

ETF's –Another kind of Mutual Fund

Introduction

Exchange traded funds have been called the next generation of mutual funds. They are attractive to individuals and institutional investors because they provide liquid, cost efficient exposure to a broad range of asset classes. No other investment allows all investors to use one product so effortlessly in managing both the long and the short term. Essentially an ETF is a low-cost, tax efficient open –ended mutual fund trust that trades on a stock exchange. Each ETF is a basket of securities that is designed to generally track an index—broad stock or bond market, industry sector, or international stock—yet trades like a single stock. All index funds must pay a licensing fee to the firm whose index is used. (e.g. all S&P Index funds pay Standard & Poors a royalty fee each year) ETF shares trade independently of the stocks of which they are composed and thus the market value of an ETF can defer from the underlying net asset value of the stocks and cash that make up that share. The unique combination of many of the best features of other investments presents exceptional low cost diversification opportunities for both individuals and institutional investors. ETF's are ideal for highly taxed Canadians whose alternatives include high MER Canadian mutual funds. (Regrettably, we aren't allowed to buy competitive U.S. based mutual funds).

As regards regulation, Section 1.3(c) (Part I) of National Instrument ("NI") 81-101 (Mutual Fund Prospectus Disclosure) states that ETFs, as mutual funds traded on an exchange, are not subject to the provisions of 81-101. Thus, the required prospectus disclosure for ETFs is different from that of regular mutual funds. Since NI 81-101 is not applicable to ETFs, OSC Rule 41-501 (General Prospectus Requirements) sets out the disclosure to be contained in prospectuses for ETFs. Readers may wish to review Form 41-501F1 (Information Required in a Prospectus). See www.osc.gov.on.ca. ETFs are subject to the provisions of National Instrument 81-102 (Mutual Funds), unless a particular fund is granted an exemption from its provisions. Since investment dealers who offer ETFs are normally members of the Investment Dealers Association of Canada ("IDA"), the fund that all members of the IDA, www.ida.ca, must contribute to, the Canadian Investor Protection Fund (CIPF) should be available to investors in ETFs. The Mutual Fund Dealers Association ("MFDA") is currently considering the establishment of a similar investor protection fund. Clients of MFDA members who offer ETFs would then, presumably, have recourse to a fund similar to that of the CIPF.

Market indexing has its roots in the investment finance theory combination of the Efficient Markets Theory (EMT) and Modern Portfolio Theory. These two paradigms suggest that investors should concentrate on their portfolio asset classes (safety/ income/ growth combinations) rather than individual stocks or fund selection. Despite the current accounting issues, the U.S. market is deemed to be highly efficient due to regulation, intense analyst coverage, modern telecommunications and the media/business press. Canada is relatively less efficient. Small caps are generally regarded as one of the more fertile grounds for active managers due to limited visibility and coverage.

As Rex Sinquefeld only half -jokingly proclaimed: “I’ve polled everyone I know, and the only people who think that markets are not efficient are the Cubans, the North Koreans, and the active fund managers.”

- Rex Sinquefeld, Schwab Institutional Conference, San Francisco, Oct. 12, 1995

Index Benchmarks are a reasonable but imperfect surrogate for the general movements in the economy, sector or asset class which are not otherwise available on a day- to day basis. A robust index should be an accurate measure of a market and be investable. The TSE 300 had been criticized for years because of the relatively large number of really small firms and the dominance of a few larger ones. Remember when Nortel was 42.6 % of the TSE 60 index? Note also that indexes are costless, frictionless and do not hold cash, so are in a way idealized constructs. The S& P 500 in particular has been criticized for it’s methodology and been accused of, in fact, being an actively managed mutual fund. Due to index portfolio changes, mergers, divestitures, amalgamations, acquisitions, bankruptcy, splits etc., indexes are not the bastions of stability most people imagine based on their experience with the CPI. When major index changes occur even ETF’s will have increased turnover. In July 2002, S&P Corp. surprised index investors with the removal of the 5 remaining Canadian companies from the S&P 500 index. Indexes exclude preferred shares, income trusts, illiquid stocks, closed –end funds, ETF’s, stocks where 75% or more of the shares are controlled by another corporation and some stocks where a foreign government may have ownership restrictions among others. Indexes aren't perfect, but they are the best economic/market indicator we have at this point of time for daily real- time use.

