

## Diversification Update at 30/11/2011

<p>TOBAM's Diversification Ratio (DR)<sup>1</sup> measures to what extent a portfolio is diversified. The DR<sup>2</sup> (square of the diversification ratio) corresponds to the number of independent degrees of freedom in a particular portfolio – or the number of independent variables at work. 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>		<b>DR<sup>2</sup> - Index diversification</b>	<b>DR<sup>2</sup> - Maximum diversification</b>	<b>% diversification used by index</b>
	<b>MSCI EMU</b>	1.66	3.50	48%
	<b>MSCI US</b>	1.77	3.84	46%
	<b>MSCI UK</b>	1.82	2.86	64%
	<b>MSCI Japan</b>	2.04	4.88	42%
	<b>MSCI World</b>	2.37	5.20	45%
	<b>MSCI Australia</b>	1.74	3.06	57%
	<b>MSCI Emerging<sup>2</sup></b>	2.96	4.12	72%

## November 2011: diversification protects on the downside

November's stock market decline has kept global markets in negative territory year to date. In particular, the Japan equity market has returned -18.68% for the period, contending with natural disasters and worries about the impact of the financial crisis on global demand. The Most Diversified Anti-Benchmark Japan portfolio provided a substantial cushion against this decline, outperforming the cap-weighted benchmark by +9.73%. The AB Japan strategy's broad investment universe and strong stock selection resulted in higher diversification within and across sectors.

<b>Anti-Benchmark Japan Equity (JPY)</b> <i>MSCI Daily TR Net Japan Local</i>	<b>Performance</b> <b>-8.95%</b> <i>-18.68%</i>	<b>Value added</b> <b>+9.73%</b>	<b>Volatility</b> <b>18.61%</b> <i>24.10%</i>
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## Performance Attribution

As detailed in the “Selection effect” column, year-to-date through November 30, stock selection across the Financials, Consumer Discretionary, Health Care and Industrials sectors collectively added over 9.5% to relative performance:

Name	Total effect	Allocation effect	Selection effect	Portfolio weight	Benchmark weight	Active Weight	Contribution to portfolio volatility	Contribution to benchmark volatility
Financials	3.07%	-0.54%	3.53%	21.42%	17.28%	4.13%	3.66%	4.59%
Consumer Discretionary	2.90%	-0.18%	3.00%	20.88%	19.61%	1.27%	4.05%	4.82%
Health Care	1.85%	0.67%	1.15%	10.34%	6.09%	4.26%	1.96%	0.84%
Industrials	1.44%	-0.60%	2.03%	15.00%	19.97%	-4.97%	1.80%	4.97%
Consumer Staples	0.92%	0.68%	0.23%	8.78%	5.50%	3.28%	0.86%	0.91%
Information Technology	0.52%	0.41%	0.10%	8.40%	13.44%	-5.04%	1.68%	3.40%
Materials	0.20%	0.16%	0.02%	0.53%	7.71%	-7.18%	0.21%	2.27%
Telecommunication Services	0.05%	0.12%	-0.08%	2.71%	4.46%	-1.75%	0.78%	0.86%
Energy	-0.02%	-0.19%	0.18%	0.65%	1.75%	-1.10%	0.09%	0.49%
Cash	-0.10%	-0.09%	0.00%	0.22%	0.00%	0.22%	0.00%	0.00%
Utilities	-1.24%	-3.08%	1.80%	11.06%	4.19%	6.87%	3.47%	0.86%
<b>TOTAL - AB Japan</b>	<b>9.58%</b>	<b>-2.63%</b>	<b>11.96%</b>	<b>100.00%</b>	<b>100.00%</b>		<b>18.55%</b>	<b>24.02%</b>

Note: Performance attribution reflects average portfolio weights for the year-to-date period ending November 30, 2011.

