

**TOPICAL ISSUES IN BENCHMARKING:  
BARCLAYS CAPITAL AGGREGATE INDEX**

*By*

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Introduction

Your active fixed income manager is likely sitting squarely on the hot seat right now after several quarters of underperformance. The good (or bad) news is you are not the only one suffering through poor fixed income performance. In fact, less than 27% of core and core plus fixed income managers outperformed the Barclay's Capital Aggregate Index (the Aggregate) in 2008. To put this in perspective, over the last nine year period 60% of core and core plus managers beat the Aggregate<sup>1</sup>.

Poor performance has many institutional investors concerned about the quality of their fixed income managers. However, before cutting back on fixed income or replacing a manager, consider that better times may be on the horizon. The index is undergoing drastic change we believe will make it easier to beat in the near future. In this paper we will discuss the composition of the Barclays Aggregate, analyze active manager performance in 2008, and present three reasons why core and core plus managers have a good chance of outperforming the Aggregate in the future.

The Index

The Aggregate was created in 1986 (with history backfilled to 1976) by Lehman Brothers and was originally called the Lehman Brothers Aggregate index. When Lehman Brothers filed for bankruptcy in September 2008, the company sold its investment banking and capital markets business to Barclays Capital, which rebranded the indices. There were no material changes to the composition or construction methodology of the Aggregate. The purpose of the index is to provide an accurate representation of the performance of the investment grade U.S. bond market. As of January 2009, the index contained about 9,000 fixed income issues and was valued at \$11.4 trillion, representing about one third of the total U.S. bond market<sup>2</sup>.

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<sup>1</sup> eVestment Alliance Core and Core Plus Fixed Income Universes with 300 observations used. Core and core plus managers are the managers most likely to benchmark to the Aggregate.

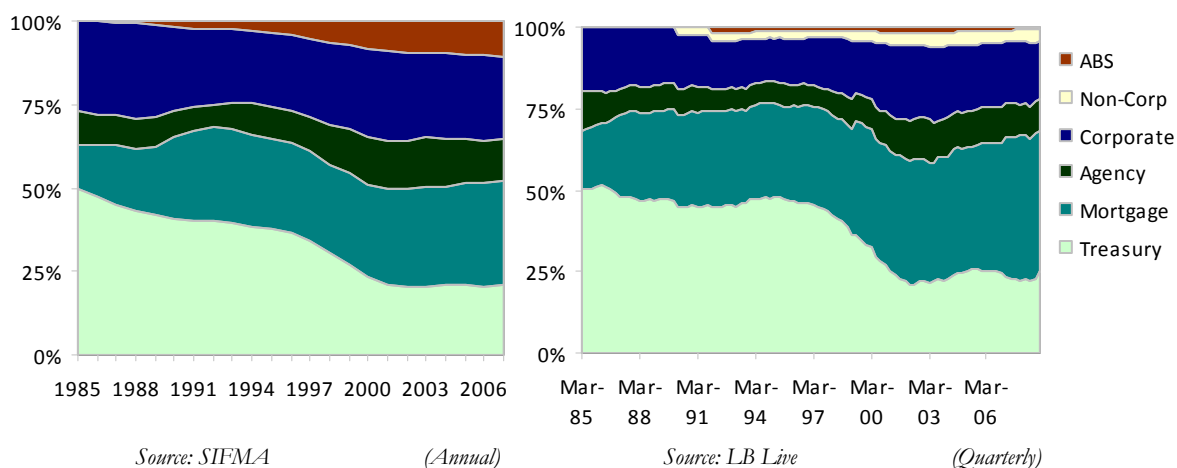
<sup>2</sup> Latest data from SIFMA and the Federal Reserve System indicate that there was \$33.2 trillion of debt outstanding 3Q08.

