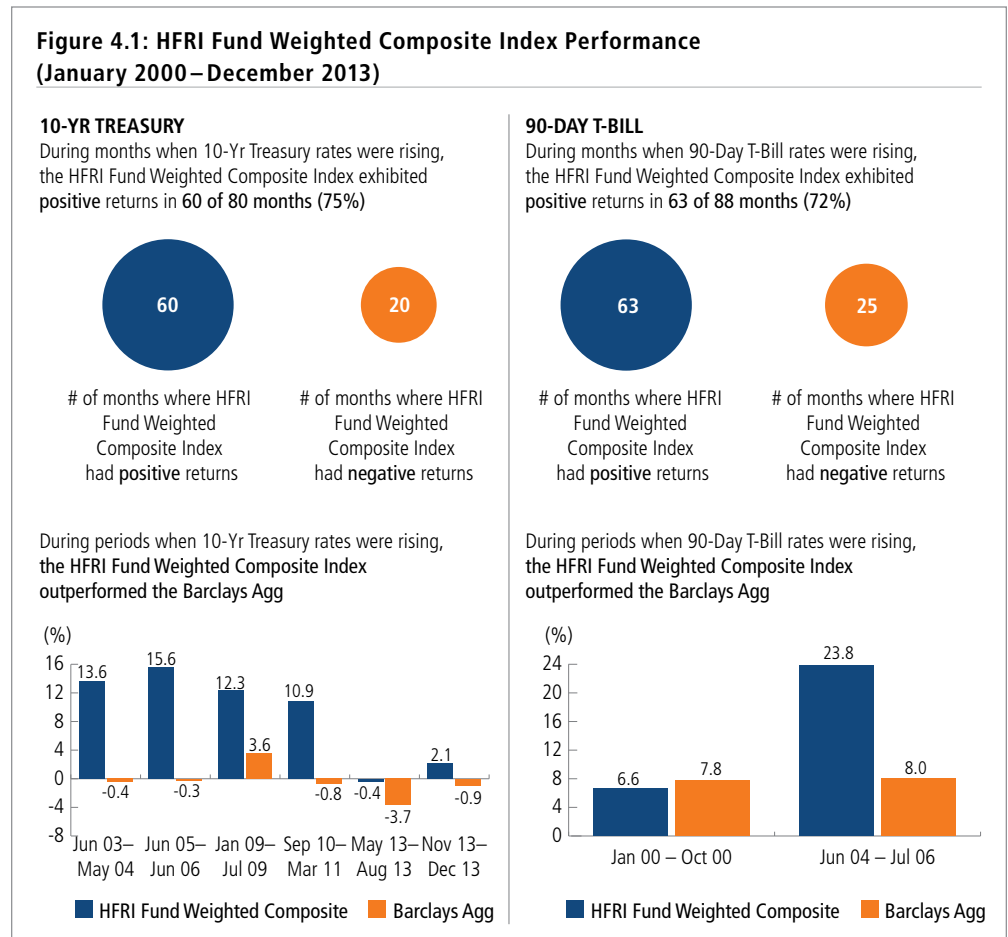
## Introduction

The rising interest rate environment through the second and third quarters of 2013 was particularly painful for long-only fixed income investors with long duration portfolios, and is likely only a glimpse of what is to come. On May 2, 2013 the 10-year Treasury yield reached its year-to-date low of 1.63% and, in just six short weeks, the yield increased by 60%, hitting 2.61% on June 25, 2013. The 2013 year-to-date high of 2.98% was hit 10 weeks later on September 5, 2013.

Given the Federal Reserve’s stated intention to begin normalizing interest rate policy over the coming years and the consequent likelihood that interest rates continue to rise across the yield curve, we believe that the upcoming period will be challenging for fixed income investing. As such, we have already begun to see investors reassess their fixed income allocations and explore additional investment options that mimic the diversification and volatility reduction historically associated with bonds without the associated duration risk. For many, hedge fund investments are helping to fill the void left by declining fixed income exposure, in part due to the reasons we discuss below.

