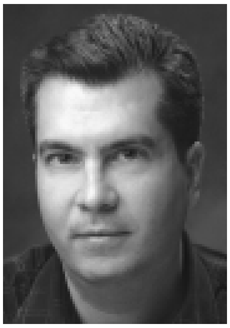

An ETF Portfolio With Added Dimension

Dan Bortolotti

Six years ago in these pages, John De Goey called Dimensional Fund Advisors "the best money management firm that most people have never heard of." DFA Canada – a Vancouver-based subsidiary of an American parent company – offers what are arguably the best mutual funds anywhere: they're low cost (with management expense ratios, or MERs, between 0.38% and 0.70%), hugely diversified, and have a track record that would make most competing managers hide their faces in shame. Yet many retail investors, and even many advisors I have interviewed as a journalist, are unaware of them.

Perhaps that shouldn't be surprising. Dimensional funds are available only through a small group of fee-only advisors who serve high-net-worth clients, putting them out of reach for the vast majority of Canadian investors – myself included. So I set out to design a portfolio of exchange-traded funds (ETFs) based on the principles pioneered by Dimensional. After all, DFA funds are passively managed and designed to capture the returns of broad asset classes, a trait they share with most ETFs.

I'm the first to admit you can't replicate a DFA portfolio on your own: Dimensional funds have a sophistication and breadth that no retail investment product can touch. However, the do-it-yourselfer can at least select ETFs that track the same asset classes and use broadly similar strategies.

Understanding the Dimensions

Dimensional's equity strategy is based on what is called the Fama-French, Three-Factor Model. You don't need a PhD in finance to understand the first factor: stocks are riskier than bonds, so they should reward investors with higher returns over the long term. This is called the "market factor".

The other two factors are not so obvious. In the early 1990s, the research of finance professors Eugene Fama and Kenneth French demonstrated that value stocks (those with low price-to-book ratios) and small-cap stocks are riskier than the broad market, and therefore have higher long-term expected returns. According to Dimensional, the annualized compound return of the large-cap S&P 500 from 1927 through 2008 was 9.6%, while large value stocks returned 10.05%, small caps returned 11.11%, and small value companies returned 13.03%. The value and size premiums appear to exist in almost every country, including Canada.

The equity portion of a typical DFA portfolio includes Canadian, U.S., and international stocks (including emerging markets) in roughly equal proportion. Following the Fama-French research, these main groupings are then subdivided into core (broad market), value and small-cap components.

Dimensional also argues that real estate investments have a low correlation across different parts of the world, and that a country's real estate markets don't move in lockstep with its broad equity markets. For these reasons, this asset class provides a diversification benefit.

Exposure to foreign currency in equity funds offers a diversification benefit as well, which should lower the overall volatility and increase the long-term returns in a portfolio. Therefore, equity investments held in foreign currencies are not hedged to Canadian dollars.

On the fixed-income side of a portfolio, DFA considers two main factors: bond maturity and credit quality. Dimensional bond funds typically keep maturities to five years or less because short bonds provide a higher return per unit of risk. Their funds also favour investment-grade issues for both government and corporate bonds. While long-term and high-yield bonds may offer higher expected returns, Dimensional believes this premium is not commensurate with the additional risk.

In keeping with its global outlook, DFA Canada's fixed-income funds include bonds from Europe and the United States as well as Canada. However, Dimensional's research has found that adding currency risk to a fixed-income fund increases volatility with no corresponding benefit. For that reason, DFA Canada's fixed-income funds hedge all foreign currencies to Canadian dollars.

The ETF Building Blocks

Now that we've looked at the factors that drive DFA's investment strategy, it's time to consider how a small investor can incorporate these ideas into a do-it-yourself portfolio. Let's summarize the key principles:

- Passive management, which goes hand-in-hand with low turnover and low fees
- A focus on value (low price-to-book) and small-cap stocks in the equity component
- A real estate component to provide added diversification
- A global perspective, including stocks from all developed and emerging markets, denominated in local currencies (that is, no currency hedging)
- Fixed-income investments with short maturities and investment-grade quality
- No currency risk from bonds: any fixed-income investments not denominated in Canadian dollars must be hedged

Let's break things down by asset class and examine the ETFs that are most closely aligned with these ideas.

Canadian Equity

For the core Canadian equity component, look to the Claymore Canadian Fundamental ETF (CRQ), one of four Claymore funds that track a "fundamentally weighted" index. Traditional indexes are based on market capitalization: the larger the company (determined by multiplying its share price by the number of outstanding shares), the greater its weight in the index. By contrast, Claymore's ETF assigns weight in the index based on company fundamentals: dividends, free cash flow, total sales and book value. This strategy gives more weight to value stocks and may capture the premium identified by Fama and French. CRQ has, in fact, outperformed the S&P/TSX Composite Index since its inception, with lower volatility.

iShares S&P/TSX Small Cap Index Fund (XCS) holds about 180 small-company stocks to capture the size premium. iShares also offers a Canadian value ETF, but with such a small universe of stocks to choose from in Canada, adding this fund will result in a lot of overlap and is unnecessarily complex.