In 1989, Canada was actually home to the first successful index ETF, TIPs-Toronto 35 Index Participation Shares, in the world (MER=0.05 %). Spiders (SPY: Amex), which track the S&P 500 index has grown to US \$30 billion in assets since 1993.ETF’ s have arrived. A conventional mutual fund uses a professional manager to select the funds’ investments. The manager actively buys and sells securities in an attempt to outperform the market. Historically most fund managers have not consistently surpassed benchmark indices over the long haul -see Athanasakos et al in Suggested Reading/References. Many studies continue to verify the difficulty active managers have in delivering superior results relative to their performance benchmarks. For the 10 years ending July 31,2002 the group average return for Canadian equity funds was 8.44 percent versus the index of 8.83 percent. (the fund average performance figures are estimated to benefit due to survivorship bias by up to 1-2 % over longer measurement periods). This, along with tax issues, management fees (Canadian regulators have excluded trading costs from the MER figure so the true costs of owning a actively managed mutual fund are understated; the annual trading costs are obscurely provided at the back of the Annual Report i.e. hidden in plain sight), loads, certain limitations/ restrictions and the desire for greater transparency, has prompted a growing number of investors to turn to a passive style investment, in which a fund manager replicates the market with the modest objective of cost -effectively keeping pace with the growth of a broad market or specific sector.

“The holdings in the Vanguard U.S. growth fund aren't anything special. It's one of those Big Corporate America type funds and includes Pfizer Inc., Microsoft Corp., Johnson & Johnson, General Electric Co., CitiGroup Inc-all the usual blue-chip suspects.... What makes the Vanguard fund unique, however, is that it charges investors almost nothing in management fees, 0.44 % to be exact. Of

course, for Canadians that's what makes the Vanguard fund uniquely infuriating, since we're not allowed to buy it. The Altamira US larger Company fund, for instance, which owns almost exactly the same portfolio as Vanguard U.S. growth fund, charges 2.56 percent a year, almost six times that of the U.S. fund. Across the board, mutual funds are a lot cheaper on the other side of the border. Actually, NAFTA was supposed to open the door to the free trade of funds too.... But after a decade of waiting there doesn't seem to be much of a rush on Bay Street to make that happen. After all, Canadian mutual fund companies have a good thing going; they charge an average of 2.1 percent in expenses when Americans pay a mere 1.1 percent"

- Kevin Libin, Canadian Business

There are also several other exchange-traded securities which emulate actively managed open-ended mutual funds. Real estate investment trusts (REIT's) are exchange traded and cover virtually every type of real estate property from apartments to retirement residences. A S&P/TSX REIT index is being developed soon-to-be followed by a BGI REIT ETF based on the index. Canada also has about 65 closed-end mutual funds that are exchange traded. These listed securities have many similar advantages as an ETF, but because the number of closed end units is fixed at any time, they tend to trade at fairly large discounts to net asset value. Exchange traded income trusts have recently appeared-some single business, but several are actively managed portfolios of trusts geared to offer optimum or stable income and managed risk .ETF index funds themselves have expanded beyond equity indices to include bond index ETF's.

To meet the competition, there are now a number of open-ended index funds, albeit with higher MER's but some of the positive characteristics of a regular mutual fund. The Spectrum Tactonics Fund is an innovative approach utilizing back -tested quantitative techniques to invest in ETF's (primarily) covering a potentially wide range of asset classes (MER=2.43 %; www.spectrum.com). Fidelity's Disciplined Equity Fund weights the fund's portfolio in accordance with the S&P/TSX Composite index but allows the fund manager to pick individual stocks in each sector whether or not they are in the index (MER=2.61 %; www.fidelity.ca).