*Since 2000, hedge funds have posted strong performance during periods of rising rates.*

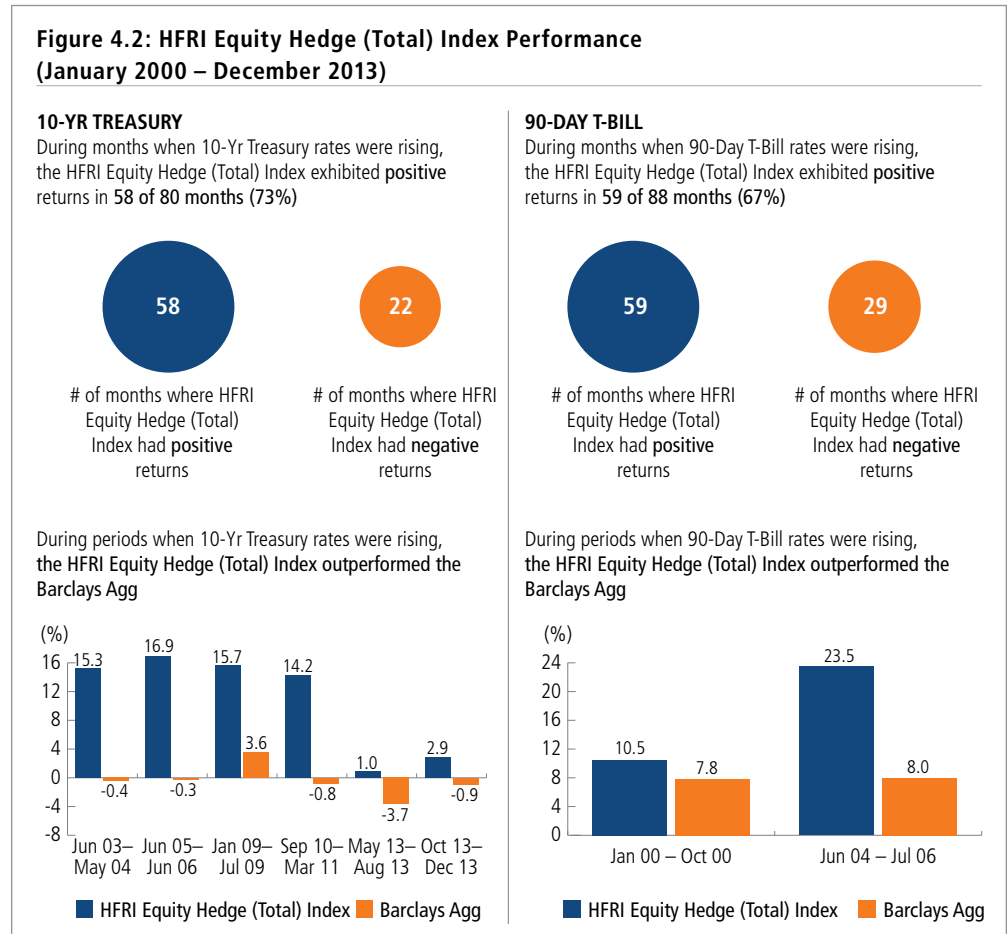
Since 2000, hedge funds have posted strong performance during periods of rising rates (see Figure 4.1), due in part to their ability to short, hold cash, allocate among different asset classes and move across different sub-strategies. Such environments create attractive opportunities for specific types of managers, including fundamental equity long/short, credit arbitrage and event-driven managers.



Sources: Bloomberg, HFR and NB Alternative Investment Management. For illustrative purposes only. **Past performance is no guarantee of future results.** The historical performance of the indices shown is for illustrative purposes and is not meant to forecast, imply or guarantee future performance. Indices are unmanaged and cannot accommodate direct investments. Comparisons to those indices are not meant to imply that hedge funds are comparable to the index of blue-chip stocks and bonds.

### Fundamental Equity Long/Short Managers

Higher interest rates generally mean that hedge funds receive higher rebates on their short positions (please refer to Looking Ahead: The Impact of Rising Interest Rates in Chapter 1 for more detail). This environment also indirectly exposes the disparity among companies with varying financing structures, margins and business models, leading to higher dispersion among stocks. Consequently, fundamental hedge fund managers find these to be fertile stock-picking conditions, with the ability to generate returns on both the long and short sides of the portfolio by identifying the best and worst stocks.



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### Credit Arbitrage Managers

These managers also find interesting relative value opportunities during a rising rate environment. For example, a fund could invest in floating rate bank loans and hedge their credit exposure with duration-sensitive fixed rate corporate bonds. This position has a net negative duration and benefits directly as rates rise. Additionally, rising interest rates are associated with rising costs for corporates with floating rate debt financing. Identifying the companies that will struggle to refinance this expensive cost of capital, as a short investment, or those that can refinance this debt as a long investment, also leads to fundamental credit selection decisions.

