



How Funds Are Positioned for a Low-Carbon Future

Topic of the month November 2017

As the world moves toward a low-carbon future, companies of many stripes are adopting renewable and clean-energy technologies. That, of course, has implications for stocks and the portfolios that hold them. How can asset owners understand the carbon-transition risks in their portfolios?

One way is to categorize funds by different types of exposure to carbon-transition risk. Using a matrix approach, asset owners may be able to better understand what long-term bets — intended or not — are embedded in their portfolios. This approach may also help investors develop more resilient investment and risk management strategies as the global energy mix evolves.

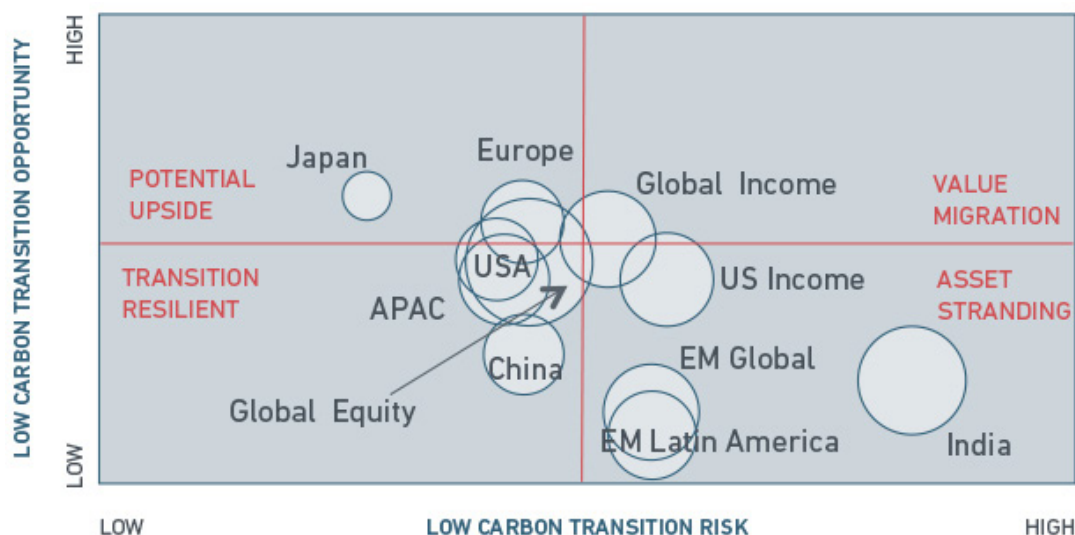
MSCI's Low Carbon Transition Matrix classifies 5,737 U.S.-domiciled equity mutual funds and exchange-traded fund families into four categories:

- **Asset-stranding:** investment strategies with high exposure to carbon-intensive assets probably at risk of becoming obsolete, or dependent on revenue derived from fossil-fuel activities. Dominant sectors: energy and materials.
- **Value migration:** funds exposed to both high risk and high opportunity during the transition to low-carbon techniques. Dominant sector: utilities, where technology is driving a migration from fossil-fueled power generation to renewable energy-based methods.
- **Transition-resilient:** funds that have low direct exposure to carbon-intensive sectors but might have indirect exposure, e.g., through carbon-intensive supply chains. Dominant sectors: healthcare, telecommunications, consumer staples and consumer discretionary.
- **Potential upside:** funds focused on sectors that appear likely to benefit from transition such as renewable energy, electric vehicles and energy-efficient equipment. Dominant sectors: information technology and industrials.

Below, we plot the average transition risk score and average transition opportunity score for U.S.-domiciled diversified equity funds for various regions, based on their Lipper classification.



Diversified equity fund categories by their exposure to carbon transition risk



Bubble size denotes standard deviation of Low Carbon Transition performance score of funds classified under a given fund category (based on Lipper classification).

Source: U.S.-domiciled funds, as of Sept. 6, 2017

To arrive at this framework, we used MSCI ESG Research’s proprietary data sets, Carbon Metrics and Environmental Impact Metrics, to assess exposure – both to low-carbon transition risks and to opportunities. On the risk side, these tools measure fund-weighted average carbon intensity (a fund’s exposure to carbon-intensive companies) and fossil-fuel revenue exposure (exposure to fossil-fuel and related businesses such as thermal coal mining). On the opportunity side, they calculate revenue exposure to low-carbon solutions such as renewable energy, energy-efficient equipment and green buildings.

Key findings (summarized in exhibit below):

- Close to 1,300 fund families with approximately USD 2.7 trillion in net asset value (NAV) were exposed to asset-stranding risk. They represented 24% of U.S.-domiciled equity-fund NAV based on Lipper’s classification.
- Some 3,702 fund families (USD 7.2 trillion in NAV) showed potential upside or appeared transition-resilient.
- Although energy and materials funds are, unsurprisingly, in the stranded-asset category, there was considerable exposure variation within each sector.
- Japanese equity funds had the highest exposure to companies providing low-carbon solutions.



Low-carbon transition matrix: fund risks and opportunities

MSCI LOW CARBON TRANSITION CATEGORY	NUMBER OF FUND FAMILIES	% OF FUND FAMILIES	TOTAL NET ASSET VALUE (BILLION USD)	% OF TOTAL NET ASSET VALUE
Asset Stranding	1,289	22.5%	2,689	23.8%
Value Migration	746	13.0%	1,395	12.3%
Transition Resilient	1,703	29.7%	3,190	28.2%
Potential Upside	1,999	34.8%	4,047	35.7%

Source: MSCI ESG Research. U.S.-domiciled funds, as of Sept. 6, 2017

This matrix can be used by:

- Asset owners to understand the intended and unintended bets embedded in their portfolios
- Fund allocators, when screening or selecting more climate-aligned funds
- Fund managers to inform their climate-risk integration strategies

For example, funds in the value-migration category can employ integration strategies that involve selecting companies based on their carbon risk-management efforts. Funds in the asset-stranding category could adopt strategies that involve divesting from or tilting toward companies based on their exposure to carbon-intensive assets.

Further reading:

[Integrating ESG Criteria into Factor Index Construction](#)
[Investing for the Long Run: ESG and Performance Drivers](#)
[Can ESG Add Alpha?](#)



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About MSCI ESG Research

MSCI ESG Research LLC is the world's largest provider of ESG research and data¹. We have over 40 years of combined experience in ESG based on legacy firms IRRC, KLD, Innovest and GMI Ratings. We analyze 6,400 companies (11,800 total issuers including subsidiaries) to help institutional investors understand how ESG factors can impact the long-term risk and return profile of their investments.

MSCI Inc. is the world's largest provider of ESG indexes² with over 700 ESG Equity and Fixed Income Indexes designed to help institutional investors more effectively benchmark ESG investment performance, issue index-based investment products, as well as manage, measure and report on ESG mandates.

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¹ By number of clients based on public information produced by Sustainalytics, Vigeo/EIRIS and Oekom as of April 2017.

² By number of indexes and by assets tracking the indexes compared with publically available information produced by FTSE and S&P Dow Jones as of April 2017