TDC ISSUE BRIEFS

HOME BIAS AND GLOBAL DIVERSIFICATION





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Every day we enjoy the benefits of an interconnected world. We might start our day with a cup of coffee that originated in South America, check our email on a smartphone designed in California and manufactured in Taiwan, then shower and change into clothes woven from Egyptian fabrics before driving a German-made car or riding in a French-built train to work.

As consumers, we rarely think twice about the benefits of access to the cornucopia of goods the global market has to offer. Yet, as investors, we will often concentrate our portfolios in favor of our home market at the expense of global diversification. For example, while US stock markets represent just over 50% of the value of global equity markets, many US investors tend to allocate around 70% of their equity assets to domestic stocks.¹ This phenomenon, which can be observed across countries around the world, is known in the investment community as "home-country bias."

By pursuing a globally diversified approach to investing, one doesn't have to attempt to pick winners to achieve a rewarding investment experience.

Given that certain frictions may be associated with investing abroad, a home-country bias may make sense for an investor in certain cases. For example, for tax-deferred investors in the US, foreign dividend tax withholdings may present a disadvantageous tax drag on international investments. In general, however, neglecting the benefits that global diversification has to offer may increase risks and decrease the investment opportunity set.

As **Exhibit 1** illustrates, 13 different developed countries (out of 21) had the best-performing equity market in a given calendar year for the 20 years ended in December 2016, and no country had the best-performing market for more than two consecutive years.