**Rules for inclusion:** To remain a strong indicator of the overall bond market, the index must maintain a composition similar to total outstanding U.S. debt. Barclays accomplishes this objective by ensuring the index constituents meet certain criteria. Issuances that meet the criteria are added to the index once a month while issues already included in the index are removed as they mature or fail to meet the criteria. The primary criteria are as follows:

- *Size:* At least \$250 million par outstanding or \$25 million tranche size
- *Quality:* Rated investment-grade using middle rating of Moody's, S&P, and Fitch<sup>3</sup>
- *Maturity:* At least one year until final maturity
- *Coupon:* Fixed rate, fixed-to-floating if currently fixed, or step-up coupons with predetermined schedule
- *Currency:* Denominated in U.S. dollars
- *Market of Issue:* Registered with SEC, fully taxable issues

**Composition:** As Figure 1 shows below, the Aggregate's composition has closely resembled the U.S. bond market throughout its history. Agency mortgage-backed securities<sup>4</sup>, Treasuries and Agency<sup>5</sup> debt dominate the index. Government-backed debt such as these comprises approximately 75% of the index, while the remainder is allocated to relatively riskier investment grade corporate debt, non-corporate credit, and commercial mortgage-backed securities<sup>6</sup>. The composition of the index is important to understand given its impact on the success of managers utilizing it as a benchmark.

**Figure 1: Composition of US Debt Market vs. Barclays Aggregate Index, 1985-2008**



<sup>3</sup> Bonds are considered investment grade if rated at or above Baa(Moody's) or BBB(S&P and Fitch).

<sup>4</sup> High quality securities collateralized by single family homes issued by government sponsored entities such as Fannie Mae and Freddie Mac. They are either backed or implicitly backed by the full faith of the government.

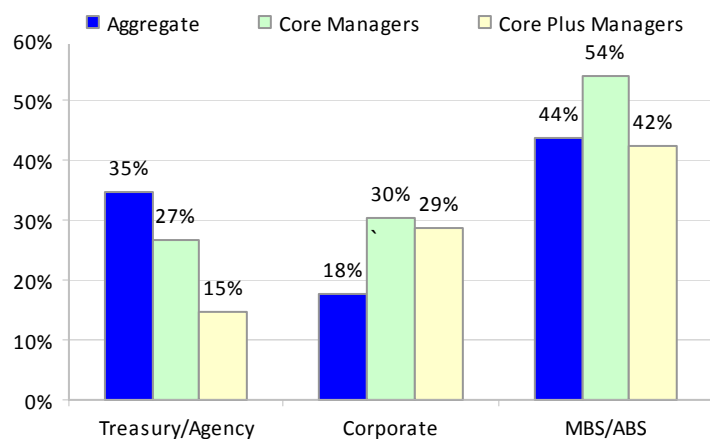
<sup>5</sup> Debt issued by a Federal Agency of government sponsored enterprise (GSE) for direct financing. Federal Agency debt is backed by the full faith of the government. GSE debt is backed implicitly by the government.

<sup>6</sup> Data as of February 28, 2009.

Active Manager Performance in 2008

Now that we understand how the index is compiled, we will analyze active manager performance relative to the benchmark last year. The average core fixed income manager did 1.4% worse than the

**Figure 2: Active Managers vs. Index Composition Comparison, 12/31/08\***



Source: eVestment Alliance

index while the average core plus manager did 8.1% worse in 2008<sup>7</sup>.

Active management strategies underperformed on average, with those taking more risk faring the worst. This underperformance was largely due to the disparity between the composition of the Aggregate and the portfolio holdings of the average active fixed income manager. As noted in the previous section, the index is comprised primarily of very low risk government guaranteed debt.

In contrast, active fixed income managers typically overweight their portfolios to corporate credit, leading to a higher risk/return profile. As you can see from Figure 2 above, Core and Core Plus managers have almost twice as much exposure to corporate credit and much less Treasury/Agency exposure compared to the index. As a result of this overweighting to riskier debt, active managers tend to perform better relative to the index during times of normal risk tolerance and worse during “flights to quality<sup>8</sup>.”

This relationship can be illustrated by comparing the Option Adjusted Spread<sup>9</sup> (OAS) between U.S. Treasuries to active fixed income manager performance. The credit OAS is a good indicator of the level of risk market participants are willing to bear. From Figure 3 below, an inverse relationship between the credit OAS spread and excess active manager returns can be seen<sup>10</sup>. Spreads increase when investors shun risk and decrease as they embrace it. As credit spreads increase active managers perform worse relative to the index and vice versa.

<sup>7</sup> eVestment Alliance Core (256 obs.), Core Plus (148 obs.), and High Yield (133 obs.) Universes used.

