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When Home Bias and Hot Bias Collide

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The phenomenon known as home bias can be defined in many ways, but it loosely refers to the tendency for investors all over the world to commit more of their portfolio to equities in their domestic market than they *should*. There has been great debate over how much *should* be invested in domestic equities and why the tendency to invest more than this amount is so pervasive in all countries. The question is commonly referred to as the "home bias puzzle," and despite a longstanding debate, there does not appear to be a simple answer.

The magnitude of the home bias phenomenon can be illustrated with data from a 1997 IMF survey of cross-border equity holdings in 29 countries, which marked the first time an econometric cross-sectional analysis had been done on the bilateral portfolio holdings of a large sample of countries. An IMF working paper compared the original survey's observed percentages of domestic equity holdings with the percentage predicted by the CAPM.[1] Although there may be valid reasons to deviate from CAPM implied weights, the survey provides a point of comparison, and the authors consider the difference between actual weights and CAPM weights to be a descriptive measure of home bias. The numbers are striking!

Country	Actual Percentage of Domestic Equity Held	CAPM Optimal Percentage of Domestic Equity Held	"Home Bias" (Actual – Optimal)
Australia	77.96	1.46	76.50
Austria	65.82	0.20	65.62
Belgium	70.37	0.67	69.70
Canada	**70.39**	**2.72**	**67.67**
Denmark	71.90	0.60	71.30
Finland	88.44	0.39	88.05

France	79.75	0.42	79.33
Ireland	14.33	0.21	14.12
Italy	78.31	2.12	76.19
Japan	89.38	13.33	76.05
Malaysia	96.61	0.44	96.15
Netherlands	59.72	3.00	56.72
New Zealand	68.57	0.16	68.41
Norway	67.19	0.28	66.91
Portugal	91.92	0.29	91.63
Singapore	72.06	0.48	71.58
Spain	86.38	1.41	84.97
Sweden	69.55	1.37	68.18
United Kingdom	69.37	11.43	57.94
United States	85.45	55.20	30.25

In another notable paper, French and Poterba concluded that non-trivial risk reduction is available from global diversification due to the low pairwise correlation of equity markets in the US, Japan, the UK, France, Germany, and Canada, regardless of whether correlations are measured in dollars, yen, or pounds, or whether the exchange rate risk is hedged.[2] When you also consider that an investor's human capital is likely far more correlated with domestic than with international markets, the diversification benefits of investing globally become even more pronounced in terms of total wealth. In spite of all this, the authors contend that investors hold nearly all of their wealth in domestic assets. The home bias puzzle, in this instance, led the authors to look at the problem from a slightly different perspective.

French and Poterba went on to ask what set of expected returns would explain each country's observed pattern of domestic holdings versus that of a value-weight strategy. The conclusion was that home bias among US, Japanese, and British investors implied higher return expectations of 90, 250, and 400 basis points in their respective home markets.[3]

Our neighbours to the south are sometimes accused of being ethnocentric. When it comes to investing, however, the two papers referenced above suggest Americans have a relatively greater global investment perspective. This conclusion, albeit aided by the large share of the global market represented by the US, can be drawn whether one judges the degree of home bias in terms of optimism for domestic market expected returns or by the difference between actual and "optimal" allocations to domestic equities.

Many authors have posited answers to the home bias puzzle, but the answers often leave you wanting, as the literature has failed to develop a generally accepted explanation. Possible causes include institutional constraints (such as the now-abolished foreign content limit in Canada), as well as taxes and higher transaction costs. However, French and Poterba note that while transaction costs may be higher in some markets, these cost differentials should lead investors to the most liquid markets rather than to their domestic markets. Furthermore, since all shares must be owned by someone (i.e., there are no orphaned stocks), differences in transaction costs should be reflected in differences in expected returns.[4]

More recently, the home bias debate has pitted local investors' informational advantage against behavioural issues, such as their "relative return optimism"—factors that would seem related. Although the latter was empirically documented above by the French and Poterba paper, this effect is also evident in a study analyzing Merrill Lynch's periodic surveys of hundreds of fund managers. The managers were asked to gauge the prospects for several major world stock markets. Their responses were strongly correlated to the markets in which they were working.[5] This type of "familiarity effect" was also documented by Heath and Tversky, who showed that when presented with two games of identical probabilities, economic agents consider the game they know less about to be more risky.[6]

Information asymmetry, the other explanation given more recent attention, can be grouped with other behavioural factors. It proposes that an investor's *perception* of an informational advantage contributes to home bias, even though being close to the source offers no real benefit. Similar to the "relative return optimism" detected in the Merrill Lynch survey, even so-called sophisticated investors are prone to believe in the advantage of information asymmetry. A survey of fund managers in Germany revealed that the more they believe themselves better informed than foreign investors about their home market, the more they invest in domestic assets. However, the survey also revealed that these managers neither forecast home stock market developments better nor rely on data sources that are only available locally.[7]

From an anecdotal perspective, Weston Wellington sometimes offers an extreme example to illustrate the problem arising from the perception of an advantage due to information asymmetry: if the local knowledge advantage really exists, wouldn't it make sense for residents of Nova Scotia to limit their investments to companies domiciled there?