Index -linked GIC's, some with initial capital guarantees are also being marketed to GIC refugees and others willing to trade off performance for lower risk. Special fund of fund type accounts allow tax-free switches between funds. Hedge funds have also been packaged to allow more access to smaller investors (e.g. NMN: TSX Northwater Neutral Trust, a portfolio of hedge funds). The 3 innovative FPX index based funds, available from Tallest (www.talvest.com) are a combination of debt instruments, options, futures and other derivative instruments based on Canadian, U.S., and international stock market indices; they are modeled after the Financial Post FPX indexes- Talvest FPX Index model Portfolios combine cash, bonds and equity exposure to come up with three generic portfolios that correspond to the income, balanced and growth portfolios of today's Canadian investor.

The ETF Story

For the purposes of this document we'll focus on index ETF's (sometimes referred to as ETIF's). Exchange traded funds are regulated in Canada as mutual fund trusts and the same restrictions apply as mutual funds-some deviations may sometimes be authorized by regulators. They offer the broadest range of investment alternatives, strategies and diversified portfolio architecture possibilities Indeed, so popular is the notion of the index ETF based portfolio that Charles

Schwab has copyrighted the term "Core and Explore", a scheme wherein a central core of broad based ETF's is formed, augmented by niche securities like REITs, income trusts or even actively managed mutual funds to satisfy a portfolio risk/ reward objective. See www.schwab.com.

Some Major ETF's

<u>Index</u>	<u>Focus</u>	<u>Symbol</u>	<u>MER</u>	<u>Pro</u>	<u>Con</u>	<u>Ten-year return to May 31,2002</u>
Dow Jones industrial Average	30 big U.S. industrials (DIAMONDS)	DIA: Amex	0.15 %	well-known names	lack of diversification	13.7 %
Russell 3000 index	broad market	IWV: Amex	0.20 %	represents 3000 largest U.S. companies	low-profile index	11.9%
S&P 500 (SPIDERS)	U.S. large caps	SPY: Amex, IVV: Amex and XSP: TSX	0.12 %	high-profile	Changing criteria	12.1%
Wilshire 5000	broad market	VTI: AMEX	0.15%	cover s entire U.S. market	Not well followed	11.6 %
NASDAQ 100 (QUBES)	top 100 on NASDAQ exchange	QQQ: Amex	0.18 percent	Blue chip tech orientation	High volatility	-25.9 % (3 year)
S&P/TSX 60(iunits)	top 60 on TSX	XIU: TSX	0.17%	large Exposure	No small caps	12.2 % (index)
S&P/ TSX Composite	broad economic sector coverage	TTF: TSX	0.25 percent	represents about 70 percent of Canadian based TSX listed companies	uncapped	10.7 percent (index)
MSCI provisional EAFE	international equity performance	XIN: TSX	0.35%	non North-American exposure, RSP eligible	no options available	7.9 % (July 31,2002)

Canada currently has in excess of 15 index ETF's with assets of around \$5 billion. Ironically, while ETF's were created to bring "Bay street to Main Street", the majority users are large institutional investors. Funds, for example, can obtain instant exposure to a sector or short sell an ETF as a way of hedging against risk in a portfolio. Because ETF's are traded on the exchanges you can get real time price quotes and execute trades any time during the trading day. You can buy them on margin, sell them short or do just about anything else that can be done with a conventional stock.

ETF's are not just for those committed to passive investment-with ETF's you can work aggressive speculative strategies, hedge risk or even produce income. In addition, orders and strategies such as market orders, limit orders and stop loss orders can easily be utilized. For instance, limit orders can be useful to automatically execute trades if you expect a dip in the market but are too busy to monitor the market daily. Just writing covered calls (where available) on your existing ETF index holdings can be a source of tax-advantaged extra income. (See Appendix I). There is a low cost iunit fund for just about every asset category so long term asset allocation can be easily achieved. An investor wanting to get into gold stocks but isn't sure which specific stock to buy, can purchase the igold units (TSX: XGD) and buy the gold index. If an investor expects a tech rally, he can buy il units (TSX: XIT) or U.S. ETF's and not worry about specific stock selection.

The i60 is the largest Canadian index ETF (assets in excess of \$ 3 billion) and is one of the most heavily traded stocks on the TSX. It does not offer a dividend reinvestment Program.