**Figure 4.3: HFRI RV: Fixed Income—Corporate Index Performance (January 2000 – December 2013)**

**10-YR TREASURY**

During months when 10-Yr Treasury rates were rising, the HFRI RV: Fixed Income—Corporate Index exhibited positive returns in 63 of 80 months (79%)

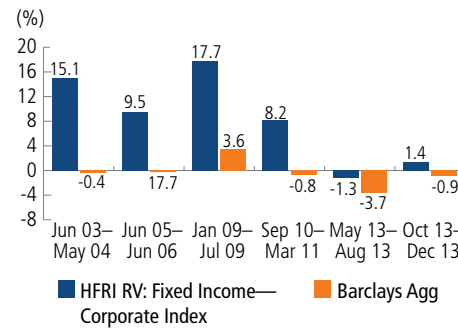


# of months where HFRI RV: Fixed Income—Corporate Index had positive returns



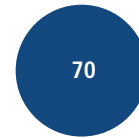
# of months where HFRI RV: Fixed Income—Corporate Index had negative returns

During periods when 10-Yr Treasury rates were rising, the HFRI RV: Fixed Income—Corporate Index outperformed the Barclays Agg



**90-DAY T-BILL**

During months when 90-Day T-Bill rates were rising, the HFRI RV: Fixed Income—Corporate Index exhibited positive returns in 70 of 88 months (80%)

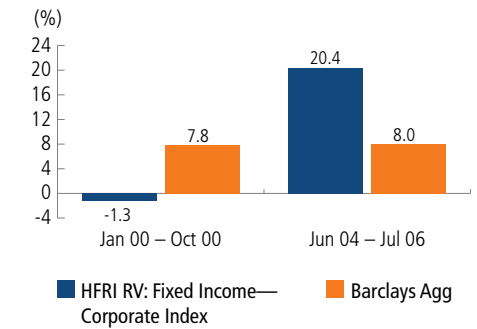


# of months where HFRI RV: Fixed Income—Corporate Index had positive returns



# of months where HFRI RV: Fixed Income—Corporate Index had negative returns

During periods when 90-Day T-Bill rates were rising, the HFRI RV: Fixed Income—Corporate Index outperformed the Barclays Agg



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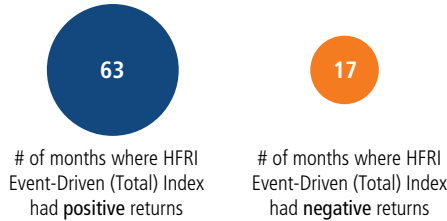
**Event-Driven Managers**

Merger arbitrage returns are comprised of the risk-free rate and a spread (or risk premium) above this rate. The risk premium, among other things, compensates an investor for risks associated with regulatory approvals, the ability to secure deal financing, shareholder approvals and any uncertainties related to delays in the timing of a deal closing. As interest rates rise, this risk premium typically increases as well, perhaps most obviously because the cost of financing and the ability to secure financing increases. Additionally, the risk-free rate itself is rising, which means the combination of the risk-free rate and the risk premium is higher on an absolute basis in periods of rising rates.

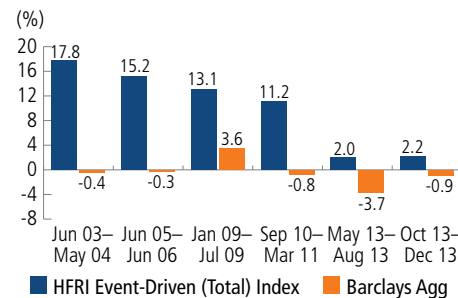
**Figure 4.4: HFRI Event-Driven (Total) Index Performance (January 2000 – December 2013)**

**10-YR TREASURY**

During months when 10-Yr Treasury rates were rising, the HFRI Event-Driven (Total) Index exhibited positive returns in 63 of 80 months (80%)

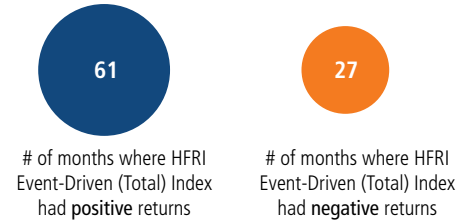


During periods when 10-Yr Treasury rates were rising, the HFRI Event-Driven (Total) Index outperformed the Barclays Agg

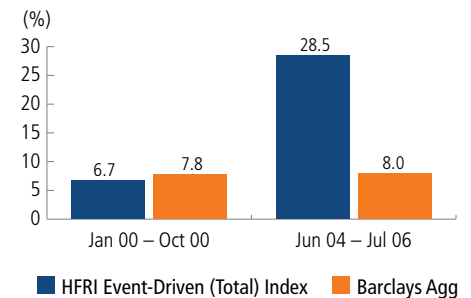


**90-DAY T-BILL**

During months when 90-Day T-Bill rates were rising, the HFRI Event-Driven (Total) Index exhibited positive returns in 61 of 88 months (69%)



During periods when 90-Day T-Bill rates were rising, the HFRI Event-Driven (Total) Index outperformed the Barclays Agg



Sources: Bloomberg, HFR and NB Alternative Investment Management. For illustrative purposes only. **Past performance is no guarantee of future results.** The historical performance of the indices shown is for illustrative purposes and is not meant to forecast, imply or guarantee future performance. Indices are unmanaged and cannot accommodate direct investments. Comparisons to those indices are not meant to imply that hedge funds are comparable to the index of blue-chip stocks and bonds.