New developments and data suggest a general reduction in equity home bias in recent years. Plausible explanations include globalization, free trade growth, the proliferation of the internet, the rise of emerging markets, and increased mutual fund investment.[8]

This is not a new trend for advisors working with Dimensional. Despite the global pervasiveness of the home bias phenomenon, many advisors have long been structuring portfolios to benefit from global diversification—and in much more meaningful ways than most investors would attempt in their native countries. Two possible reasons for their partial immunity to home bias come to mind immediately: a solid grounding in modern finance and an equilibrium view of markets.

Firstly, a foundation of knowledge grounded in modern portfolio theory is something that advisors working with Dimensional can certainly draw upon. In the immortal words of Merton Miller, "Diversification is your buddy." Secondly, a belief in market efficiency offsets the perception of information asymmetry that seems to trap so many investors into remarkably high allocations to domestic securities. After all, the information contained in the prices of US equities is no more or less comprehensive for an American, a Brit, an Aussie, or a Canadian. With an equilibrium view, you no longer care how much information *you* have about foreign securities, but how much information all market participants collectively have.

Consequently, a Canadian advisor investing with Dimensional often has an equity allocation similar to that of the "Dan Wheeler Optimizer" (i.e., 1/3 domestic equities, 1/3 US equities, and 1/3 international equities). This portfolio still exhibits some degree of home bias since market cap weights for Canadian stocks would be closer to 4%. Nevertheless, a 1/3 domestic allocation is well below the level of bias found in the IMF study.

Advisors with a 30-40% allocation to Canadian equities often consider this a prudent level of home bias because of the preferential tax treatment of Canadian dividends, exposure to currency risk, and existence of behavioural factors. Although the *right* amount of domestic exposure is still debatable, this is certainly a less biased allocation than what many investors choose.

The benefits of global diversification are undeniable, but portfolios designed with a more prudent level of domestic exposure could be heavily scrutinized by clients when the domestic market (or domestic currency) goes through a period, even short-term, of dramatic outperformance. At this point home bias will collide with an even more potent behavioural influence that I will call "hot bias"—that is, the strong desire of clients to invest disproportionately *going forward* in whatever has been doing well. Hot bias added to home bias can be like pouring gasoline onto a fire. The resulting explosion of emotions can lead even savvy investors to abandon thoughtfully constructed portfolios and conclude, "You can lead a happy investment life without leaving home."

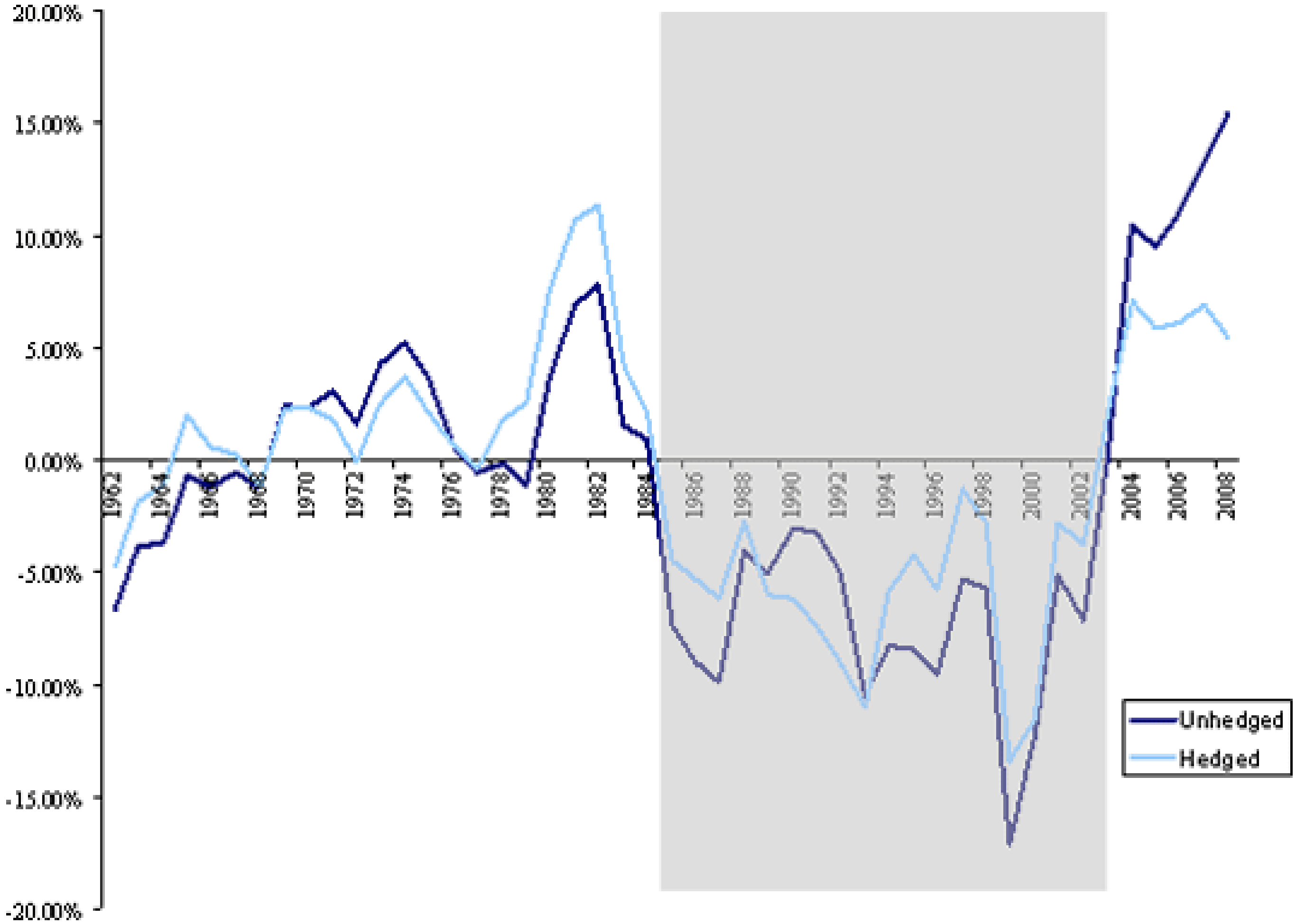
This phrase was not spouted by a Calgary-based oil executive in 2007 but by none other than Roger Lowenstein in a *Wall Street Journal* article circa 1997! Even this noted author and supposedly sophisticated investor fell prey to the collision of home bias and hot bias, as the 10-year annualized return for US equities as of 1997 was 18%, versus a return over the same period for all non-US equities of just over 6%! The profound impact of this collision is evident in the following colourful prose from the article:

