

# DIVERSIFICATION DASHBOARD

June 2015

## Diversification Ratios®

| <p>TOBAM's Diversification Ratio® (DR) measures to what extent a portfolio is diversified. The DR<sup>2</sup> (square of the diversification ratio) measures the number of effective degrees of freedom to which a portfolio is exposed.</p> <p>As the table shows, the "broad market" indices leave diversification on the table. In addition to a snapshot of each market's DR<sup>2</sup>, the table shows the DR<sup>2</sup> of a well-diversified portfolio, and the fraction of available diversification used by the index.</p> | Universe                 | DR <sup>2</sup><br>Index<br>diversification | DR <sup>2</sup><br>Maximum<br>diversification® | %<br>diversification<br>used by index |
|--|--------------------------|---|--|---------------------------------------|
|  | MSCI All Countries World | 5.92  | 25.40  | 23.3%                                 |
|  | MSCI World               | 5.09  | 19.22  | 26.5%                                 |
|  | MSCI Emerging Markets    | 7.26  | 14.65  | 49.6%                                 |
|  | MSCI Canada              | 4.71  | 10.07  | 46.8%                                 |
|  | MSCI Pacific Ex-Japan    | 3.18  | 9.04   | 35.1%                                 |
|  | MSCI US Equity           | 3.20  | 8.02   | 39.9%                                 |
|  | MSCI Japan               | 2.48  | 6.40   | 38.8%                                 |
|  | MSCI EMU                 | 2.06  | 5.01   | 41.1%                                 |
|  | MSCI UK Equity           | 3.00  | 4.89   | 61.5%                                 |
|  | MSCI Australia           | 2.49  | 4.29   | 58.0%                                 |

Source: TOBAM, figures as of May 29, 2015

## Anti-Benchmark US Credit celebrates its 1<sup>st</sup> anniversary

*Having applied the Anti-Benchmark® to equities since 2006, TOBAM successfully implemented its strategy to corporate bonds for the first time in May 2014.*

*The Anti-Benchmark US Credit is celebrating its first anniversary, providing a good opportunity to look at this innovative strategy and its achievements over the past 12-months.*