**CTA and Macro Managers**

As discussed in the first chapter of this outlook, CTA strategies have historically maintained a long position in government bonds, believing that they offer protection in a risk-off market. However, more recently, low interest rates have made it difficult to trade with a long bond bias. If interest rates continue to rise, CTAs may begin to short government bonds, increasing their correlation to risky assets. Compared to the strategies mentioned previously, CTA strategies have had less success in rising interest rate environments historically. Similarly, we expect that global macro funds may experience similar issues in the current environment and have historically demonstrated less success in rising rate environments as well, although they have fared better than CTA strategies.



**Figure 4.5: Barclay CTA Index Performance (January 2000 – December 2013)**

**10-YR TREASURY**

During months when 10-Yr Treasury rates were rising, the Barclay CTA Index exhibited **positive** returns in 37 of 80 months (46%)

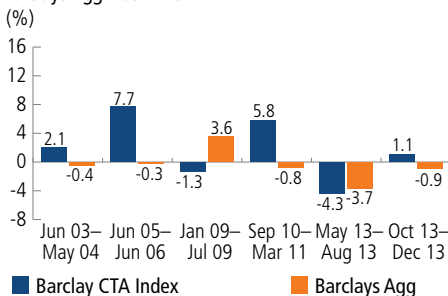


# of months where Barclay CTA Index had **positive** returns



# of months where Barclay CTA Index had **negative** returns

During periods when 10-Yr Treasury rates were rising, the performance of the Barclay CTA Index relative to the Barclays Agg was mixed



**90-DAY T-BILL**

During months when 90-Day T-Bill rates were rising, the Barclay CTA Index exhibited **positive** returns in 47 of 88 months (53%)

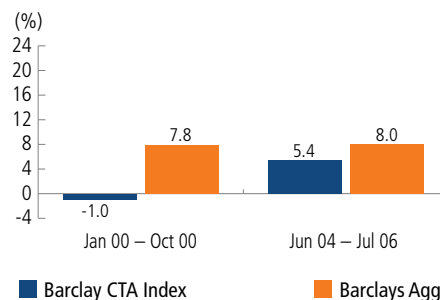


# of months where Barclay CTA Index had **positive** returns



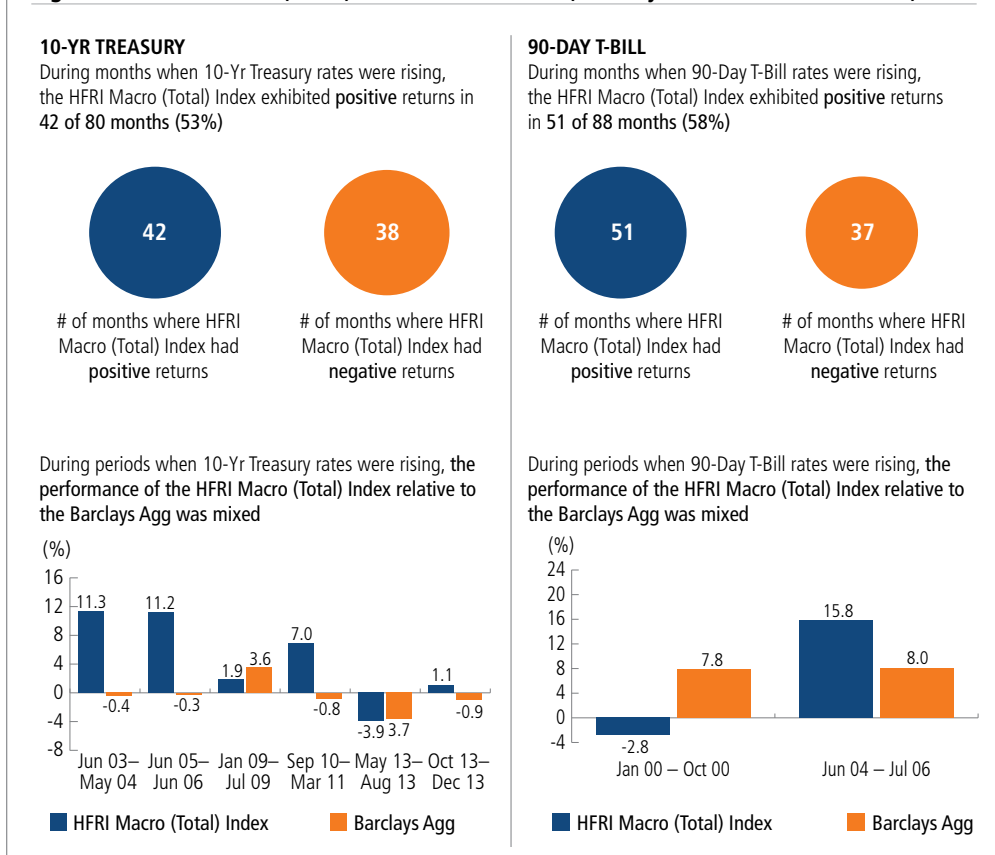
# of months where Barclay CTA Index had **negative** returns