> *Thus, the "sound" investor is defined as one who has moved a good chunk of his money out of the society he knows to countries with which he is unfamiliar, each according to their market weights. Indeed, not to put assets in such terra incognita is deemed to be "unsound." More than one so-called expert has recoiled with horror at the news that my own family is geographically undiversified. We have no money in the former Yugoslavia, none in the present Argentina, none in the future Republic of Antarctica, none in Zambia, Belgium, or Kazakhstan.*[9]

Unfortunately for readers who acted on this idea (likely because it validated their own thinking that resulted from this collision of home bias and hot bias), the following decade was marked by an annualized return for US equities of 6% compared to a return for all non-US equities of 9%.[10] A concentrated portfolio of US stocks would have underperformed a globally diversified portfolio while exposing investors to significantly more risk, despite the perceived safety of investing at home.

The same powerful collision is presently well underway in Canada. The chart below shows the annualized return difference between Canadian and US equities for all five-year periods ending from 1961 to 2007. For nearly twenty years (represented by the shaded area), there was never a five-year period when Canada outperformed the US, yet Canadian investors still maintained portfolios heavily tilted to Canada. However, now that the hot bias fuel has been poured onto the home bias fire, the global trend toward less home bias may be sharply contradicted in Canada, as the more recent five-year periods represent dramatic outperformance for domestic equities.

5-Year Annualized Return Difference
(S&P TSX Composite minus S&P 500)
Canadian Dollars



Canada has had a great run. We should be proud of that. But whether it will continue is anyone's guess. The moral of the story is that diversification works whether we like it or not, meaning a properly diversified portfolio will likely always hold components that have recently performed well—and those that have not. We should learn from the US experience a decade earlier and not abandon those underperforming asset classes.

In the sobering words of *New York Times* columnist Mark Hulbert, ". . . your equity portfolio should be divided among the world's stock markets based upon each country's share of total global stock market capitalization. The reason: even though the stock market is not totally efficient, it is largely so. Each country's share of the world market reflects an implicit judgment about its relative prospects, a judgment that will be difficult to second-guess correctly."

The comments of Don Proteau, Weston Wellington, and Jim Davis are greatly appreciated.

[1]Shujing Li, Isabel K. Yan, and Hamid Faruqee, "The Determinants of International Portfolio Holdings and Home Bias" (IMF Working Paper 04/34, International Monetary Fund, 2004).

[2]Kenneth R. French and James Poterba, "Investor Diversification and International Equity Markets," *American Economic Review* 81, no. 2 (May 1991): 222-26.

[3]Ibid.

[4]Ibid.

[5]Mark Hulbert, "Investors Root for the Home Team and Don't Venture Abroad," *New York Times,* May 5, 2002.

[6]Chip Heath and Amos Tversky, "Preference and Belief: Ambiguity and Competence in Choice under Uncertainty," *Journal of Risk and Uncertainty* 4, no. 1 (January 1991): 5-28.

[7]Torben Luetje and Lukas Menkhoff, "What Drives Home Bias? Evidence from Fund Managers' Views" (presentation, Royal Economic Society's 2005 Annual Conference at the University of Nottingham, March 23, 2005).

[8]Amir Andrew Amadi, "Equity Home Bias: A Disappearing Phenomenon?" (working paper, SSRN, May 5, 2004).

[9]Roger Lowenstein, "'97 Moral: Drop Global-Investing Bunk," *Wall Street Journal,* December 18, 1997.

[10]Returns for this example are S&P 500 and MSCI World ex US in US dollars.