The i60 index participation units (TSX: XIU) comprises 60 of the largest (as measured by market cap) and most heavily traded stocks on the Toronto stock exchange. It is based on the S&P /TSX 60 Index (www.iunits.com) and has a MER of 0.17 %, far less than any mutual fund including index mutual funds. Stocks include Royal Bank, Manulife, BCE, Suncor, Loblaw's and George Weston. The i60 ETF is intended to equal 1/10 of the level of the corresponding index. It is 100 % RSP eligible. It's standard deviation is 5.9 % vs. the S&P/TSX index of 5.5 %. Its Beta relative to the TSE Composite is about 1.07 with R-squared of 0.98 .In 2001 it had a turnover of only 13 % in contrast with the Royal Canadian equity fund of 36 % or the TSE's 18 %*. This means lower trading costs and less taxable capital gains distributions. As a result of a favorable arrangement with a broker, no trading commissions were paid in 2000. Distributions are made quarterly with the last quarter including a capital gains distribution. The " i" stands for index and is the distinctive indicator of " i units", the brand name of all Barclays Global Investors (BGI) Canada's ETF's. If there is a "C" (for cap) suffix it means that there is a limit to how large any one stock can be in the index fund; 10 percent in the case of the i 60 C. The i60 options are traded on the Montreal Exchange, www.me.org .The ishares are sold through the advisor channel.

* Source: Chevreau, pg 175, the wealthy boomer



Source: www.globefund.com

Note: All returns are pre-tax and ignore mutual fund sales charges/loads and other fees (e.g. set-up fees, short term trading fees, switch fees) and ETF commission expenses

Investor Behaviour

The first step on the index funds journey is to recognize investor behaviors.

Active investors actively engage in stock picking, market timing, manager picking, and style picking. They usually share the following thoughts and behaviors:

- select actively managed funds or stocks they think can outperform a market.
- believe there are times to be in a market and times to be out of a market. This is generally known as market timing.
- think that active managers with the best historical track records are the ones to select to manage their investments.
- shift in and out of styles or categories in an effort to chase returns, e.g., from large cap to small value.

The underlying rationale for pursuing an indexing approach is:

- a belief in the persistence of rising long-term equity returns;
- a belief you cannot consistently *a priori* find undervalued securities;
- a desire for cost-effective, easy to understand investments
- a need for tax-efficiency

Contrasting Active and Index Investing

Characteristic	Active Investing	Index Funds Investing
Return Objective	Beat a market benchmark	Obtain the returns of a market, index or asset class
Style Definition	Significant style drift from classification at times	Relatively pure and consistent classification, index changes can be disruptive
Average Equity Fund Returns over 10 years	8.44 % (to July 31,2002) less loads/other fees	S&P/TSX Composite=8.83% less trading costs; in a flat or rising interest rate environment active management may outperform
Approach	Stock Selection, Market Timing, Track Record Investing	Buys and holds the stocks in a index, Low turnover
State of Mind	Stressful at times because of underperformance Re: benchmark	Relatively relaxed because of ease of monitoring performance and excellent index tracking, no adviser to talk to in dark times
Taxes and Portfolio Turnover (non –registered)	High (20-40% of return over 10 years), Portfolio Turnover averages about 70%-80 %	Low due to favorable capital gains tax rate (big impact on returns over 10 years); Turnover averages 10%-15 %
<u>Net Performance</u>	Generally below the index, by the amount of fees, loads, expenses and taxes	Very close to the index (s), much better after- tax
Individual Investors	Currently about 98%	Currently < 1% but will accelerate once advisors make the transition to fee-based comp'n
Institutional Investors	Currently about 50% and declining	Currently about 50% and growing
Proponents	Virtually all Brokerage Firms, Mutual Fund Companies. Market	The Univ. of Chicago, Nobel Prize Recipients, Vanguard Group, Dimensional Fund Advisors, Barclays Global Investors and

	Timing Services, Investment Press and Brokerage Training Programs.	recently, Charles Schwab & Company
Analytical Techniques	Qualitative/Models, Management meetings. Forecasting/ Predicting the future, Intuition, Insensitivity towards taxes but improving.	Quantitative, Risk Management, Long Term Statistical Analysis, Accurate Performance Measurements, Tax planning.