During periods when 90-Day T-Bill rates were rising, the Barclay CTA Index underperformed the Barclays Agg



Sources: Bloomberg, Barclay Hedge and NB Alternative Investment Management. For illustrative purposes only. **Past performance is no guarantee of future results.** The historical performance of the indices shown is for illustrative purposes and is not meant to forecast, imply or guarantee future performance. Indices are unmanaged and cannot accommodate direct investments. Comparisons to those indices are not meant to imply that hedge funds are comparable to the index of blue-chip stocks and bonds.

**Figure 4.6: HFRI Macro (Total) Index Performance (January 2000 – December 2013)**



Sources: Bloomberg, HFR and NB Alternative Investment Management. For illustrative purposes only. **Past performance is no guarantee of future results.** The historical performance of the indices shown is for illustrative purposes and is not meant to forecast, imply or guarantee future performance. Indices are unmanaged and cannot accommodate direct investments. Comparisons to those indices are not meant to imply that hedge funds are comparable to the index of blue-chip stocks and bonds.

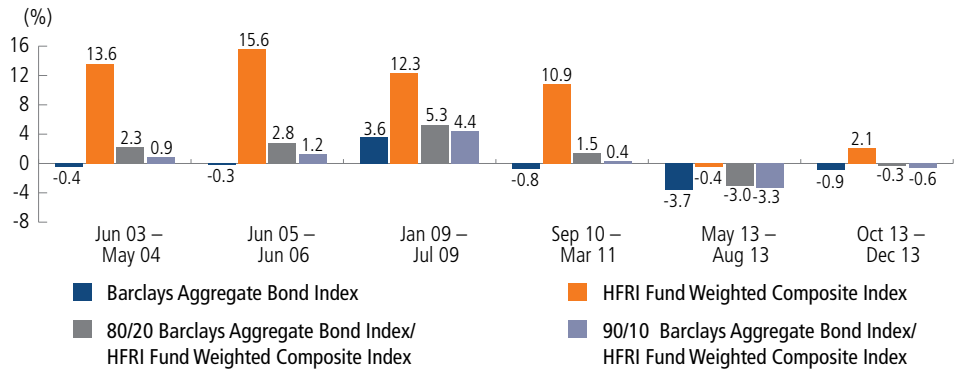
### Conclusion

The potential for hedge funds to protect capital and often benefit from rising rates makes them an attractive complement to traditional allocations for a variety of investors. While the exact timing of a potential rise in interest rates is uncertain, and will depend on economic growth, among other things, it is worthwhile for investors to consider an allocation to hedge funds versus more traditional asset classes sooner rather than later, particularly given the run up in risk assets over the last several quarters.

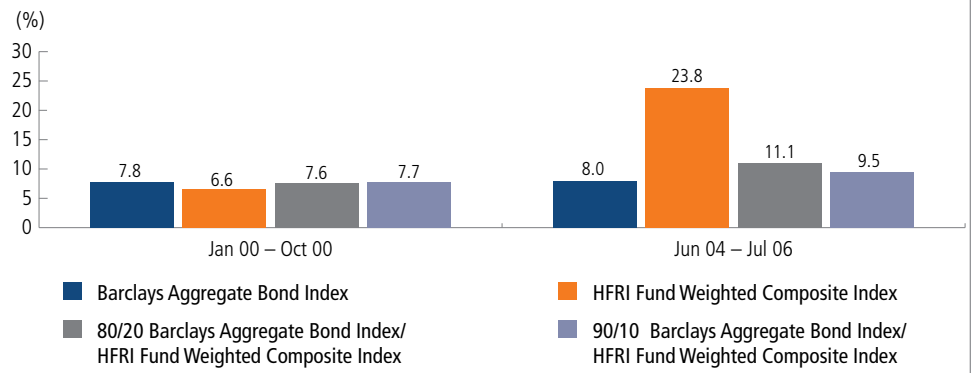
We believe that, by diversifying across hedge fund strategies and building a conservatively positioned portfolio with a robust short book and modest gross and net exposures, investors can achieve absolute returns and a low beta to the broader markets during these challenging times.