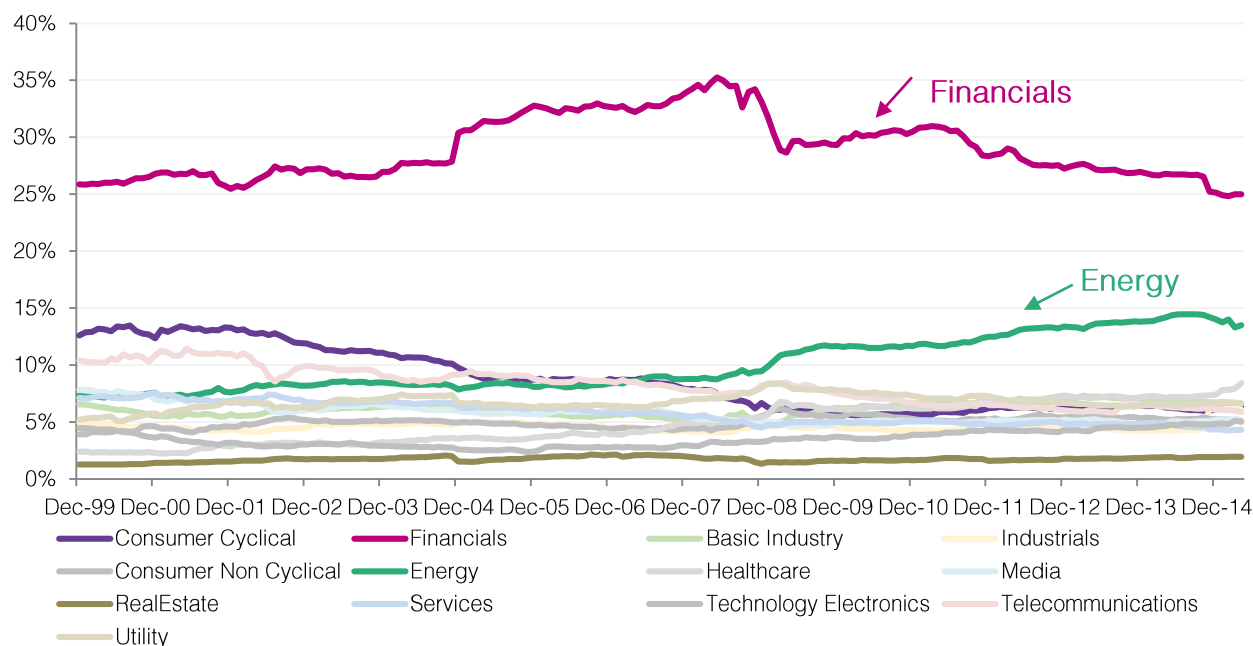
### 1. Introduction

The successful implementation of the Anti-Benchmark strategy to corporate bonds for the first time represented a significant breakthrough in TOBAM's research and execution capabilities. Bringing together the research contributions of 15 investment experts, the strategy has been designed to implement the Anti-Benchmark attributes while overcoming the specificities of the corporate debt market.

The heavy structural biases that plague market-cap weighted equity indices are also present in issuer-weighted bond indices. In effect, corporate bond indices are usually weighted according to the volume of debt issued, a situation that can lead to heavy concentrations and biases towards a limited number of sources of risks.

Financials and financial services issuers, as well as the energy sector for example have historically been over-represented, as illustrated in Chart 1.

Chart 1: Concentration in the Merrill Lynch US Corporate Index: Sector weights



Source: TOBAM. Figures from Dec 1999 to April 2015.

## 2. The track record and the performance drivers

### a. Markets highlights

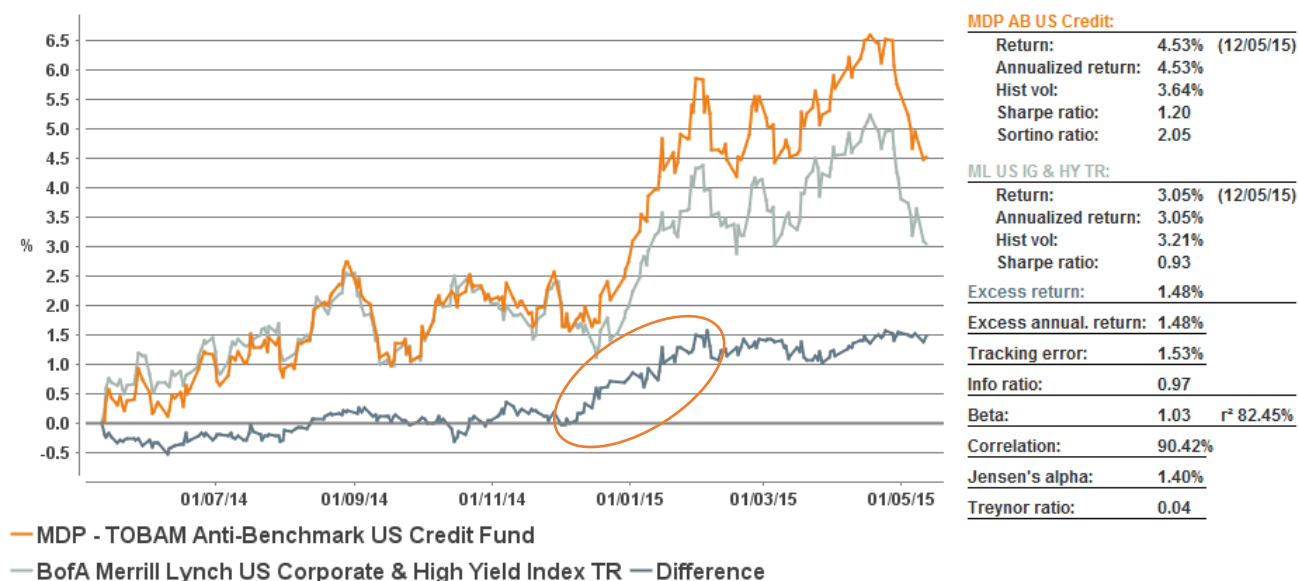
Opposing forces shook up the US Credit market since the launch of the AB US Credit fund in May 2014, marking the long awaited come back of volatility.

On the one hand, the collapse of commodity prices, to which the high yield credit market is heavily exposed, combined with rising expectations of a first rate hike by the Fed in 2015, acted as headwinds for the asset class. On the other hand, strong economic figures in the US on the back of improving consumers purchasing power, and a better macro environment abroad lifted by accommodative monetary policies, provided healthy conditions to keep default rates low and appetite for credit risk reasonably high.