Canadians Love Mutual Funds

Exchange traded funds (ETF's) are essentially securities, typically of stocks or bond(s) included in indexes; they trade on a stock exchange just like common shares but unlike common shares stock certificates are not issued. They are passively managed at present but ultimately actively managed ETF's will come. What's the big advantage? Well it's basically their low MER's compared to actively managed mutual funds. The fundamental problem with the structure of the Canadian fund industry is that advice fees continue to be bundled along with product fees; funds are priced to pay for advice. In addition, the advice is perceived as biased (tied selling), the advice process is not quality-controlled and more often than not, the advice is not even provided or wanted. A suspected culprit that has skewed appropriate asset mix advice from 3rd party supposedly independent financial well-being advisors is the significant differences between the trailer fee commission remuneration paid to advisors on the highest paying equity funds and the limbo to zero low money market funds with diversified and fix income funds falling between the two extremes. Somewhere along the line the mutual fund concept has moved from primarily managing money to a packaged product, aggressively marketed and sold by minimally qualified commission- driven salespersons. See www.osc.gov.on.ca for a good mutual fund fee impact calculator. The www.iunits.com calculator shows the impact that mutual fund fees –MER's- have on your investment performance, based on a fund you select from the www.globefund.com database and a presumed pre-MER return that you choose.

The table below provides a summary comparison between actively managed mutual funds and ETF's.

Characteristic	Mutual fund (open – end)	Exchange Traded Fund
MER	About 2.3 % average excluding subsumed trading commissions excluded by regulation from the MER	Typically 0.75 % or less; range 0.08-0.75 %, if full-service broker used or in a fee based account, a significant portion of the

		lower fee argument is lost
Advice	Included in MER but may not be unbiased due to the method of dealer/adviser compensation	No advice unless purchased through a significantly more expensive full-service broker. Brokers, like advisers, are motivated by commissions; there's no free lunch.
Minimum investment	\$ 100 for many funds; usually not more than \$500; fractional units possible- very convenient for small investors	Generally a board lot of 100, can be less but at a premium price
Diversification	Adequate	Very broad depending on index, narrow indexes create significant risk/return
Cash	Must hold low-performing cash for potential redemptions- 2 to 10 % +	Little cash" drag"
Versatility	Many choices of funds and variants, switching among funds in family possible often without extra fees	Can be shorted, options can be written and purchases margined/ sales limit stopped
Price	Buy/Sell at end- of- day NAV-unknown at time of purchase or sale	Can place orders at anytime during the trading day; limit orders possible
Return	Some possibility of beating index over long term	At best, fund will match index
Taxation	With some exceptions, generally inefficient if held outside registered account	Extremely tax –efficient but all foreign ETF distributions treated as ordinary income
Management	Active portfolio manager	Passive only at present; some closed-end funds might be attractive
Reinvestment	Generally automatic	Need to set up DRIP program at broker
Commissions	Load and no-load available	Trading costs with discount broker
Sale/Redemption	Must be redeemed by fund company at net asset value; may include back-end load and termination fees	Sold on open market-must be a buyer; normal trading commissions apply-discount broker typically assumed

Mutual Fund Education Series
Kenmar

Here's some simple arithmetic to illustrate the challenge facing a high MER fund. Assume \$ 10,000 is put into a 2.3 % MER actively managed fund and the associated benchmark index has returned 10 % in the year. Assuming linear growth in the year the average amount invested is \$ 10,500 and the return lost to the MER is $0.023 \times \$ 10,500 = \$ 241.50$. Now we'll assume we bought an index ETF and the commission was, say \$30.00, for \$ 10,000 dollars worth; then the gain of the ETF is $\$ 10,000 \times 0.10 - \$ 30.00 = \$ 970$. To get an equivalent return (R) from the active fund we must have $R \times \$ 10,000 - \$ 241.50 = \$ 970$ or $R = \$ 1211.50 / \$ 10,000 = 12.11\%$. This implies a 20 %⁺ improvement over the index. Adding in the effect of low yield cash holdings would only increase the hurdle rate but we'll be kind and assume the manager can make up the difference by securities lending or writing some covered calls. We'll also be very generous and assume the brokerage commissions paid by the fund are the same as the lower turnover index ETF fund /benchmark index and there is no front-end load charge. That 20%⁺ is still quite a challenge and we haven't even considered taxes yet or gameplaying issues.