**Figure 4.7: Portfolio Performance (January 2000 – December 2013)**

**PERFORMANCE DURING RISING 10-YR TREASURY RATES**



**PERFORMANCE DURING RISING 90-DAY T-BILL RATES**



Sources: Bloomberg, HFR and NB Alternative Investment Management. For illustrative purposes only. **Past performance is no guarantee of future results.** The historical performance of the indices shown is for illustrative purposes and is not meant to forecast, imply or guarantee future performance. Indices are unmanaged and cannot accommodate direct investments. Comparisons to those indices are not meant to imply that hedge funds are comparable to the index of blue-chip stocks and bonds.

## Definitions

**Alpha (Jensen's Alpha):** A risk-adjusted performance measure that is the excess return of a portfolio over and above that predicted by the Capital Asset Pricing Model ("CAPM"), given the portfolio's beta and the average market return. Jensen Alpha's measures the value added of an active strategy.

**Barclays Aggregate Bond Index:** Represents securities that are U.S. domestic, taxable and dollar-denominated. The Index covers the U.S. investment grade, fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities and asset-backed securities.

**Barclays Capital Global High Yield Index:** An unmanaged index considered representative of fixed-rate, non-investment grade debt of companies in the U.S., developed markets and emerging markets.

**Barclays Capital Long Government Credit Index:** Measures the investment return of all medium and larger public issues of U.S. Treasury, agency, investment-grade corporate and investment-grade international dollar-denominated bonds with maturities longer than 10 years.

**Barclays Capital Pan-European Aggregate Index:** The Pan-European Aggregate Index tracks fixed-rate, investment-grade securities issued in the following European currencies: Euro, British pounds, Norwegian krone, Danish krone, Swedish krona, Czech koruna, Hungarian forint, Polish zloty and Slovakian koruna. The principal asset classes in the index are Treasuries, Government-Related, Corporate and Securitized, which include Pfandbriefe, other covered bonds and asset-backed securities.

**Barclays Capital U.S. MBS Index:** Measures the performance of investment-grade fixed-rate mortgage-backed pass-through securities of Government National Mortgage Association ("GNMA"), Federal National Mortgage Association ("FNMA") and Freddie Mac ("FHLMC") that have 30-, 20-, 15-year and balloon securities that have a remaining maturity of at least one year, are investment grade and have more than \$250 million or more of outstanding face value. In addition, the securities must be denominated in U.S. dollars and must be fixed-rate and non-convertible. The Index is market-capitalization weighted, and the securities in the Index are updated on the last calendar day of each month.

**Barclays CTA Index:** Measures the composite performance of established programs. For purposes of this index, an established trading program is a trading program that has four years or more documented performance history. Once a trading program passes this four-year hurdle, its subsequent performance is included in this unweighted index. The Barclay Index does not represent an actual portfolio, which could be invested in, and therefore the index performance results should be deemed to be hypothetical in nature and of comparative value only.

**Basis Risk:** Basis risk refers to the imperfect correlation where offsetting investments in a hedging strategy do not experience price changes in entirely opposite directions from each other. This creates the potential for excess gains or losses in a hedging strategy and adds risk to the position.

**Beta:** A measure of the systematic risk of a portfolio. It is the covariance of the portfolio and the benchmark divided by the variance of the benchmark. Beta measures the historical sensitivity of a portfolio's returns to movements in the benchmark. The beta of the benchmark will always be one. A portfolio with a beta above the benchmark (i.e. >1) means that the portfolio has greater volatility than the benchmark. If the beta of the portfolio is 1.2, a market increase in return of 1% implies a 1.2% increase in the portfolio's return. If the beta of the portfolio is 0.8, a market decrease in return of 1% implies a 0.8% decrease in the portfolio's return.

**Correlation:** A statistical measure of how a portfolio moves in relation to its benchmark. Correlation values range from +1.0 to -1.0. A positive correlation implies that they move in the same direction. Negative correlation means they move in opposite paths. A correlation of +1.0 means that the portfolio and benchmark move in exactly the same direction; -1.0 means they move in exactly the opposite direction; 0.0 means they do not correlate at all with each other.

**Dow Jones-UBS Commodity Index:** An index composed of futures contracts on physical commodities, consisting of commodities traded on U.S. exchanges, with the exception of aluminum, nickel and zinc, which trade on the London Metal Exchange.

