FAIR | Canadian Foundation *for* Advancement *of* Investor Rights

May 14, 2009

Heads You Lose, Tails You Lose: The Strange Case of Leveraged ETFs

FAIR Canada Calls Upon Regulators to Take Action to Protect Investors

Imagine that in March 2008 you were smart enough to foresee that the energy market was going to crater. Rather than selling some individual stocks short, you bought a leveraged Exchange Traded Fund (ETF) bear fund that offered 2X the inverse of the return of the energy index of the Toronto Stock Exchange – just like the man told you to do in the TV ads.

You should have made a killing, right? The index of Canadian energy stocks fell 39.4% in the next 12 months. Your investment in the bear fund should have soared in value by 79%. Instead, it actually declined 25.4%. The bull fund met expectations with a 75.4% decline, virtually double the index's fall.

FOUR OF NINE PAIRS OF LEVERAGED ETFS LOST MONEY WHEN HELD FOR A YEAR – WHETHER BULL OR BEAR

The example of the oil fund is not an anomaly. The Canadian gold sub-index gained 1% for the 12 months ending March 31, 2009. The HBP S&P/TSX Global Gold Bear Plus ETF did not lose 2%, as its 2X inverse would indicate. It actually lost 87%. Its pair, the inverse Global Gold Bull Plus ETF, should have gained 2%. Instead, it lost 46%.

You would have met the same fate – losing money, no matter which side of the trade you took – had you held four of the nine Horizon BetaPro pairs of bull and bear funds that had been around for an entire year. At least one member of virtually all of the other pairs suffered from significant tracking errors, even when pointed in the right direction.

Sometimes the lack of correlation works in your favour -if you can correctly predict not only the timing and the final result, but the consistency of the direction of the moves. The HBP Natural Gas Bear + Fund was up 389% in the year to March 31, compared to the index's 69% decline.

A MAJOR PROBLEM LOOMS

Leveraged and inverse ETFs are the most rapidly growing segment of the market. 32 Canadian funds, offered only by Horizons BetaPro, have attracted $2.1 billion in investor dollars in the past 26 months and show up daily in the lists of top performing and most actively traded stocks. In addition, Canadian investors are purchasing leveraged ETF products trading on U.S. exchanges.

"Come on" advertising campaigns on both sides of the border encourage investors to chase that popularity and past performance at major risk to their financial health. Leveraged ETF funds actually deliver their promised daily performance, but their marketing material omits performance data for longer periods. Boilerplate risk disclosure does not come anywhere close to conveying the true risks associated with speculating in these very powerful investment vehicles, and the high probability of losing money if they are held longer term.

It is past time for the regulators to step in and protect investors by enforcing tighter standards for disclosure and advertising, and by ensuring that the products do not harm investors.