In August 2002, Mark Bonham of Bonham & Co. Inc was assessed \$200,000 in penalties by the OSC for artificially raising the value of the funds he was managing using inappropriate methods in manually pricing shares in his funds .In Sept. 1999, Royal Bank came under criticism for the active role two of its mutual funds played in Onex's hostile takeover bid for Air Canada- in a perceived conflict of interest, 2 Royal- owned mutual funds (with 2.5 million Air Canada shares) and Royal Bank, as a major lender to troubled Canadian Airlines, had " independently " supported the bid which would have seen the 2 airlines merged. This controversy was bettered by Caldwell 's 2001 stock trading practices:

" ... One reason for the lousy performance (of Caldwell funds): lots of trading activity. Five of his funds had portfolio turnover of at least 75 percent last year, three of them more than 100 percent. In total, the funds paid \$800,000 in brokerage commissions-almost one percent of assets at year-end. And where did those commissions go? Primarily to Caldwell Securities Ltd. according to Caldwell's regulatory filings...."

-Derek DeCloet, " Volatile funds scorch Caldwell", FP, Aug. 9, 2002 pg. FP1

In another case a senior got scorched:

"At 83, Maurice Phillips doesn't surprise easily any more. But a statement he got earlier this year from Investors Group surprised him plenty. It also irritated the retired printing-paper salesman from Pointe Claire.

Because he'd requested a transfer of his registered retirement income fund to BMO Nesbitt Burns, two years after moving it to Investors Group on a friend's recommendation, Phillips was hit with \$1,543.97 in mutual-fund redemption fees and \$617.59 in termination fees, which Investors Group deducted from the transferred amount. That represented about 3.5 per cent of his capital at that point.

He also absorbed a loss of about 4 per cent on the market value of his units of the Investors Mutual of Canada fund, for which he'd paid about \$14.90 a unit and which were redeemed in April for \$14.28.... The agreement he signed said the company "may" charge fees upon redemption, but he doesn't remember that point being made in his discussion with the representative.

He'd transferred RRIFs a couple of times before, to and from bank and insurance companies, and never got hit with penalties. The fees are outlined in the mutual-fund prospectus, but Phillips said he never got one..."

**Paul Delean, Montreal Gazette, “ Feeling Burned, and bitter about it”,
July 22nd, 2002**

Beyond the fees levied, one can certainly question the ethics of selling a back -end load fund to a 83-year-old senior. Note also that a few mutual fund companies base the redemption charge on the current market value of the fund, a practice that is not investor-friendly if the fund has risen in value. About 75 % of load fund sales are of the back-end variety.

Investors today are increasingly beginning to appreciate the greater transparency and relative simplicity of ETF's. (I have put together a glossary of *specialized* Mutual Fund investment terms over the past 3 years –it now stands at 60 pages!)

Other major reasons investor attention has focused on ETF's is that historically, actively managed funds incur tax penalties due to higher portfolio turnover/distributions, carry sales commissions, deferred sales charges, and other special fees and most importantly fail to consistently beat the index. Detractors of ETF's unfairly refer to them as “ Guaranteed Mediocrity”.

But what about the exceptional active funds, the ones that have been garnering five-star ratings from Morningstar or appear in top Funds? The ones “savvy” investors flock to? Remember that Morningstar's star rating is based on past performance, which is no guarantee of anything. Indeed, Burton Malkiel states in a 1995 Journal of Finance article that he determined there is no relationship whatsoever between a fund's past performance and its future performance – a caution always included in the Prospectus.

Even those who do find a relationship between past performance and future performance, such as Martin Gruber in a 1996 Journal of Finance article, do not recommend chasing past winners. “It would be very costly and time-consuming to invest in funds this way,” he told an interviewer.

Nevertheless, for whatever reason, Canadians still hold in excess of \$400 billion of actively managed high MER funds with the hope that they can beat the index. Why do Canadian investors prefer active funds to index funds? Four possible reasons: First, investors make mistakes as they evaluate returns. They overlook how their investment would have fared in an index fund. Second, investors want more than returns. They also want hope and fun. Third-very effective marketing and promotion of mutual funds. Fourth, their advisers who earn trailer fees, a virulent form of linked selling, keep them invested in securities where they collect on-going sales commissions (these trailer fees are embedded in the MER so they are not very transparent to investors).