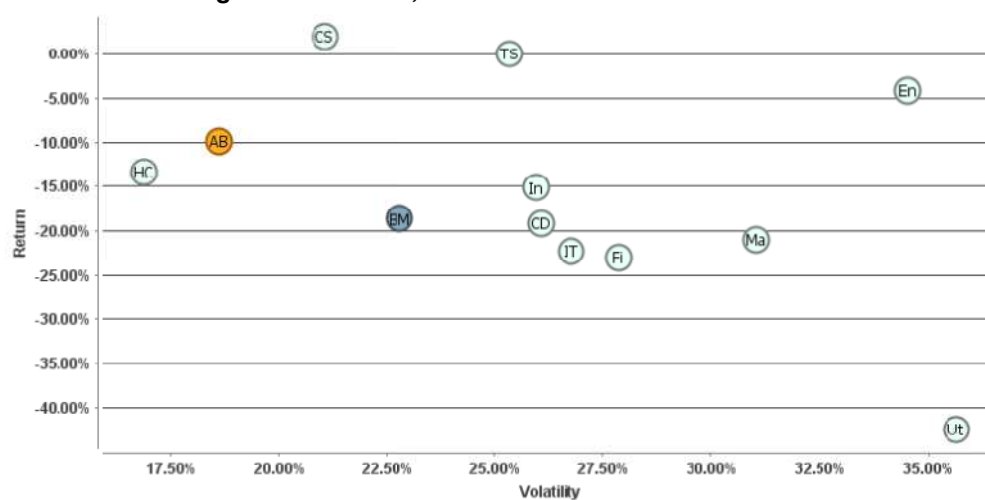
<sup>1</sup>TOBAM's Diversification Ratio measures a portfolio's or index's diversification. It is supported by original research and is based on a mathematical definition of diversification. TOBAM's “Anti-Benchmark” Most Diversified Portfolio® maximizes this Diversification Ratio. Maximizing diversification within a universe of securities provides a result closer to the true market risk premium from that universe. “Maximum Diversification®” and “MaxDiv®” are registered trademarks of TOBAM.

<sup>2</sup> The Anti-Benchmark Emerging Markets Equity strategy filters the reference index to the 200 largest market capitalizations.

## Risk/Return comparison

The portfolio's attractive risk/return profile also illustrates the Anti-Benchmark portfolio's defensive quality during market downturns: the AB outperformed its benchmark by more than 9%, with less volatility than 11 of the 12 sectors in the benchmark. Indeed, the diversified selection of stocks summed to sector positioning that protected the portfolio from the declining market. Despite holding a substantial overweight in the Utilities sector throughout the year (on average +6.87% vs. the benchmark), the fund nonetheless outperformed thanks to an efficient selection of stocks whose performance more than offset that of the Utilities sector.

## Risk-Return for the Japan equity market – MSCI Japan vs. Most Diversified Japan Equity portfolio Year to date through November 30, 2011



### Legend

<b>AB</b>	<b>Anti-Benchmark</b>	<b>BM</b>	<b>Benchmark</b>
<b>CS</b>	<b>Consumer Staples</b>	<b>HC</b>	<b>Health Care</b>
<b>UT</b>	<b>Utilities</b>	<b>FI</b>	<b>Financials</b>
<b>IT</b>	<b>Information Technology</b>	<b>CD</b>	<b>Consumer Discretionary</b>
<b>IN</b>	<b>Industrials</b>	<b>MA</b>	<b>Materials</b>
<b>EN</b>	<b>Energy</b>	<b>TS</b>	<b>Telecom Services</b>

Source: TOBAM, Factset.

## Superior Diversification

The AB Japan portfolio's Diversification Ratio squared ( $DR^2$ ) has continued to rise, whereas the MSCI Japan index's  $DR^2$  marginally declined over the period:

## Evolution of Diversification Ratios squared 2011 year to date

	31/12/2010	30/11/2011
<b>DR<sup>2</sup> – Anti-Benchmark Japan</b>	2.96	4.88
<b>DR<sup>2</sup> – MSCI Japan</b>	2.25	2.04

As detailed above, the  $DR^2$  for the AB Japan portfolio has risen at a faster rate than that of the MSCI Japan, as the diversification differential provided by the AB Japan strategy, already large, continued to grow over the period. The Anti-Benchmark's overall risk composition – the fact that each holding is the most decorrelated from all other holdings – resulted in a more efficient portfolio with enhanced performance and downside protection.

## 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. FTSE also publishes the FTSE TOBAM Maximum Diversification Index Series based on the Anti-Benchmark equity portfolio construction methodology. The company manages over \$2.0 billion via its Anti-Benchmark strategies for institutional clients worldwide. Its team includes seventeen financial professionals based in Paris, Los Angeles and Amsterdam (30.11.2011).

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