**HFRI Fixed Income–Asset Backed Index:** Includes strategies in which the investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread is a fixed income instrument backed physical collateral or other financial obligations (loans, credit cards) other than those of a specific corporation. Strategies employ an investment process designed to isolate attractive opportunities between a variety of fixed income instruments specifically securitized by collateral commitments which frequently include loans, pools and portfolios of loans, receivables, real estate, machinery or other tangible financial commitments. Investment thesis may be predicated on an attractive spread given the nature and quality of the collateral, the liquidity characteristics of the underlying instruments and on issuance and trends in collateralized fixed income instruments, broadly speaking. In many cases, investment managers hedge, limit or offset interest rate exposure in the interest of isolating the risk of the position to strictly the yield disparity of the instrument relative to the lower risk instruments.

**HFRI Fund Weighted Composite Index:** Includes equally-weighted performance indexes, utilized by numerous hedge fund managers as a benchmark for their own hedge funds. The HFRI are broken down into four main strategies, each with multiple sub-strategies. All single-manager HFRI Index constituents are included in the index, which accounts for over 2200 funds listed on the internal HFR Database.

**HFRI Macro Index:** Tracks a broad range of hedge fund strategies in which the investment process is predicated on movements in underlying economic variables and the impact these have on various types of investments. Macro strategies employ a distinct investment thesis that is predicated on predicted or future movements in the underlying instruments, rather than realization of a valuation discrepancy between securities.

**HFRI RV Fixed Income—Corporate Index:** Includes strategies in which the investment thesis is predicated on realization of a spread between related instruments in which one or multiple components of the spread is a corporate fixed income instrument. Strategies employ an investment process designed to isolate attractive opportunities between a variety of fixed income instruments, typically realizing an attractive spread between multiple corporate bonds or between a corporate and risk-free government bond.

**HFRI Equity Hedge Index:** Maintains positions both long and short in primarily equity and equity derivative securities. A wide variety of investment processes can be employed to arrive at an investment decision, including both quantitative and fundamental techniques; strategies can be broadly diversified or narrowly focused on specific sectors and can range broadly in terms of levels of net exposure, leverage employed, holding period, concentrations of market capitalizations and valuation ranges of typical portfolios. Equity Hedge managers would typically maintain at least 50% exposure to, and may in some cases be entirely invested in, equities—both long and short.

**HFRI Macro Systematic Diversified CTA Index:** Has investment processes typically as function of mathematical, algorithmic and technical models, with little or no influence of individuals over the portfolio positioning. Strategies which employ an investment process designed to identify opportunities in markets exhibiting trending or momentum characteristics across individual instruments or asset classes. Strategies typically employ quantitative process which focus on statistically robust or technical patterns in the return series of the asset, and typically focus on highly liquid instruments and maintain shorter holding periods than either discretionary or mean reverting strategies. Although some strategies seek to employ counter trend models, strategies benefit most from an environment characterized by persistent, discernible trending behavior. Systematic Diversified strategies typically would expect to have no greater than 35% of portfolio in either dedicated currency or commodity exposures over a given market cycle.

**Information ratio:** A measure of risk-adjusted return. The average excess return (over an appropriate benchmark or risk-free rate) is divided by the standard deviation of these excess returns. The higher the measure, the higher the risk-adjusted return. The Information Ratio of the benchmark will equal zero.

**Loan-to-value ratio (“LTV”):** A lending risk assessment ratio that financial institutions and other lenders examine prior to approving a mortgage. Typically, assessments with high LTV ratios are generally seen as higher risk and, therefore, if the mortgage is accepted, the loan will generally cost the borrower more.

**NAR Housing Affordability Composite Index:** Measures the ability of a family earning the median income to purchase a median-priced home. The index is formed by the ratio of a percentage of the average income of all families in the area to the monthly loan payment needed to purchase the average priced home sold in that area. An index value of 1.00 indicates that half of the families in the area could afford to buy the average home. The higher the index, the more affordable is the housing in the area at the time.

**Newedge CTA Index:** Provides the market with a reliable daily performance benchmark of major commodity trading advisors (“CTAs”). The Newedge CTA Index calculates the daily rate of return for a pool of CTAs selected from the larger managers that are open to new investment. Selection of the pool of qualified CTAs used in construction of the Index will be conducted annually, with re-balancing on January 1st of each year. A committee of industry professionals has been established to monitor the methodology of the index on a regular basis.

**Standard & Poor’s European Leveraged Loan Index (“ELLI”):** Is a multi-currency index that covers the European leveraged loan market back to 2003 and is currently calculated on a weekly basis.