\*eVestment Core Fixed Income Universe (187 obs.) and Core Plus Fixed Income Universe (113 obs.) used. Totals do not sum to 100% due to averaging and exclusion of other fixed income sectors.

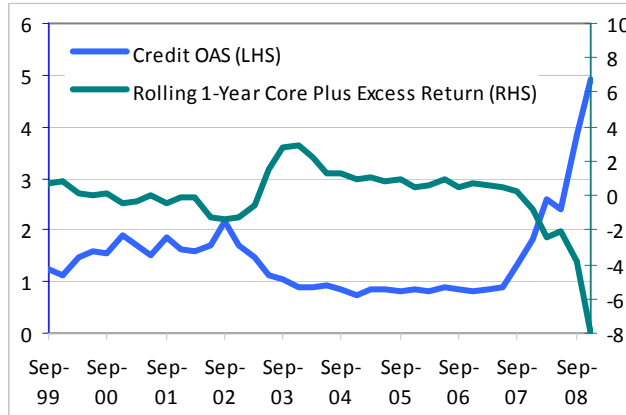
<sup>8</sup> A flight to quality occurs during times of uncertainty when investors sell risky assets in favor of safe assets like government debt.

<sup>9</sup> The option adjusted credit spread is the difference in yield between riskier credit securities and risk-free Treasury securities of similar maturity adjusted to remove the effect of options.

<sup>10</sup> Core plus universe exhibited in chart because these portfolios tend to be more sensitive to spreads, thus providing a better illustration of the relationship. Core fixed income manager excess return exhibited a similar pattern.

This trend played out exactly as expected during the financial crisis in 2008. Rising delinquency rates and struggling financial institutions led market participants to become almost unwilling to bear any type of risk, creating insatiable demand for safe assets like government-backed debt. These conditions set the stage for a classic flight to quality. Spreads increased dramatically (Figure 3) as investors sold risky debt (driving prices down and yields up) and bought safer debt (driving prices up and yields down). At one point, investors were so fearful they accepted negative yields on short-term (30-day) Treasuries. As spreads widened, the average core and core plus manager was punished due to being overweight relatively riskier debt compared to the index.

**Figure 3: Credit OAS Spread vs. Average Core Plus Manager Excess Return Above BC Agg. 1999-2008**



Source: Lehman, eVestment Alliance, Wurts & Associates

### Change is Coming

Hopefully you aren't too depressed to read on because we are just getting to the good news. The same volatility that hurt active managers last year has created tremendous opportunity for them to add value going forward. We believe that active managers will fare better in the near future relative to the index due to three key factors.

**1. Potential Treasury Bubble:** Our research leads us to believe Treasuries are priced at bubble-like levels due to the recent flight to quality. When this trend reverses, Treasuries will underperform credit-based investments. Because most active managers have much lower exposure to Treasuries than the index, underperformance of government debt will be a positive for relative total performance. Simple supply and demand characteristics in the Treasury market provide evidence for our opinion.

#### **Increasing supply:**

*Massive U.S. Government borrowing:* The government will need to borrow trillions of dollars over the next few years to fund dozens of rescue packages and other government programs. The budget deficit is expected to be \$1.9 trillion this year and \$1.4 trillion in 2010. This equates to 13.1% of U.S. GDP which is over twice the next highest deficit as a percentage of GDP (6% in 1983) in the last 40 years<sup>11</sup>. This money will need to be funded by the issuance of record levels of Treasuries

<sup>11</sup> Congressional Budget Office estimate of President's Budget.