EXHIBIT 1. EQUITY RETURNS OF DEVELOPED MARKETS ANNUAL RETURN (%)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
RETURNS	Switzerland 44.2	Finland 121.6	Finland 152.6	Switzerland 5.9	New Zealand 8.4	New Zealand	Sweden 64.5	Austria 71.5	Canada 28.3	Spain 49.4	Finland 48.7	Japan -29.2	Norway 87.1	Sweden 33.8	Ireland 13.7	Belgium 39.6	Finland 46.0	usa 12.7	Denmark 23.4	Canada 24.6
	Italy 35.5	Belgium 67.7	Singapore 99.4	Canada 5.3	Australia 1.7	Austria 16.5	Germany 63.8	Norway 53.3	Japan 25.5	Ireland 46.8	Hong Kong 41.2	Switzerland -30.5	Australia 76.4	Denmark 30.7	New Zealand 5.5	Denmark 31.3	Ireland 41.2	New Zealand	Ireland 16.5	New Zealand
	Denmark 34.5	Italy 52.5	Sweden 79.7	Denmark 3.4	Ireland -2.8	Australia —1.3	Spain 58.5	Belgium 43.5	Austria 24.6	Singapore 46.7	Germany 35.2	usa -37.6	Singapore 74.0	Hong Kong 23.2	usa 1.4	Singapore 31.0	usa 31.8	Denmark 6.2	Belgium 12.1	Norway 13.3
	usa 33.4	Spain 49.9	Japan 61.5	Norway -0.9	Austria -5.6	Norway -7.3	Austria 57.0	treland 43.1	Denmark 24.5	Norway 45.1	Norway 31.4	Spain -40.6	Sweden 64.2	Singapore 22.1	ик -2.6	Germany 30.9	Germany 31.4	Hong Kong 5.1	Japan 9.6	Australia 11.4
	Spain 25.4	France 41.5	Hong Kong 59.5	Italy -1.3	Belgium —10.9	Italy -7.3	New Zealand 55.4	Sweden 36.3	Norway 24.3	Sweden 43.4	Canada 29.6	France -43.3	Hong Kong 60.2	Canada 20.5	Switzerland -6.8	New Zealand 29.3	Spain 31.3	Belgium 4.1	Austria 3.5	Austria 11.3
	Germany 24.6	Ireland 35.3	Canada 53.7	Netherlands -4.1	Spain 11.4	Japan -10.3	Canada 54.6	New Zealand 35.2	Finland 16.7	Denmark 38.8	Singapore 28.4	Canada -45.5	Belgium 57.5	Japan 15.4	Norway -10.0	Hong Kong 28.3	Netherlands 31.3	Singapore 3.0	Italy 2.3	usa 10.9
	Netherlands 23.8	usa 30.1	Norway 31.7	France -4.3	Norway -12.2	Switzerland —10.3	Australia 49.5	Italy 32.5	Switzerland 16.3	Belgium 36.7	Australia 28.3	Germany -45.9	Canada 56.2	usa 14.8	Belgium -10.6	Austria 25.9	Belgium 27.6	Ireland 2.3	Finland 2.0	France 4.9
	ик 22.6	Germany 29.4	France 29.3	Australia —10.0	usa -12.4	Singapore —11.0	Denmark 49.3	Denmark 30.8	Australia 16.0	Austria 36.5	Denmark 25.6	Singapore -47.4	New Zealand 50.4	Australia 14.5	Australia —11.0	Australia 22.1	Japan 27.2	Canada 1.5	Netherlands	Netherlands 4.8
	Finland 17.3	Switzerland 23.5	usa 21.9	ик -11.5	ик -14.0	Canada —13.2	Norway 48.1	Australia 30.3	Singapore 14.4	Germany 36.0	Spain 24.0	Denmark -47.6	Spain 43.5	Switzerland	Netherlands -12.1	Sweden 22.0	Switzerland 26.6	Switzerland -0.1	USA 0.7	Germany 2.8
	Ireland 15.8	Netherlands 23.2	Germany 20.0	Austria -12.0	Denmark -14.8	Belgium -15.0	Ireland 43.8	Spain 28.9	Netherlands 13.9	France 34.5	Netherlands 20.6	Netherlands -48.2	ик 43.3	Norway 10.9	Spain -12.3	France 21.3	France 26.3	Finland -0.7	Switzerland 0.4	Japan 2.4