Horizons BetaPro Fund Performance

	Percentage Return					Inception
Fund name	**1month**	**3month**	**6month**	**1year**	**Return**	**(mm/yy)**
S&P/TSX 60 Bear + ETF	(14.4)	(6.9)	10.7	22.7	0.3	Jan 07
S&P/TSX 60 Bull + ETF	14.3	(6.9)	(51.3)	(61.8)	(31.7)	Jan 07
Index: S&P/TSX 60	**6.9**	**(2.3)**	**(25.3)**	**(32.5)**	**(27.1)**	
COMEX Gold Bullion Bear + ETF	(7.8)	(15.5)	(23.2)	(23.5)	(24.7)	Jan 08
COMEX Gold Bullion Bull + ETF	6.1	4.2	(1.5)	(17.0)	(12.2)	Jan 08
Index: Comex Gold Bullion	**(3.6)**	**4.2**	**4.4**	**(1.8)**	**0.5**	
DJ-AIG Agriculture Bear + ETF	(8.2)	5.0	25.7	64.6	106.6	Mar 08
DJ-AIG Agriculture Bull + ETF	5.9	(17.1)	(44.2)	(67.3)	(73.6)	Mar 08
Index: Dow Jones Agriculture	**3.9**	**(6.4)**	**(19.3)**	**(35.2)**	**(43.6)**	
NYMEX Crude Oil Bear + ETF	(1.5)	16.3	285.1	201.8	95.2	Jan 08
NYMEX Crude Oil Bull + ETF	(8.8)	(52.1)	(94.0)	(94.8)	(89.8)	Jan 08
Index: NYMEX Crude Oil	**(2.7)**	**(23.8)**	**(68.6)**	**(69.0)**	**(65.3)**	
NYMEX Natural Gas Bear + ETF	29.8	84.9	198.1	389.6	146.6	Jan 08
NYMEX Natural Gas Bull + ETF	(27.2)	(60.9)	(83.8)	(93.4)	(85.6)	Jan 08
Index: NYMEX Natural Gas	**(13.9)**	**(34.3)**	**(54.3)**	**(69.0)**	**(61.9)**	
S&P/TSX Energy Bear + ETF	(18.3)	(22.3)	(23.7)	(25.4)	(16.2)	June 07
S&P/TSX Energy Bull + ETF	15.8	(6.4)	(65.5)	(75.4)	(57.3)	June 07
Index: TSX Energy stocks	**8.3**	**0.0**	**(31.3)**	**(39.4)**	**(41.5)**	
S&P/TSX Financials Bear + ETF	(29.2)	(11.8)	28.4	15.7	23.7	June 07
S&P/TSX Financials Bull + ETF	34.2	(18.8)	(64.5)	(67.5)	(55.3)	June 07
Index: TSX Financial stocks	**15.7**	**(7.5)**	**(35.7)**	**(37.2)**	**(46.0)**	
S&P/TSX Global Gold Bear + ETF	36.3	(36.1)	(87.6)	(86.7)	(78.3)	June 07
S&P/TSX Global Gold Bull + ETF	(34.7)	6.6	(0.1)	(46.4)	(17.1)	June 07
Index: S&P/TSX Gold stocks	**(17.9)**	**9.1**	**27.4**	**1.0**	**25.5**	
S&P/TSX Global Mining Bear +	(2.3)	(33.0)	(61.3)	(45.6)	(52.8)	Jan 08
S&P/TSX Global Mining Bull +	(2.3)	11.6	(41.8)	(74.4)	(62.3)	Jan 08
Index: S&P/TSX Mining Stocks	**(0.8)**	**10.3**	**(8.5)**	**(34.9)**	**(22.3)**	

All data as of **March 31, 2009** except for one month performance figures as of **April 30, 2009**.
Source: Horizons BetaPro website, Performance Data ; FAIR Canada calculations for indices since inception

BACKGROUND: PLAIN VANILLA ETFS OFFER REAL ADVANTAGES

Exchange Traded Funds were invented in Canada in the 1980s, with the Toronto Stock Exchange TIPS product. They gained traction in the U.S. in the late 1990s and are becoming an increasingly popular tool for investors. ETFs are similar to index mutual funds in that they passively duplicate an index. Unlike mutual funds that are priced only at the close of market, ETFs trade like stocks.

Broad-based ETFs typically have some of the lowest fees in the investment management business, from a low of 0.08% (8 basis points) to 0.25%. Other advantages of ETFs include diversification, tax efficiency, liquidity, and constant pricing information. They are transparent – it is quite easy to find out what they hold. They can be easily used for hedging or for shifting a portfolio quickly and efficiently. It's hard to find anything bad to say about plain vanilla Exchange Traded Funds.

GREATER COMPLEXITY OF NEW PRODUCTS

Financial markets rarely remain plain vanilla for long. A variety of fund originators in the U.S. sliced and diced the market into smaller segments and specialized indices. Funds were divided by a wide range of factors. Here are some examples:
Theme - commodities, currencies, emerging markets;
Sector - energy, agriculture;
Country or region - emerging Europe, sub-Saharan Africa;
Style – growth, value and most recently even active management.

These more complicated ETFs tend to have higher management fees (typically 0.4% to 0.6%) and greater volatility. While offering more specific tools for sophisticated investors, they pose greater risks.

LEVERAGED AND INVERSE ETFS

If plain vanilla ETFs were good, wouldn't funds that offered twice the daily move be even better? Or funds that offered the inverse of moves in an index or the price of a commodity?

In June 2006 ProShares, a unit of mutual funds firm ProFunds, launched the first inverse and leveraged exchange traded funds in the United States. The initial offerings were simply ETF versions of existing mutual funds, first offered by Rydex in 1993 and followed by ProFunds in 1997.

Leveraged ETFs offer twice (or even three times) the daily return of their underlying index. Inverse ETFs offer the opposite of the daily return.