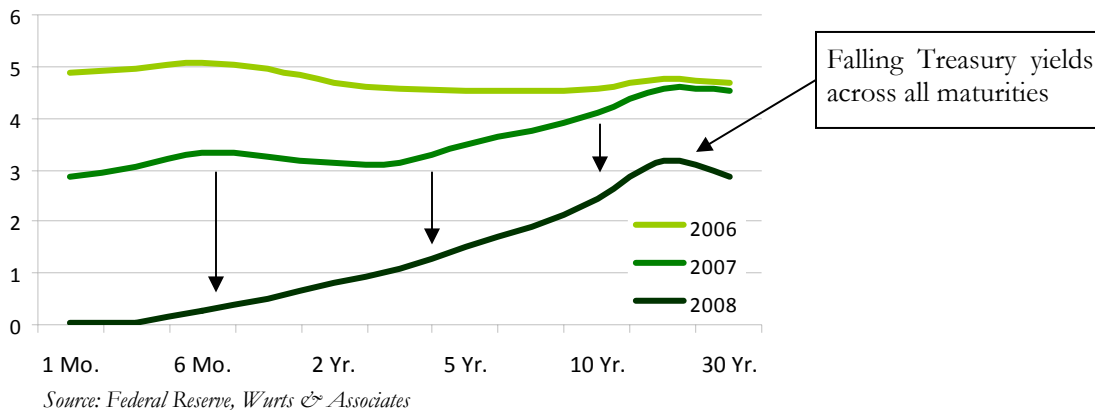
over the next few years. In 2008, there were already 75% more Treasuries issued (\$1 trillion) than the average annual number of issuances in each of the last 10 years (\$592 billion)<sup>12</sup>. Excess supply with stable or decreasing demand will lead to falling Treasury prices and higher yields.

**Decreasing demand:**

*Reversal of “flight to safety” (“flight to risk”):* Treasuries returned an unsustainable 13.7% last year, beating all other asset classes. This was made possible by incredible demand from panicked investors seeking shelter from potential losses. Once uncertainty begins to dissipate, the demand for risk-free assets will return to more normal levels and prices will inevitably come down.

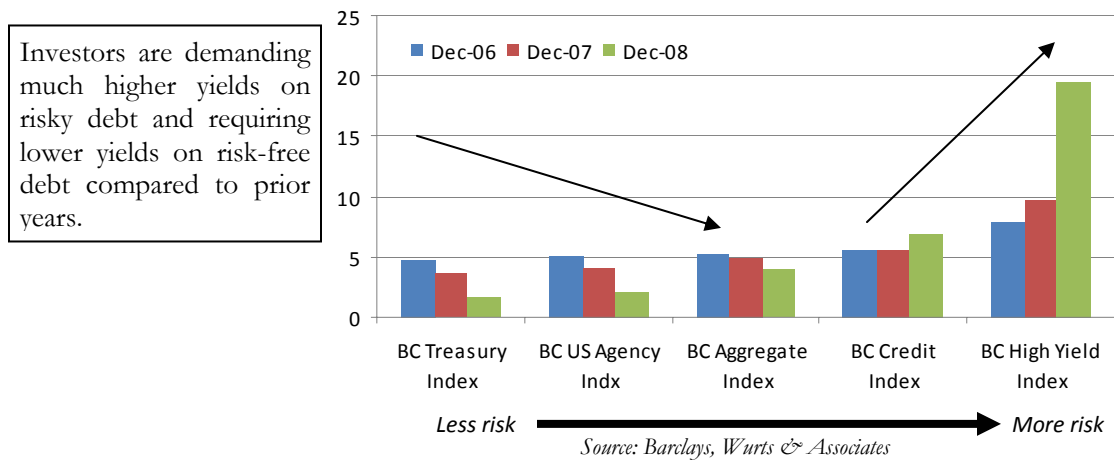
*Historically low Treasury yields:* Treasury yields decreased substantially in 2008 across all maturities (Figure 4 below). At the same time, yields on debt bearing any form of risk went through the roof. As a result, credit spreads expanded significantly and have remained high throughout 2009. Figure 5 (next page) shows the significant increase in riskier debt yields and corresponding decrease in safer debt yields in 2008. The spread between the Treasury index and high yield index, which hovered around 5% in 2007, tripled to 16% in 2008! Even after considering increased defaults, the high yields on non-government credit will eventually be enough to entice investors to once again bear credit risk. When they do, yields will converge to more normal levels and Treasuries will underperform riskier debt.

**Figure 4: Treasury Yield Curve, 2006-2008**



<sup>12</sup> Securities Industry and Financial Markets Association (SIFMA).