	Belgium 13.6	ик 17.8	Australia 17.6	Ireland -12.7	Hong Kong —18.6	ик -15.2	France 40.2	Hong Kong 25.0	Sweden 10.3	Italy 32.5	France 13.2	UK -48.3	Austria 43.2	Finland 10.3	Canada —12.7	Netherlands 20.6	Denmark 25.2	Australia —3.4	France -0.1	Hong Kong 2.3
	Sweden 12.9	Sweden 14.0	New Zealand 12.9	usa -12.8	Canada —20.4	Spain -15.3	Hong Kong 38.1	Singapore 22.3	Germany 9.9	Netherlands 31.4	New Zealand 8.9	Sweden -49.9	Netherlands 42.3	Austria 9.9	Japan -14.3	Switzerland 20.4	Sweden 24.5	Netherlands -3.5	Hong Kong -0.5	Singapore 1.4
	Canada 12.8	Denmark 9.0	ик 12.5	Finland -14.2	Switzerland —21.4	Denmark -16.0	Italy 37.8	Canada 22.2	France 9.9	Australia 30.9	ик 8.4	Italy -50.0	Denmark 36.6	UK 8.8	Sweden -16.0	Norway 18.7	ик 20.7	Japan -4.0	Germany -1.9	Sweden 0.6
	France 11.9	Australia 6.1	Denmark 12.1	Hong Kong —14.7	Netherlands —22.1	Hong Kong —17.8	Singapore 37.6	ик 19.6	Belgium 9.0	ик 30.6	Italy 6.1	Australia -50.7	France 31.8	Germany 8.4	Denmark -16.0	usa 15.3	Italy 20.4	Spain -4.7	Sweden -5.0	ик -0.1
	Norway 6.2	Japan 5.1	Netherlands 6.9	Germany -15.6	France -22.4	Netherlands -20.8	Japan 35.9	France 18.5	Hong Kong 8.4	Hong Kong 30.4	usa 5.4	Hong Kong -51.2	Italy 26.6	New Zealand	Hong Kong —16.0	ик 15.3	Austria 13.4	ик -5.4	New Zealand -6.3	Spain —1.0
	Austria 1.6	Austria 0.4	Spain 4.8	Spain -15.9	Germany -22.4	France -21.2	Belgium 35.3	Germany 16.2	ик 7.4	Finland 29.9	Switzerland 5.3	New Zealand -53.8	usa 26.3	Netherlands 1.7	France -16.9	Finland 14.6	New Zealand	Sweden -7.5	ик -7.6	Finland -4.7
	Australia —10.4	Hong Kong —2.9	Italy -0.3	Belgium -16.8	Singapore —23.4	usa -23.1	Switzerland 34.1	Japan 15.9	usa 5.1	Switzerland 27.4	Austria 2.2	Finland -55.2	Switzerland 25.3	Belgium -0.4	Singapore -17.9	Italy 12.5	Hong Kong 11.1	Italy -9.5	Australia —10.0	Switzerland -4.9
	New Zealand —14.1	Canada —6.1	Switzerland -7.0	Sweden -21.3	ttaly -26.6	Ireland -26.2	ик 32.1	Switzerland 15.0	Spain 4.4	Canada 17.8	Sweden 0.6	Norway -64.2	Germany 25.2	France -4.1	Germany -18.1	Canada 9.1	Norway 9.4	France -9.9	Norway -15.0	Ireland -7.1
	Hong Kong -23.3	Singapore -12.9	Austria -9.1	Singapore -27.7	Sweden -27.2	Finland -30.3	usa 28.4	Netherlands 12.2	Italy 1.9	New Zealand 16.6	Belgium -2.7	Belgium -66.5	Ireland 12.3	Italy -15.0	Italy -23.2	Japan 8.2	Canada 5.6	Germany -10.4	Spain -15.6	Belgium -7.6
	Japan -23.7	New Zealand -22.6	Ireland -12.6	Japan -28.2	Japan -29.4	Sweden -30.5	Netherlands 28.1	usa 10.1	New Zealand	usa 14.7	Japan -4.2	Austria -68.4	Finland 11.1	Ireland -18.1	Finland -31.9	Ireland 5.7	Australia 4.2	Norway -22.0	Singapore -17.7	taly -10.5
	Singapore —30.0	Norway -30.1	Belgium -14.3	New Zealand -33.5	Finland -38.2	Germany -33.2	Finland 19.4	Finland 6.1	Ireland -2.3	Japan 6.2	Ireland -20.1	Ireland -71.9	Japan 6.3	Spain -22.0	Austria -36.4	Spain 3.0	Singapore 1.7	Austria -29.8	Canada -24.2	Denmark -15.8
_	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016