Three fund originators – Rydex, ProShares, and Direxion - now offer leveraged and inverse Exchange Traded Funds in the United States. From a standing start three short years ago, there are now 140 leveraged ETFs in the U.S., with total assets of $33.2 billion. They regularly rank in the most active traded stocks on major U.S. indices. New products are launched frequently.

MORNINGSTAR'S WARNING: "LEVERAGED ETFS KILL PORTFOLIOS"

Almost from the beginning there have been voices in the financial press warning about the perils of leveraged and inverse ETFs. They don't have a very long track record, so their true risks have only recently become apparent.

Investing consultants Morningstar (CTRL+click for link) published a report in January, 2009 with the graphic title quoted above. Author Paul Justice wrote:

> *"Leveraged and inverse ETFS are not meant to be held as long-term investments… Very bad things happen whenever you hold these ETFs longer than … one day for stock-based ETFs, sometimes monthly for commodities. You are almost mathematically guaranteed to get a return that is not double that of the index. Not only will the magnitude of your returns bounce around, you might not even get returns that are in the same direction as the changes in the index."*

Similar articles appeared in Barron's, MarketWatch, The Motley Fool, Yahoo Finance, Seeking Alpha, and a host of other publications and blogs.

<u>Boring technical talk about how leveraged ETFs work</u>

See, you stopped reading already. That's the problem. Most investors don't read the prospectus and pay little attention to the technical details of how these funds work.

The costs of compounding, constant leverage, frequent rebalancing and volatility greatly distort the results achieved by leveraged and inverse ETFs over time. Many of the articles linked above go through the math.

<u>The Canadian angle</u>

Leveraged ETFs were first introduced to Canada in early January, 2007 by Horizons BetaPro Management (HBP), a unit of Jovian Capital of Toronto. Management of the funds was outsourced to ProShares of Baltimore, one of the major players in the U.S. leveraged ETF market. Even before Horizons BetaPro launched in Canada, Canadians were able to purchase leveraged ETF products trading on U.S. exchanges.

BetaPro's first two funds offered to double the daily move of the main large company Canadian index, the S&P/TSX 60. The Bull Plus offers twice the daily return of the index, before fund fees. The Bear Plus offers twice the inverse or opposite of the index's movement on a daily basis.

Management fees for these funds are set at 1.15% - a big premium to plain vanilla ETFs, although still below fees for actively managed mutual funds. The premium fee reflects the greater complexity of the structure, the need to use derivatives – and the lack of price sensitivity of most purchasers. Note that the trading impact of daily rebalancing further adds to the costs of ownership.

<u>Gaining rapidly in Canadian popularity</u>

Despite the market decline in 2008, ETFs continued to expand and to gain market share. Horizons Funds grew at an incredible 274% pace from a small base in 2008, finishing the year with $1.89 billion in assets. That was more than double Claymore Investment's $0.95 billion, but still trailed industry leader Barclay's Global Investors iShares Canada with $16.44 billion.

N.B. The other two major Exchange Traded Fund initiators in Canada do not offer leveraged or inverse ETFs. Claymore used to offer inverse ETFs but has exited the field. Barclay's never has.

By March, 2009, BetaPro had launched 34 funds and attracted $2.1 billion in assets. Five of the ten most actively traded names on the Toronto Stock Exchange Industrials in March, 2009 were Horizons BetaPro Funds with volumes ranging from 104 to 465 million shares. Only one ETF regularly eclipses the BetaPro offerings – the Barclay's iShares S&P/TSE Large Cap 60.

<u>Sparse coverage in the Canadian financial press</u>

Coverage of leveraged and inverse ETFs in Canada has been limited. Some financial reporters and mutual fund analysts have made cautionary noises. Morningstar Canada has warned investors away.

