

Diversification Dashboard - 30/04/2013

TOBAM's Diversification Ratio (DR)1 measures to what extent a portfolio is diversified. The DR2 (square of the diversification ratio) measures the number of effective degrees of freedom to which a portfolio is exposed. As the table shows, the "broad market" indices leave diversification on the table. addition to a snapshot of each market's DR2, the table shows the DR² of a well-diversified portfolio, the fraction of available diversification used by the index.

	DR ² - Index diversification	DR ² - Maximum diversification	% diversification used by index
MSCI EMU	2.38	6.66	35.8 %
MSCI US	2.91	9.29	31.3%
MSCI UK	2.56	4.33	59.2%
MSCI Japan	2.49	7.65	32.6%
MSCI World	3.84	15.02	25.5%
MSCI Australia	2.66	6.05	44.1%
MSCI Pacific ex-Japan	2.49	7.19	34.6%
MSCI Canada	3.68	7.54	48.8%
MSCI Emerging	4.66	9.91	47.0%

Canadian Equities: a diverse market?

Increasing global market speculation about central bank plans to remain accommodative sent gold prices to new lows in April and into May, and revealed the extent to which a diversified mix of stocks, particularly within the Metals & Mining sector for the period in question, can add positive performance even in a down market. Consider the Canadian equity market: the S&P/TSX index's selection of gold producers was a principal factor contributing to underperformance. Performance data are provided below:

AB Canada vs. S&P/TSX Composite Canada index March 28, 2013 through May 15, 2013



Source: TOBAM. Performance represents the Anti-Benchmark Canada equity fund. Returns are stated in CAD and gross of fees. Past performance does not guarantee future results.

¹ 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.



Performance and volatility: AB Canada vs. S&P/TSX Composite Canada index March 28, 2013 through May 15, 2013

	3/28/13 – 5/15/13 Performance	3/28/13 – 5/15/13 Volatility
AB Canada portfolio	1.67%	10.45%
S&P TSX index	-1.88%	15.60%
MSCI Canada IMI	-2.66%	16.11%
Gold price (GC1 commodity)	-8.66%	33.28%

Source: TOBAM, Bloomberg. Performance represents the Anti-Benchmark Canada equity fund and is stated gross of fees. Performance attribution is calculated vs. the MSCI Canada IMI index. Past performance does not guarantee future results.

Based on the above information, one might expect the AB Canada portfolio's outperformance to be derived from not holding gold stocks. However, while the portfolio did hold about 5% less in Metals & Mining stocks than the MSCI Canada IMI index, the Anti-Benchmark Canada portfolio was able to identify the most diversifying - i.e., least correlated - stocks, even in a negative performance environment. The table below details performance attribution for the AB Canada portfolio:

Performance & Risk Attribution

March 28, 2013 through May 15, 2013

	AB Canada IMI	MSCI Canada IMI	Difference
Portfolio performance	1.67%	-2.66%	+4.33%
% Weight in Metals & Mining	6.75%	11.55%	-4.80%
Metals & Mining sector performance		-23.06%	
Metals & Mining contribution to absolute performance	-1.67%	-3.15%	
Metals & Mining contrib. to relative portfolio performance	+1.31%		
Portfolio Volatility	10.24%	15.90%	-36%
Metals & Mining contribution to portfolio volatility	2.79% (27% of portf. volatility)	5.41% (34% of bench. volatility)	-2.62%

Source: TOBAM, Bloomberg. Performance represents the Anti-Benchmark Canada equity fund and is stated gross of fees. Performance attribution is calculated vs. the MSCI Canada IMI index. Past performance does not guarantee future results.

The disparity in the AB Canada portfolio's correlation with gold prices compared to that of the S&P/TSX Composite index over this short period is illustrated below:

AB Canada, S&P/TSX & Gold prices: Daily returns correlations

March 28, 2013 - May 15, 2013

	AB Canada	S&P/TSX Composite index	Gold price (GC1 commodity)
AB Canada	1		
S&P/TSX Composite index	84%	1	
Gold price (GC1 commodity)	48%	66%	1
-		Source:	TORAM Bloomhera

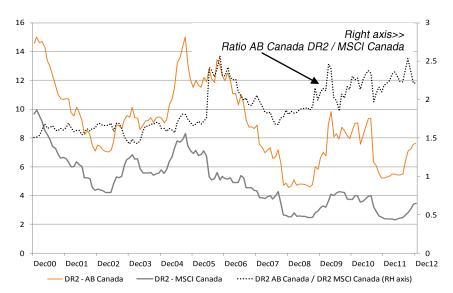
Source: TOBAM, Bloomberg



In conclusion, an event such as the drop in the price of gold can serve not only to remind investors of the extent to which cap-weighted indices have significant room for greater diversification. Indeed, over time, the AB Canada portfolio has remained, on average, twice as diversified as the benchmark index.

Diversification ratios squared: AB Canada vs. MSCI Canada

The DR2 (square of the diversification ratio) measures the number of effective degrees of freedom to which a portfolio is exposed.



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 more than \$4.2 billion via its Anti-Benchmark strategies for institutional clients worldwide. Its team includes seventeen financial professionals.

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