

## Diversification Update at 31/03/2012

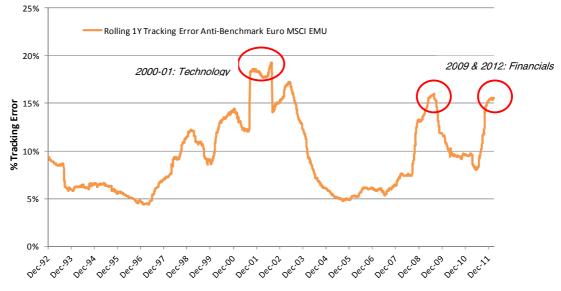
TOBAM's Diversification Ratio (DR)measures to what extent a portfolio is diversified. The DR<sup>2</sup> (square of the diversification ratio) corresponds to the number of independent degrees of freedom in a particular portfolio - or the number of independent variables at work. As the table shows, the "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 welldiversified portfolio, and the fraction of available diversification used by the index.

	DR <sup>2</sup> - Index diversification	DR <sup>2</sup> - Maximum diversification	% diversification used by index
MSCI EMU	1.66	3.65	46%
MSCI US	1.74	3.69	47%
MSCI UK	1.80	2.92	61%
MSCI Japan	2.46	6.60	37%
MSCI World	2.28	5.02	45%
MSCI Australia	1.66	2.76	60%
MSCI Emerging <sup>2</sup>	2.92	4.33	68%

### The concentrated Euro-zone market: how long can it last?

The diversification in the Euro-zone equity cap-weighted benchmark has reached new recent lows, due to continued concentration - indeed, diversification has declined since September 2011. The Diversification Ratio, TOBAM's measure of how well a portfolio or index picks up on the available diversification in an investment universe, has trended downward for the Euro-zone investment universe (MSCI EMU index).

Tracking error measures the distance between two portfolios. As such, the Anti-Benchmark (AB) Euro portfolio's tracking error compared to the MSCI EMU benchmark measures how far the benchmark is from being fully diversified. This tracking error has surpassed 15% as of March 31, 2012. Historically, the tracking error between the AB and the benchmark has peaked at times of extreme index concentration:



#### Benchmark concentration: distance between Most Diversified Portfolio and MSCI EMU

<sup>&</sup>lt;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<sup>®</sup> 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.

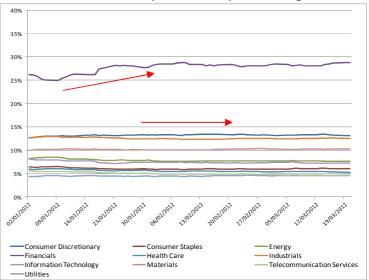


Symptomatic of the concentration prevalent in the Euro-zone market for an even longer period, the current level of tracking error is explained by the fact that the MSCI EMU index continues to bet on the Financials sector. In risk-adjusted terms, the benchmark's allocation to Financials has increased from 25% to almost 30% over the quarter.

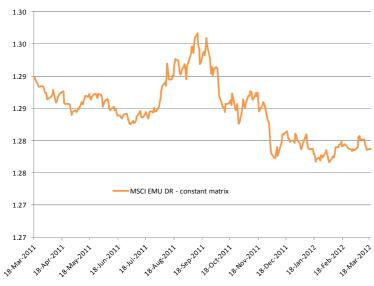
This firstly indicates an extremely bullish outlook on Financials on the part of the index. It moreover implies that over this period, as the sector's weight has increased, the capweighted benchmark's assumption has been that the implicit outperformance of Financials vs. other sectors would be even larger.

#### A bullish benchmark: MSCI EMU is long financials





#### Benchmark bets have not improved diversification



MSCI EMU index - Constant-matrix DR

As it stands today, the benchmark's Diversification Ratio has continued to decline, which signifies that the market has concentrated, as observed in its increasing allocation to Financials. Once this concentration begins to reverse course, we expect the resulting increase in available diversification to be favorable for Anti-Benchmark strategies.



# 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 \$2.3 billion via its Anti-Benchmark strategies for institutional clients worldwide. Its team includes sixteen financial professionals based in Paris, Los Angeles and Amsterdam (29.02.2012).

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