All in all, this uncertainty left the US credit market with a mixed performance on the period, eking out a small gain on a total return basis (IG +3.4%, HY +1.9% from May 12<sup>th</sup>, 2014 to May 12<sup>th</sup>, 2015) thanks to strong Treasuries (10Y UST 40bps tighter), but posting negative excess returns with wider credit spreads (IG spreads +20bps, HY +86bps).

b. Anti-Benchmark® US Credit vs. ML US Corporate & High Yield Index

Chart 2: Performance (May 12<sup>th</sup>, 2014 to May 12<sup>th</sup>, 2015)



Source: TOBAM. Figures as of May 12, 2015. Returns are stated in USD and Gross of Fees.  
Past Performance is not indicative of future results.

Over its first year of live track-record, the MDP AB US Credit returned **4.53% (gross of fees) vs. 3.05%** for the Merrill Lynch Investment Grade & High Yield Index.

c. Understanding the Anti-Benchmark Relative Performance

The Anti-Benchmark investment process aims at delivering the full risk premium via diversification. To achieve this in the context of the Credit asset class, the Anti-Benchmark matches the average duration and the average spread of the benchmark.

Charts 3 & 4 illustrates the duration and spread characteristics of the AB US Credit and the benchmark over the 1-year track record.

Chart 3: Average Duration

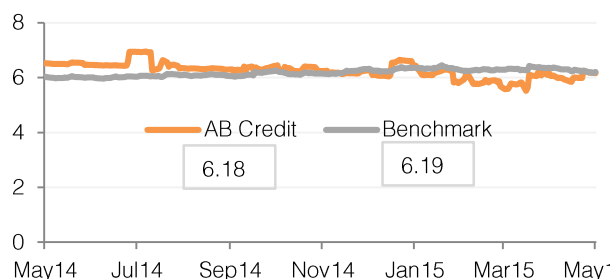
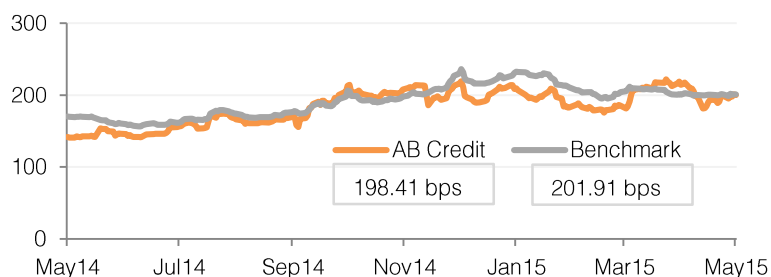


Chart 4: Average Spreads

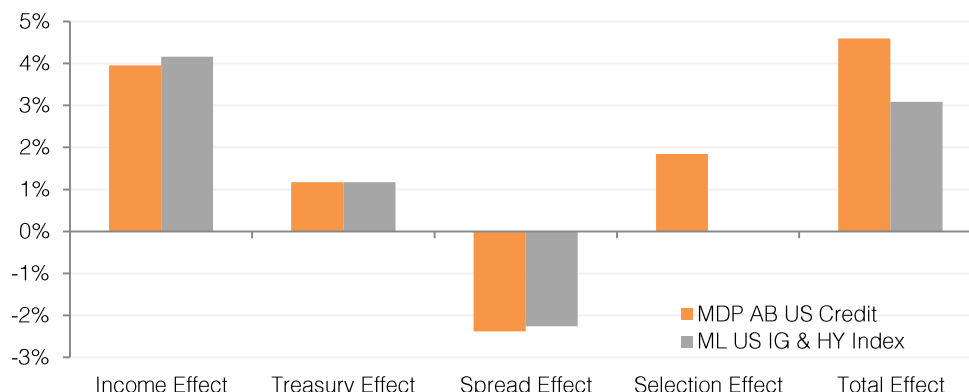


Source: TOBAM – Figures from May 2014 to May 2015. Table figures are as at May 12, 2015.

Chart 5 below analyses the drivers of performance of the Anti-Benchmark US Credit and the benchmark respectively, by breaking it down into various factors. Fixed income requires a unique approach to performance attribution since much of its returns is driven by factors specific to the bond market. We use the “fixed income performance attribution methodology”<sup>\*</sup>.

\*: Campisi, S (2000) : “Primer on fixed income performance attribution”, The Journal of Performance Measurement, vol 4, N°4

**Chart 5: “Fixed Income Performance Attribution” (May 12<sup>th</sup>, 2014 to May 12<sup>th</sup>, 2015)**



Source: TOBAM

Unsurprisingly, since duration and spreads are matched, the “income”, “treasury” and “spread” effects have no explanatory power. The main driver of the outperformance is the so-called “selection effect”, in our approach: the benefits of the bonds’ diversification. The Anti-Benchmark methodology applied to the corporate bonds universe succeeded in providing superior performance by delivering greater diversification.