**Figure 5: Nominal Fixed Income Rates (YTM)**



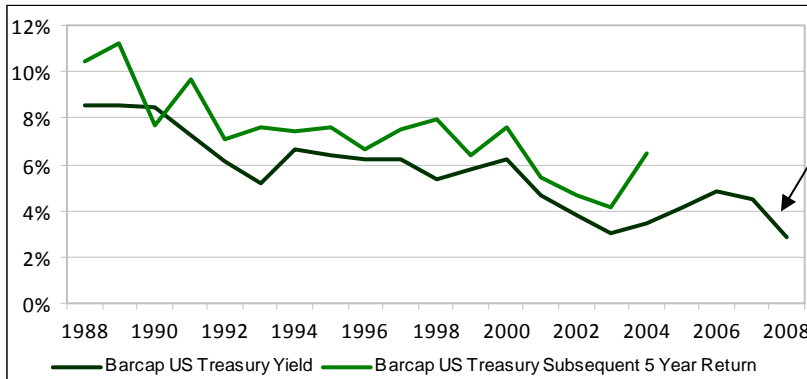
**2. Projected Fixed Income Performance:** The market crisis has produced record levels of volatility and the longest period of outperformance by Treasuries versus other fixed sectors ever seen. Risk-free assets outperform during periods of stress, but in the long run investors are compensated for risk-taking. Our view is that nominal Treasuries and Agencies are priced to provide low to negative real returns after inflation over the next ten years while investment grade credit will do better. As the fixed income market settles back to normal levels, historic long run performance trends will take over and active managers should have a better chance to outperform. Estimated ten year performance can be found in Table 1 below<sup>13</sup>. *Note: we use starting yield as the initial point for our fixed income forecasting because it has proven to be a strong indicator of future total return as shown on the following page.*

	<b>Treasury &amp; Agency</b>	<b>Agency MBS</b>	<b>Barclays Aggregate</b>	<b>US IG Grade Corp. Credit</b>
Starting Yield	2.25	3.63	4.00	6.90
Less Exp. Defaults	0.00	0.00	-0.10	-0.3
Nominal Return	2.25	3.63	3.90	6.6
Less Exp. Inflation	3.00	3.00	3.00	3.0
<b>Real Return</b>	<b>-0.75</b>	<b>0.63</b>	<b>0.9</b>	<b>3.6</b>

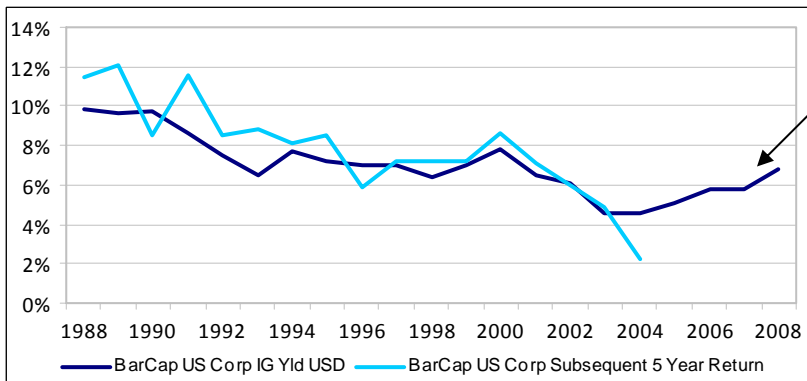
Source: Wurts & Associates Asset Class Expectations Dec 2009, Barclays

<sup>13</sup> These estimates were calculated by beginning with starting yield and subtracting expected defaults and inflation. For more information on forecasted performance, request a copy of our 2009 Asset Class Expectations.