In US dollars. Source: MSCI developed markets country indices (net dividends). MSCI data © MSCI 2017, all rights reserved. Indices are not available for direct investment. Index performance does not reflect expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results.

This trend was also observable in emerging markets. As Exhibit 2 illustrates, 13 different emerging market countries (out of 20) had the best-performing market in a given year, and no country had the best-performing market in consecutive years.

This data shows that it is difficult to know which markets will outperform from year to year. By holding a globally diversified portfolio, investors are instead well positioned to capture returns wherever they occur.

EXHIBIT 2. EQUITY RETURNS OF EMERGING MARKETS ANNUAL RETURN (%)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
HGH ■	Turkey 118.1	Korea 141.1	Turkey 252.4	Czech Rep.	Russia 55.9	Czech Rep.	Thailand 144.6	Colombia 133.0	Egypt 161.6	China 82.9	Peru 94.7	Colombia -25.1	Brazil 128.6	Thailand 56.3	Indonesia 6.5	Turkey 64.9	Taiwan 9.8	Egypt 29.3	Hungary 36.3	Brazil 66.7
Ī	Russia 112.1	Philippines	Russia 247.1	Poland -4.0	Korea 48.7	Indonesia 42.8	Turkey 125.9	Egypt 126.2	Colombia 107.5	Indonesia 74.8	Brazil 80.0	Chile -35.4	Indonesia 127.6	Peru 53.3	Malaysia 0.1	Philippines 47.6	Egypt 8.2	Indonesia 27.2	Russia 5.0	Russia 55.9
	Hungary 95.2	Thailand 11.6	Malaysia 114.3	Brazil -11.4	Colombia 45.8	Hungary 30.7	Brazil 115.0	Hungary 92.5	Russia 73.8	Peru 62.6	Turkey 74.8	South Africa -37.9	Russia 104.9	Chile 44.8	Philippines 0.1	Egypt 47.1	Malaysia 7.7	Philippines 26.4	India -6.1	Peru 55.6
	Mexico 53.9	Czech Rep.	Indonesia 93.5	Chile —15.1	Peru 19.9	Peru 30.5	Peru 94.3	Czech Rep. 87.3	Korea 58.0	Phillippines 59.7	India 73.1	Peru -40.1	India 102.8	Colombia 43.4	Thailand —2.4	Poland 41.0	Korea 4.2	India 23.9	Philippines -6.3	Hungary 35.4
	Colombia 41.8	Poland -6.7	Korea 92.4	Malaysia —16.0	Mexico 18.5	South Africa 28.0	Egypt 91.8	Poland 61.5	Brazil 57.0	Russia 55.9	China 66.2	Malaysia -41.2	Turkey 98.5	Malaysia 37.0	Czech Rep. -5.0	Colombia 35.9	China 4.0	Turkey 19.1	Korea -6.3	Thailand 27.0
	Egypt 31.2	Hungary -8.2	Egypt 88.4	South Africa —17.2	Taiwan 10.5	Thailand 27.6	China 87.6	Indonesia 52.2	Turkey 56.9	India 51.0	Egypt 58.4	Czech Rep42.7	Chile 86.7	Philippines 35.5	Colombia -5.0	Thailand 34.9	Poland 3.6	Thailand 16.8	China —7.6	Colombia 26.5
	Brazil 27.3	Taiwan —20.6	India 87.3	Mexico -20.5	Thailand 5.3	Colombia 25.4	Chile 84.4	Mexico 48.3	Mexico 49.1	Brazil 45.8	Czech Rep. 55.9	Mexico -42.9	Colombia 84.3	Indonesia 34.6	Korea -11.8	Mexico 29.1	Russia 1.4	Peru 10.5	Taiwan —11.0	Taiwan 19.6
	Peru 20.5	India -21.2	Mexico 80.1	India -21.7	Malaysia 4.6	Russia 15.7	India 78.4	South Africa 44.9	Czech Rep. 46.2	Poland 41.9	Indonesia 55.0	Talwan -45.9	Talwan 80.2	South Africa 34.2	Mexico -12.1	India 26.0	Mexico 0.2	Taiwan 10.1	Mexico -14.2	South Africa 18.4
	India 11.3	Egypt -27.0	Brazil 67.2	Peru -23.8	Czech Rep.	Korea 8.6	Indonesia 78.2	Turkey 42.0	India 37.6	Mexico 41.4	Thailand 46.6	Thailand —48.3	Hungary 77.6	Mexico 27.6	South Africa —14.4	China 23.1	Philippines -2.0	China 8.3	Czech Rep. -16.5	Indonesia 17.5
NS NS	Chile 5.5	South Africa —27.6	South Africa 57.2	Hungary -26.8	Chile -2.8	India 8.4	Russia 75.9	Brazil 36.5	Peru 35.0	Malaysia 37.1	Malaysia 46.1	China -50.8	Thailand 77.3	Korea 27.2	China —18.2	Hungary 22.8	India -3.8	South Africa 5.7	Chile -16.8	Chile 16.8
— RETURNS	Taiwan -6.3	Chile -28.5	Taiwan 52.7	Russia -30.0	Indonesia -8.5	Egypt 1.6	Colombia 66.9	Chile 29.0	South Africa 28.3	Czech Rep.	Philippines 41.7	Philippines —51.9	Korea 72.1	Taiwan 22.7	Russia —19.3	Korea 21.5	South Africa —5.8	Czech Rep. —2.4	Indonesia -19.1	Korea 9.2
	South Africa -8.2	Malaysia -30.8	Thailand 47.2	China -30.5	Hungary -9.2	Poland 1.3	Czech Rep.	Philippines 26.6	Poland 25.0	Hungary 33.7	Korea 32.6	Едурt -52.4	Peru 72.1	Turkey 21.2	Chile -20.0	Peru 20.2	Hungary -5.8	Mexico -9.2	Malaysia -20.1	China