Despite being steady over the one year span, the bulk of the outperformance was mainly registered over the period 01/12/2014 – 30/01/2015.

In the next section, we narrow down the analysis to this specific period, to analyze further the drivers of the performance.

#### d. Focus on the 01/12/2014 – 30/01/2015 Period

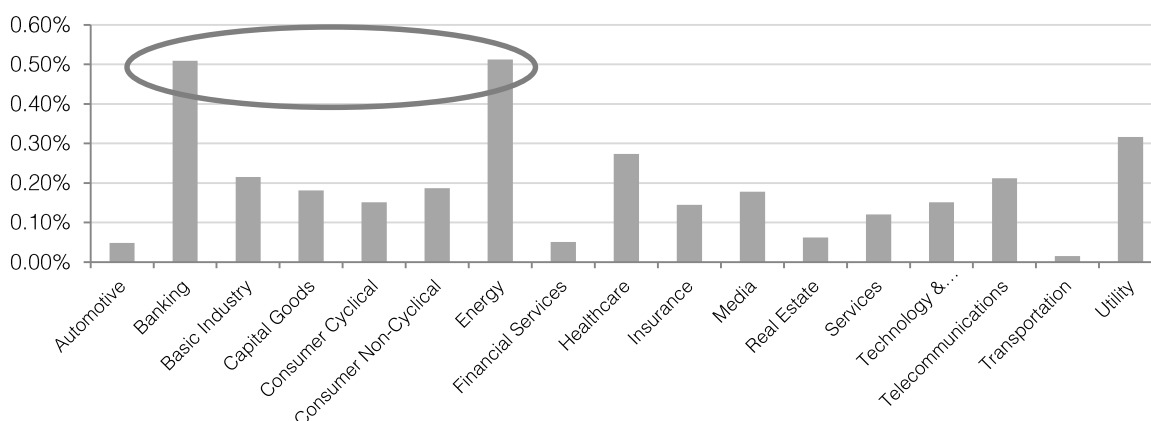
On the contrary to the Anti-Benchmark, the index is not evenly exposed to all risk factors available in the investment universe, thus relative return differences between the AB portfolio and the benchmark can be explained by looking at the performance of the benchmark’s largest bets.

- **Sector Analysis**

As illustrated in Chart 6 below, the largest sources of risk of the ML US Corporate & High Yield Index over the period came from the banking and energy sectors.

**Chart 6: Sources of Risk (Ex-Post) – ML US Corporate & High Yield Index**

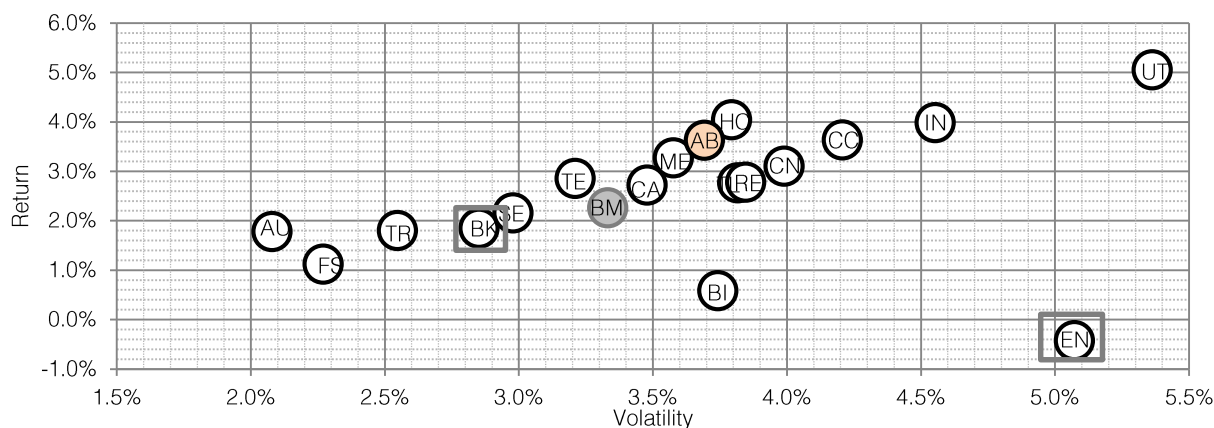
Dec 1, 2014 to Jan 30, 2015



Source: TOBAM

Chart 7 shows these two bets were not rewarded: energy (EN) is the worst performer and the banking sector (BK) underperformed the benchmark over the period.