For each warning in the press, there are many puff pieces quoting from company press releases. Even the normally cautious Rob Carrick of the Globe and Mail (July 12, 2008) described leveraged exchange traded funds as *"turbocharged versions of existing ETFs and mutual funds… a simpler alternative to traditional down-market strategies like short selling and options."*

The Canadian forensic accountant Al Rosen put it more harshly in a December 2008 article in the Financial Post. *"Sometimes you get mauled by the market bear, and sometimes you get gored by the* *bull. But, with BetaPro ETFs, you can easily get run down by both at the same time."*

AN "ARMS RACE" OF LEVERAGE

Following on the success of the double leveraged exchange traded funds, U.S. fund originator Direxion issued the first 14 triple-leveraged ETFs in November 2008. The Direxion shares offer investors three times the daily movement (or inverse) of an underlying index. They have quickly moved towards the top of the most popular and most traded ETFs. On April 23, 2009, industry journal IndexUniverse reported that ProShares filed for triple leverage on 94 new Exchange Traded Funds.

Will triple leverage come to Canada? Since ProShares actually manages the Canadian Horizons BetaPro funds, it would seem likely. HBP executives say that they have no intention of bringing triple leverage shares to Canada; and the regulators might actually decide to intervene. FAIR Canada prefers not to wait and react, but rather to warn regulators and investors ahead of time.

LEVERAGED AND INVERSE ETFS PERFORM SOME POSITIVE FUNCTIONS...

Easy, risk-limited access to leverage. Leveraged ETFs offer ordinary investors access to non-recourse leverage - you cannot lose more than your entire investment. That might not sound like a particularly attractive sales pitch – *"Invest with us! You won't lose more than all of your money!"* Investors are enamored of the huge potential upside if they guess correctly – leveraged ETFs appear regularly on the best (and worst) performing lists in Canada and the US. And the limited liability of leveraged ETFs is an advantage when compared to the risks of short-selling stocks, where you can lose several times your original investment. Margin investments and the futures market often allow you to risk more capital than you have invested, and can require "margin calls" where you have to put up more capital or risk having your investment sold for you at a loss.

Exposure to different markets. Before these ETFs came along, it was hard for investors to easily bet against the price of oil or metals or some of the financial sub-indices. Regular and leveraged ETFs now offer traders a chance to speculate about the direction of oil and natural gas prices, gold and non-precious metals, agricultural commodities, currencies, fixed income instruments, and most of the sub-indices on the Canadian and U.S. markets.

Useful tools for professional investors. Leveraged ETFs allow day traders to speculate and sophisticated institutional money managers to hedge positions. Some mutual fund managers in Canada have applied for exemptions from the regulators to invest in leveraged ETFs. They can be a handy tool for quickly employing exposure to markets or covering expected cash calls.

... AND SOME CONSIDERABLE DOWNSIDE

Huge swings could be beyond investors' risk tolerance. Most investors overestimate their risk tolerance. 2X leveraged ETFs suffer huge swings – particularly in recent months where markets often move 3% or more a day. The triple leverage products, of course, are even riskier.

Consistency of direction is crucial. Leveraged ETFS are path-dependent. If the index or commodity go consistently in one direction – as oil prices did on their way up and then on their way down – the leveraged ETF can actually perform better than expected, and deliver a return four, five or even more times the underlying index. However, if returns are choppy and vary significantly from day to day, then these ETFs will lose money even if the underlying index finishes the period flat.

Volatility has a huge impact. Horizon BetaPro's prospectus includes an interesting chart showing how performance fluctuates depending on the level of returns and how much those returns vary by day - the volatility of those returns. For example, a 2X leveraged ETF based on an index that was down 20% for the year would lose 40% - bang on! - at 25% volatility. At the same 20% return and 50% volatility, however, instead of gaining 40% the ETF would lose 50%. At 75% volatility, it would lose 63%.

How about a 2X inverse ETF? For the same negative 20% return, the ETF would gain 30% at 25% volatility – within hailing range of double the 20% loss of the index. But the ETF would shift to an outright loss of 26% at 50% volatility, and a 71% loss at 75% volatility.

It's even more outrageous if the index is flat. Then losses range from 6% to 43% as volatility rises from 25% to 75%. And the inverse has losses ranging from 17% at 25% volatility to 82% at 75% volatility.

If people really understood these numbers, would anyone invest for longer than a few weeks in volatile sectors like oil, gold or financials?

WHAT ARE THE OTHER RISKS WITH LEVERAGED ETFS?

Counter-party risks. Leveraged ETFs are constructed through derivatives and futures contracts. All require exposure to counter-parties. Horizons BetaPro reassures investors that they follow accepted counter-party risk procedures, using only big banks with acceptable credit ratings. But the recent financial meltdown has taught investors not to rely overly much on credit ratings or on the size of a financial institution as true protection from such risks. Should one of HBP's counterparties encounter difficulties, leveraged ETF shareholders might suffer losses.