**Figures 6 & 7: Treasury and Corporate Bond Yield vs. Subsequent Returns, 1998-2008**



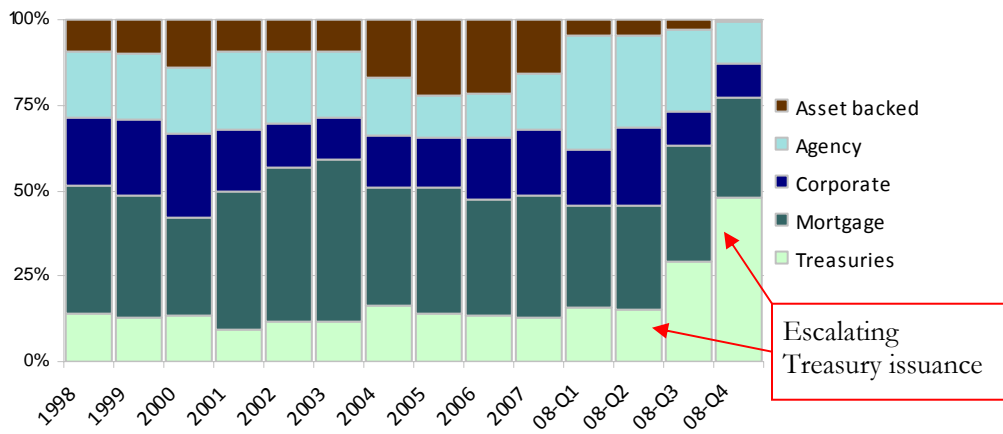
Source: Morningstar Direct



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**3. Changing composition of outstanding U.S. debt:** As stated earlier, the composition of the Aggregate index tracks that of the total outstanding U.S. bond market. This is important because the financial crisis has had a significant impact on the type of new debt being issued. Below is a rundown of how issuances in various fixed income sectors have been affected by the financial crisis.

**Figure 8. New Issuances of Debt\* in the U.S. by Sector, 1998-2008**



\*Excludes municipal issues. (2008 broken out into quarters to emphasize recent change)

Source: SIFMA

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**Treasuries:** As stated above, Treasury issuance is increasing and will continue to increase for a significant period of time. This trend is also illustrated above in Figure 8. As more Treasuries are issued, we could see Treasuries increase from approximately 25% of the index to 30-40%. Additional exposure in the Aggregate to this potentially poorly performing fixed income sector indicates a likelihood of poor prospective performance for the index.

**Corporate Debt:** Unprecedented market conditions have had the opposite effect on corporate issuances. There were 67% fewer new corporate bond issues in the second half of 2008 than in the second half of 2007<sup>14</sup>. One of the primary reasons for this is investor's resistance to take on risk. Little to no demand for corporate credit pushed the cost to borrow higher even as the Federal Reserve lowered rates to effectively 0%. Many companies have been forced to replace maturing long-term debt with short-term bridge loans or commercial paper to push their liabilities out until markets calm down. As the Aggregate only includes issues with over a year of maturity, the maturing corporate debt will simply fall out of the index until longer term debt is issued. Also, a higher than usual amount of downgrades due to tightening standards and deteriorating corporate balance sheets will lead to credit downgrades to below investment grade, which will in turn force more corporate debt out of the Aggregate. While corporate issuances have begun to see a revival in 2009 due to government efforts, it will likely be a while before they return to normal levels.

**Mortgages:** The culprit behind the financial crisis did not come away from the carnage unscathed. In the second half of 2008, there was a 42% cutback in new issues of mortgage-related securities compared to the same period in 2007. Demand for new issues of Non-Agency<sup>15</sup> securitized products has disappeared due to skyrocketing delinquency rates and falling property values, resulting in higher perceived risk. This explains the abundance of these securities stuck on companies' balance sheets. While government programs have been announced that will help to provide some liquidity in the market, we will not see new issues of MBS reach normal levels for quite some time and may never see issuance reach 2006/2007 levels.

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<sup>14</sup> Securities Industry and Financial Markets Association (SIFMA).

<sup>15</sup> Non-Agency MBS are securitized mortgages issued by banks and financial institutions not related to the government. They are typically lower quality than Agency MBS and carry no government guarantee.

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### Conclusion

Considering bubble-level pricing in Treasuries, relatively higher yields on riskier debt and an increase in the allocation of Treasuries in the Barclays Aggregate, our view is it will be easier for core and core plus fixed income managers to outperform the Aggregate going forward. When investors regain their appetite for risk, spreads will inevitably narrow and the more credit-weighted portfolios of core and core plus managers should appreciate while the Aggregate will lag from its increased weighting to overpriced Treasuries. Though credit markets are beginning to show signs of healing necessary to reverse the flight to quality, the turnaround will not happen overnight and it would not be prudent to stray from long-term asset allocation goals or to fire a manager for allocating to credit. Take a deep breath. Greener pastures are ahead.