**Standard & Poor’s/LSTA Leveraged Loan Index:** Is a daily total return index that uses LSTA/LPC Mark-to-Market Pricing to calculate market value change. It tracks the current outstanding balance and spread over LIBOR for fully funded term loans. The facilities included in the index represent a broad cross section of leveraged loans syndicated in the U.S., including dollar-denominated loans to overseas issuers.

**S&P 500 Index:** Consists of 500 stocks chosen for market size, liquidity and industry group representation. It is a market value-weighted index (stock price times number of shares outstanding), with each stock’s weight in the Index proportionate to its market value. The “500” is one of the most widely used benchmarks of U.S. equity performance. As of September 16, 2005, S&P switched to a float-adjusted format, which weights only those shares that are available to investors, not all of a company’s outstanding shares. The value of the index now reflects the value available in the public markets.

**S&P/Case-Shiller® Home Price Index:** An indicator for the U.S. residential housing market, tracking changes in the value of residential real estate, both nationally as well as in 20 metropolitan regions.

**U.S. Dollar Index:** Measures the performance of the US Dollar against a basket of currencies: EUR, JPY, GBP, CAD, CHF and SEK. It includes 9 chart types, 1 up to 1,000 periods and a vast range of customizable technical indicators.

## Risk Considerations

While hedge funds offer you the potential for attractive returns and diversification for your portfolio, they also pose greater risks than more traditional investments. There is no guarantee that any fund will meet its investment objective. An investment in hedge funds is only intended for sophisticated investors. Investors may lose all or a substantial portion of their investment. You should consider the risks inherent with investing in hedge funds:

**Leveraged and Speculative Investments**—An investment in hedge funds is speculative and involves a high degree of risk. Hedge funds commonly engage in swaps, futures, forwards, options and other derivative transactions that can result in volatile fund performance. Leveraging may increase risk in hedge funds.

**Limited Liquidity**—There are limited channels in the secondary market through which investors can attempt to sell and/or purchase interests in hedge funds; and an investor's ability to transact business in the secondary market is subject to restrictions on transferring interest in hedge funds. Hedge funds may suspend or limit the right of redemption under certain circumstances. Thus, an investment in hedge funds should be regarded as illiquid.

**Absence of Regulatory Oversight**—Hedge funds are not required to be registered under the U.S. Investment Company Act of 1940; therefore hedge funds are not subject to the same regulatory requirements as mutual funds.

**Dependence upon Investment Manager**—The General Partner or manager of a hedge fund normally has total trading authority over its respective fund. The use of a single advisor applying generally similar trading programs could mean the lack of diversification and, consequently, higher risk.

**Foreign Exchanges**—Selective hedge funds may execute a portion of their trades on foreign exchanges. Material economic conditions and/or events involving those exchanges may affect future results.

**Fees and Expenses**—Hedge funds often charge high fees; such fees and expenses may offset trading profits. Fees on funds of funds are in addition to the fees of underlying funds, resulting in two layers of fees. Performance or incentive fees may incentivize the manager of those funds to make riskier investments.

**Complex Tax Structures**—Hedge funds may involve complex tax structures and delays in distributing important tax information.

**Limited Reporting**—While hedge funds generally may provide periodic performance reports and annual audited financial statements, they are not otherwise required to provide periodic pricing or valuation information to investors.

**Business and Regulatory Risks of Hedge Funds**—Legal, tax and regulatory changes could occur during the term of a hedge fund that may adversely affect the fund or its managers.

In addition to these risk considerations, specific risks will apply to each hedge fund based on its particular investment strategy. Any investment decision with respect to an investment in a hedge fund or a private equity fund of funds should be made based upon the information contained in the Confidential Private Placement Memorandum of that fund.

**Hedge Fund Data and Analyses**—The hedge fund data contained in this material is based upon internal analyses of information obtained from public and third-party sources. Any returns shown were constructed for illustrative purposes only. There are numerous limitations inherent in the data presented, including incompleteness and unavailability of hedge fund holdings, activity and performance data (i.e., unavailability of short activity and intraquarter activity), and the reliance upon assumptions. No representation or warranty is made as to the accuracy of the information shown, the reasonableness of the assumptions used, or that all assumptions and limitations inherent in such analysis have been fully stated or considered. Changes in assumptions may have a material impact on the data and the results presented. The simulated, estimated and expected returns and characteristics constructed for any hedge fund strategies are shown for illustrative purposes only, and actual returns and characteristics of any fund or group of funds may differ significantly from any simulated, estimated and expected returns shown. All return data is shown net of fees and other expenses and reflect reinvestment of any dividend and distributions.

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