Worsen end-of-day volatility? The technical mechanism of daily rebalancing based on the market closing price has served to worsen the market's end-of-day swings. Peter Haynes of TD Securities lays out the numbers in a report of late April, 2009. He expects markets to eventually adjust on their own. The possible impact on market integrity certainly merits study by regulators.

Tax inefficiency. Leveraged ETFs in the U.S. incur high percentages of taxable gains. The use of derivatives and daily rebalancing is much less tax-efficient than their plain vanilla ETF counterparts.

Can leveraged ETFs cause runs on stocks or market sectors? Some critics claim that leveraged ETFs make it easier for people to manipulate markets and sectors by driving prices down. This is the view of Jim Cramer from CNBC's appropriately named Mad Money. We don't find the evidence to be persuasive.

SO WHO IS ACTUALLY USING LEVERAGED ETFS?

The "average" investor holds leveraged and inverse ETFs for two weeks – based on arithmetic calculations of volumes versus units outstanding. But that could be misleading, with heavy volume from a few institutions and hedge funds masking longer-term positions by retail investors.

Horizons BetaPro management states that 15% to 20% of newly issued ETF units go through discount brokerages and other retail channels. The average holding period for retail investors is one to two months, they say. At least some of those retail investors are sophisticated players and day traders fully aware of the risks involved in leveraged ETFs.

Even if these percentages are accurate, we suspect that many retail investors are holding Horizons BetaPro and U.S. leveraged and inverse ETFs for long periods of time and losing considerable sums.

By way of comparison, iShares Canada's plain vanilla ETFs are 50% held by retail investors. But institutions account for 85% of the trading volume.

Former Goldman Sachs trader and managing director Eric Oberg doubted the appeal of leveraged ETFs to professional investors. His article on TheStreet.com (December 23, 2008) states:

> *"These products, contrary to popular belief, are not made for professionals; in fact if you talk to most institutional ETF desks on the Street, they will tell you they see very little activity from institutional investors in these products… an institution can find more efficient ways to be short or to be leveraged. So can individual investors – through standard margin accounts. These products offer "ease of use" but at a very high cost – high fees, uncertainty, and a great likelihood that investment returns will fluctuate wildly from the performance of the underlying index."*

Our discussions with several traders and observers in Canada indicate that the Canadian leveraged ETFs are indeed popular with the institutional crowd: proprietary trading desks at investment dealers, mutual funds and other institutional investors, hedge funds and the like. The heavy trading of the more popular leveraged ETFs confirms that popularity.

ADVERTISING ENTICES RETAIL INVESTORS, DOWNPLAYS RISKS

Horizons BetaPro advertises heavily in the financial press such as the Globe and Mail and the Financial Post; in trade publications geared to retail investment professionals like Investment Executive and Advisor's Edge; and on television business shows like the Business News Network. The three U.S. leveraged ETF originators spend heavily in U.S. financial media that spill over into Canada.

In a conversation with FAIR Canada, Horizons BetaPro's management emphasized their extensive education program for teaching financial advisors and investment professionals how best to use their products. They do not want investors buying their products without understanding the products and the associated risks – that would be bad for repeat business. They say that advertising is directed towards sophisticated investors who use ETFS for hedging and short-term trading.

FAIR Canada suggested that Horizons BetaPro consider the suitability of their retail-oriented advertising, or at least add clear warnings of the risks of longer-term holdings. True, this could pose some technical challenges, particularly for 15-second broadcast spots. But no more than the challenges faced by drug companies obliged to mention side effects when pushing their wares. In the case of leveraged and inverse ETFs, holding for long periods of time can cause serious and unexpected harm to investors' portfolios.

INADEQUATE DISCLOSURE OF RISKS

The Horizons Betapro amended prospectus of February 27, 2009 contains eight pages of risks.

The prospectus summary stresses that HBP's leveraged and inverse Exchange Traded Funds are designed to **provide daily investment results** (their emphasis). The summary warns that *"units of the ETFs are highly speculative and involve a high degree of risk, some not traditionally associated with mutual funds… An investor may lose a portion or even all of the money that they place in an ETF."*

We submit that the focus on daily results without clear disclosure of the risks of holding for longer periods is not enough. Nowhere does the prospectus state that leveraged ETFs are not appropriate for longer term investors. And we know that there is a very low likelihood that most investors – even sophisticated ones – actually read the prospectus.