**Chart 7: Risk/Return by sector – ML US Corporate & High Yield Index**  
Dec 1, 2014 to Jan 30, 2015



Source: TOBAM, Bloomberg. Past performance is not indicative of future results.

MDP AB US Credit (AB), ML US IG & HY (BM), Automotive (AU), Banking (BK), Basic Industry (BI), Capital Goods (CA), Consumer Cyclical (CC), Consumer Non-Cyclical (CN), Energy (EN), Financial Services (FS), Healthcare (HC), Insurance (IN), Media (ME), Real Estate (RE), Services (SE), Technology & Electronics (TE), Telecommunications (TL), Transportation (TR) and Utilities (UT).

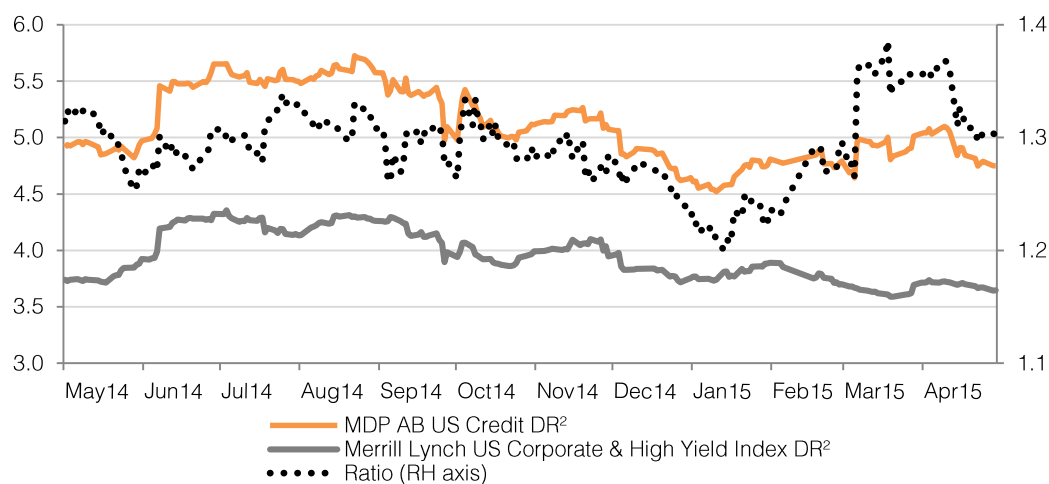
The Anti-Benchmark on the other hand, was comparatively more exposed to more diversifying sectors, such as healthcare or consumer cyclical and utilities.

### 3. Diversification benefits of the strategy and perspectives for AB US Credit

#### a. Diversification Ratios

Chart 8 shows that the measure of diversification, the  $DR^2$ , of the Anti-Benchmark US Credit portfolio is consistently greater than the one available in the ML US Corporate & High Yield Index.

**Chart 8: Diversification Ratios squared: Anti-Benchmark US Credit vs ML US IG & HY Index**  
May 12<sup>th</sup>, 2014 to May 12<sup>th</sup>, 2015



Source: TOBAM

The diversification gap between the benchmark and AB US Credit has been increasing during 2015 and remains at significantly higher levels.

#### 4. Conclusion

Since launch a year ago, the Anti-Benchmark AB US Credit returned 4.53% (gross of fees) vs. 3.05% for the Merrill Lynch US Investment Grade & High Yield Index.

The outperformance was steady throughout the year, with a peak registered between December 2014 and January 2015. The benchmark suffered from its unrewarded concentrations in the banking and energy sectors.

The current concentrations in the benchmark illustrates the opportunity for greater diversification and the Anti-Benchmark US Credit offers a good strategy to take advantage of it by maximizing diversification in the broad and liquid US corporate bond market.



## For more information

TOBAM is an asset management company offering innovative investment capabilities whose aim is to maximize diversification. TOBAM's flagship Anti-Benchmark® strategies, supported by original research and a mathematical definition of diversification, provide clients with diversified core equity exposure, both globally and in domestic markets. The company manages \$8.7 billion (June 2015) via its Anti-Benchmark® strategies for institutional clients worldwide. Its team includes 36 financial professionals.

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