	Poland -22.4	Indonesia -31.5	Chile 39.0	Colombia -38.9	Brazil -17.0	Malaysia -0.7	South Africa 45.9	Korea 22.9	Philippines 23.9	Chile 29.3	Poland 25.8	Poland -54.5	Philippines 68.0	India 20.9	Talwan —20.2	South Africa 19.0	Czech Rep. -8.1	Malaysia —10.7	Thailand —23.3	Poland 0.7
	Czech Rep22.7	Mexico -33.5	Poland 31.5	Egypt -43.7	South Africa —17.2	Мехісо —13.3	Phillippines 42.8	India 19.1	Chile 21.6	Taiwan 20.9	Russia 24.8	Korea -55.1	China 62.6	Russia 19.4	Peru -21.4	Taiwan 17.7	Thailand -14.3	Korea -10.7	Egypt -23.5	India -1.4
	China -25.3	Brazil -39.6	Peru 18.9	Taiwan -44.9	Philippines -19.3	China -14.0	Taiwan 42.5	Malaysia 15.2	China 19.8	South Africa 20.5	Chile 23.7	Brazil -56.1	South Africa 57.8	Poland 15.9	Brazil -21.6	Russia 14.4	Brazil -15.8	Chile -12.2	Poland -24.9	Czech Rep2.5
	Phillippines -62.6	Peru -40.2	China 13.3	Philippines -45.0	India -19.5	Chile -19.8	Korea 35.9	Taiwan 9.8	Hungary 18.5	Egypt 17.1	South Africa	Indonesia -56.2	Mexico 56.6	Egypt 12.4	Poland -29.5	Malaysia 14.3	Colombia -21.1	Poland -13.6	South Africa —25.1	Malaysia -3.9
FOW ▲	Korea -66.7	Colombia -41.7	Hungary 11.7	Turkey -45.6	China -24.7	Talwan -24.5	Poland 35.5	Russia 5.7	Indonesia 15.8	Colombia 13.8	Hungary 16.8	Hungary -61.5	Malaysia 52.1	Brazil 6.8	Hungary -33.6	Chile 8.3	Chile -21.4	Brazil -13.7	Turkey -31.6	Philippines -6.1
	Malaysia -68.0	China -42.4	Czech Rep.	Korea -49.6	Poland -27.4	Philippines -29.0	Mexico 32.8	Peru 3.2	Thailand 9.2	Korea 13.2	Colombia 15.0	Turkey -62.1	Poland 42.5	China 4.8	Turkey -35.2	Indonesia 5.2	Indonesia -23.1	Colombia -19.8	Peru -31.7	Turkey -8.1
	Thailand —73.4	Turkey -52.5	Philippines 3.3	Thailand -56.3	Turkey -32.7	Brazil -30.7	Hungary 32.3	China 1.9	Taiwan 7.3	Thailand	Mexico 12.2	India -64.6	Egypt 39.7	Czech Rep.	India -37.2	Czech Rep.	Turkey -26.5	Hungary -27.4	Brazil -41.2	Mexico -9.0
	Indonesia -74.1	Russia -83.0	Colombia -14.4	Indonesia -61.9	Egypt -41.3	Turkey -35.7	Malaysia 26.6	Thailand -0.9	Malaysia 2.3	Turkey -7.0	Taiwan 9.1	Russia -73.8	Czech Rep.	Hungary -9.6	Egypt -46.9	Brazil 0.3	Peru -29.8	Russia -45.9	Colombia -41.8	Egypt -11.4
ت	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016

In US dollars. Source: MSCI emerging markets country indices (gross dividends). MSCI data © MSCI 2017, all rights reserved. Indices are not available for direct investment. Index performance does not reflect expenses associated with the management of an actual portfolio. Past performance is not a guarantee of future results.

Due to the recent positive performance of international stocks, investors today may be less worried about a global approach to investing than they may have been in the past. Over the last several years, however, strong performance in the US equity markets has led some market participants to question the value of

holding a globally diversified portfolio. In different market environments, and as sentiments about global diversification and its value ebb and flow, it is helpful to remember that history has not shown any one market around the world to be a consistent outperformer.

Clearly, attempting to pick only winning markets in any given period is a challenging proposition. By pursuing a globally diversified approach to investing, one doesn't have to attempt to pick winners to achieve a rewarding investment experience. By expanding the investment opportunity set beyond their domestic stock market, investors can help increase the reliability of outcomes. Thus, investors can be confident that a globally diversified portfolio will hold the best (and worst) performing countries each year.

Source: Dimensional Fund Advisors LP.

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Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio.

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