We fear that Investors – particularly retail investors – are paying more attention to the "come-on" advertisements than to the mind-numbing pages of risk factors in the prospectus.

RE-BALANCING ISN'T THE ANSWER

In a July, 2008 interview in the Globe and Mail, BetaPro President Howard Atkinson suggests *"rebalancing monthly if you're holding leveraged ETFs in volatile sectors such as energy and quarterly or semi-annually for calmer sectors."*

Al Rosen dismissed the rebalancing argument in his Financial Post column about ETFs. *"To most people, rebalancing means taking the capital you already have invested and shuffling the allocation of those funds. To BetaPro, rebalancing actually means recapitalizing. Under similar circumstances, people often call this throwing good money after bad."*

BOTH HARM AND FOUL

Horizons BetaPro leveraged funds do what they claim – deliver twice the daily return of the underlying index. The products are clearly popular – how else could they attract $2.1 billion in just over two years? If some people neglect to read the prospectus or heed the frequent warnings, why should that be the public's or the regulator's problem?

Disclosing the risks in dense technical language in prospectuses that are incomprehensible to most retail investors does not meet the standards required for Canadian investments. Writing eight pages of risks without **explicitly warning** that there is a high probability of a breakdown in the expected correlation over time and that these products are inappropriate for most retail investors, does not serve the interest of investors.

AN EXAMPLE OF BETTER RISK DISCLOSURE FROM U.S.'S DIREXION ETFS

Here is an example of better disclosure, on the first page of U.S. ETF-originator Direxion's prospectus of April 1, 2009.

Although the warning is too long and the print is too small, Direxion clearly warns of the risks, in plainer English than its competitors. And the warning appears on the front page of the prospectus, not buried deep in the body of the text. FAIR Canada does not endorse the Direxion disclosure, but it does provide an interesting comparison.

> *"The Funds offered in this Prospectus are exchange-traded funds but they are very different from most exchange-traded funds. First, all of the Funds pursue leveraged investment goals, which means that the Funds are riskier than alternatives that do not use leverage because the Funds magnify the performance of the benchmark on an investment… Each Fund seeks daily leveraged investment results. The return of each Fund for periods longer than a single day, especially in periods of market volatility, may be completely uncorrelated to the return of the Fund's benchmark for such longer period.*
>
> *The Funds are intended to be used as short-term trading vehicles for investors managing their portfolios on a daily basis. The Funds are not intended to be used by, and are not appropriate for, investors who intend to hold positions… Investors who do not understand the Funds or do not intend to manage the funds on a daily basis should not buy the Funds."*

FAIR CANADA CALLS UPON REGULATORS TO TAKE ACTION TO PROTECT INVESTORS

Immediately require all leveraged and inverse ETF products offered in Canada to file a new prospectus. The prospectus should have bold front page disclosure, in plain English, of the risks of holding these products for longer than a few days, particularly in volatile markets

2. Insist on prominent disclaimers on all leveraged/inverse ETF advertising, both print and broadcast, with an explicit warning: This product is not suitable for holding periods longer than a few days, and is not appropriate for virtually all retail portfolios. Disclosure should be provided on the relevant company websites. Marketing materials should include references to the actual performance of the bull and bear versions of the ETFs over a period of one year and since inception. Simplify tables to make tracking error, leverage and volatility risks much more transparent.

3. Warn registrants of the need to consider the suitability of these products for clients and to ensure that clients who trade the products understand the risks. Discount and execution-only brokers should communicate these risks to their clients.

4. Study and publish conclusions on the actual uses of leveraged and inverse ETFs before clearing new offerings for sale to retail investors. With the drumbeat of the new triple-leverage ETFs now heard in the U.S., such a study assumes much greater urgency.

CONCLUSION: NOT ALL PRODUCTS SHOULD BE SOLD TO ALL INVESTORS

One key lesson of the recent financial collapse is that markets do not self-regulate, and that less sophisticated investors must be protected from financial “innovations” that pose excessive risks to their savings while generating handsome returns for their sponsors. Just because something can be sold doesn’t mean that it should be sold.