U.S. Equity

While Claymore does have a U.S.-equity ETF based on the same principles as CRQ, it hedges currency risk and hasn't done a good job of tracking its index. A better choice is the PowerShares FTSE RAFI US 1000 (PRF), a U.S.-listed ETF. It tracks the same index as Claymore's fund, but does so without hedging, with more precision and at lower cost.

To capture the value and small premiums, consider the Vanguard Value ETF (VTV) and the Vanguard Small-Cap ETF (VB). Alternatively, there's the Vanguard Small-Cap Value Fund (VBR), which tracks an index of stocks that meet both criteria.

International Equities

Claymore and PowerShares both have fundamentally weighted ETFs that provide exposure to a cross-section of developed markets. However, the Vanguard Europe Pacific ETF (VEA) and the U.S. version of the iShares MSCI EAFE Index Fund (EFA) are far cheaper and have a better record of tracking their indexes. Either of these is ideal for overseas developed markets.

As a core holding for emerging markets, the Vanguard Emerging Markets ETF (VWO) is an excellent choice. The iShares MSCI Emerging Markets Index Fund (XEM) tracks the same index and is an alternative for Canadians who want to trade on the TSX, though it has a much higher management fee (0.82% compared with 0.27%).

The value tilt is achieved with the iShares MSCI EAFE Value Index Fund (EFV) and the small tilt with the Vanguard FTSE All-World ex-U.S. Small-Cap ETF (VSS), which includes small companies in both developed and emerging markets.

Note that currency exposure in international funds is often misunderstood by Canadian investors, and even many advisors: If you buy a U.S.-listed ETF that holds international equities you are not exposed to fluctuations in the U.S. dollar. The funds' underlying holdings are denominated in local currencies – the euro, British pound, Japanese yen, Australian dollar, Chinese yuan, Brazilian real, and a host of others – and the greenback is simply a "flow-through" currency.

Real Estate

Claymore's Global Real Estate ETF (CGR) comes closest to matching the DFA Global Real Estate Securities Fund. Both focus on real estate investment trusts (REITs), but also include land developers, property managers, and companies involved in the construction or sale of residential, commercial and industrial real estate. The Claymore ETF includes all 15 of the top holdings in the DFA fund and has a broadly similar country breakdown: the largest allocation to the United States, plus with exposure to both developed markets in Asia and Europe, and a small allocation to Canada.

Fixed Income

Fixed income is the one asset class where it's virtually impossible for ETF investors to follow Dimensional's strategy. There is no global bond ETF that is hedged to Canadian dollars. There are U.S.-listed global bond ETFs, but since taking currency risk on the bond side of your portfolio is generally unwise, these are not recommended.

The only option, then, is an all-Canadian short-term bond fund that holds both government and corporate investment-grade issues, such as the iShares DEX Short Term Bond Index Fund (XSB). Claymore offers two ultra-low-cost alternatives that use a laddered strategy: CLF for government bonds, and CBO for corporates.

Putting it all together, Table 1 illustrates what our ETF portfolio might look like, assuming a conventional mix of 60% equities and 40% fixed income.

TABLE 1

Asset class	Allocation	Exchange-traded fund	MER
Canadian core equity	12%	Claymore Canadian Fundamental (CRQ)	0.68%
Canadian small-cap equity	8%	iShares S&P/TSX Small Cap (XCS)	0.55%
U.S. core equity	8%	PowerShares FTSE RAFI US 1000 (PRF)	0.46%
U.S. value equity	4%	Vanguard Value (VTV)	0.14%
U.S. small-cap equity	4%	Vanguard Small-Cap (VB)	0.14%
International core equity	8%	Vanguard Europe Pacific (VEA)	0.15%
International value equity	4%	iShares MSCI EAFE Value (EFV)	0.40%
International small-cap equity	4%	Vanguard FTSE All-World ex-US Small-Cap (VSS)	0.40%
Emerging markets equity	4%	Vanguard Emerging Markets (VWO)	0.27%
Global real estate	4%	Claymore Global Real Estate (CGR)	0.70%
Short-term bonds	40%	iShares DEX Short Term Bond (XSB)	0.25%

This portfolio has a weighted MER of 0.36%, less than one-sixth the cost of the average balanced mutual in Canada. (Setting it up with a discount brokerage that charges $9.95 per trade would cost another $110 or so.) For that small fee, it offers tremendous diversification, with more than 7,000 stocks in dozens of countries and several currencies. And it's designed to capture the higher expected returns of value and small-cap equities.

Will it perform as well as a portfolio of Dimensional funds? Probably not, but for small investors who can't have the real thing, this ETF portfolio may be as close as they can get.

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