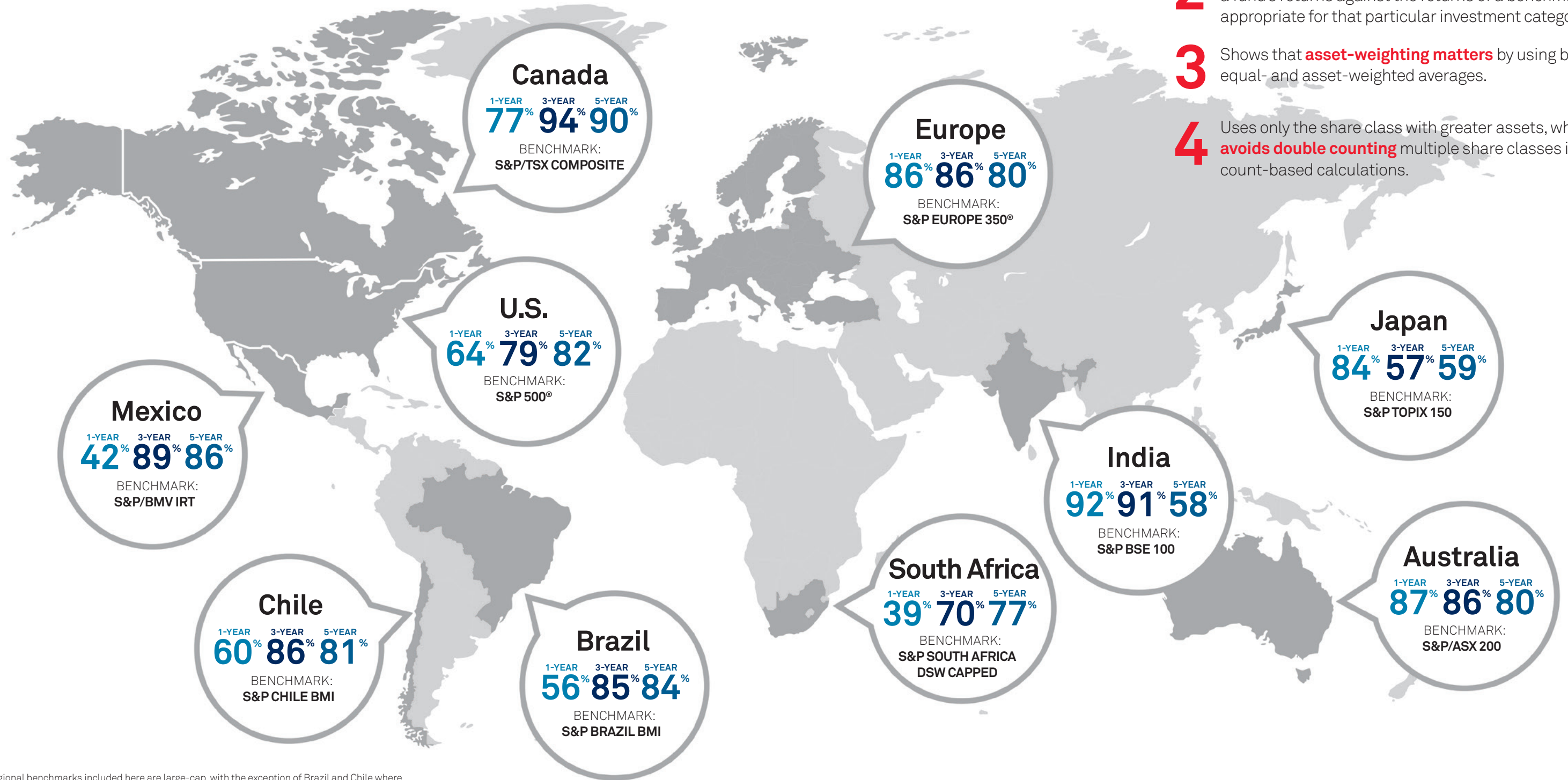


SPIVA[®] Around the World

Percentage of active funds outperformed by benchmarks* over 1-, 3-, and 5-year periods



The SPIVA Difference

- 1 Accounts for the entire opportunity set—not just the survivors—thereby **eliminating survivorship bias**.
- 2 Applies an **apples-to-apples comparison** by measuring a fund's returns against the returns of a benchmark appropriate for that particular investment category.
- 3 Shows that **asset-weighting matters** by using both equal- and asset-weighted averages.
- 4 Uses only the share class with greater assets, which **avoids double counting** multiple share classes in all count-based calculations.

* Regional benchmarks included here are large-cap, with the exception of Brazil and Chile where SPIVA results displayed reflect regional broad market indices. Multiple benchmarks exist in all regions tracked by SPIVA. For more information on SPIVA methodology, including a full list of regional benchmarks and results, visit www.spdji.com/spiva

Source: S&P Dow Jones Indices LLC, Morningstar, Funddata, CRSP. Data as of December 31, 2018. Charts and tables are provided for illustrative purposes. Past performance is no guarantee of future results.

SPIVA: S&P Indices Versus Active

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