Let's take the example of a casino. All the money on the gaming table comes from the pockets of the players, right? Some win, some lose, but the total amount in the pockets of players at the end of the evening is less than the amount they brought with them. The house takes a cut on each spin of the wheel, paying out less in winnings than it collects in bets. So roulette is a negative-sum game, and so is your actively managed mutual fund. Too many investors fail to see that the market is a *negative-sum* game because they fail to compare the returns of their active funds to those of the index.

They think that the 10% return of their active fund means winning when, in fact, it means losing relative to the 12% index-fund return. Even investors who understand the negative-sum nature of the market often stumble at the next hurdle: failing to understand that luck often masquerades as skill.

Now for a little math (skip to the next section if you find the math intimidating or boring). The simplest probability distribution is one with only two event classes-heads –tails, win-lose, and success-fail. For those who remember their elementary statistics, one such discrete distribution is the Binomial distribution. Any high school student can derive it from first principles but we'll spare everyone the pain and cite it as follows:

$$P(r \text{ successes in } N \text{ trials with probability of success} = p) = {}^N C_r \cdot p^r \cdot q^{N-r}$$

Where P=the probability of observing exactly r successes in N independent trials

p= the probability of success (beating the benchmark)

q=1-p = probability of failure

r= the number of successes

${}^N C_r$ is the familiar, combinatorial symbology from high school algebra. It is equal to $N! / r! (N-r)!$ The mysterious! stands for factorial where 3! for instance= 3.2.1=6.. By definition 0! Is equal to zero. Now take p, the probability of beating the benchmark, to be 50 % or 0.50 expressed as a decimal, which is equivalent to flipping a coin. The probability of getting 10 (=r) consecutive years of beating the benchmark (a "success") by pure chance is then $10! (.5)^{10} (1-.5)^{(10-10)} / 10! (10-10)! = 0.00098$. The complete table courtesy of Dr. M. Milevsky is shown below:

Ten years of Results

# of years of superior fund performance	Probability of beating the benchmark index
0 (P=0/10)	0.00098
1	0.00977
2	0.04394
3	0.11719
4	0.20508
5	0.24608
6	0.20508
7	0.11719
8	0.04394
9	0.00977
10 (P=10/10)	0.00098

With this little table, you can make a quick assessment of the fund. Let's say the fund manager claims to beat the benchmark index seven times out of the last ten years. According to the table, there is a 11.72% probability of him doing this by pure chance i.e. no skills whatsoever.

Research scientists, safety engineers, pollsters and market researchers typically use five percent or even one percent to distinguish randomness from causality. So on a scientific basis, a 12 percent probability would be sufficiently high to reject the hypothesis that his track record is due

to his portfolio management skills. Nine out of 10 would bring us into the five % range which in many cases would be acceptable. *The point of all this is to demonstrate how even a low 50/50 probability of being a "winner" can lead to some cases of tremendous success 8/10, 9/10 and 10/10 due strictly to randomness (luck).*

Index Fund Management

Index funds are not managed according to traditional methods of investment management, referred to as "active management" which involve the buying and selling of securities based upon the portfolio advisers market, financial and economic analysis. Index funds don't rely on the ability of a portfolio advisor's analysis. However, because of their size and/or investment objective, index funds may not always be able to hold the same companies in the same proportion as the market index. There are three commonly used methods, that are not mutually exclusive, to implement passive management (indexing):

1. The most basic form of passive management is investing in the same companies and in approximately the same proportion as the market index being tracked. As a result, the net asset value of an index fund will fluctuate in approximately the same proportion and direction as the index.
2. Optimization/ sampling: a commonly used mathematical process known as "optimization" or "sampling" is used to identify the securities which would likely provide a return closest to the return of the index being tracked. Rather than holding the same companies in the same proportion, optimization allows you to hold a smaller number of securities in larger proportions versus the index, while at the same time tracking the performance of the market index.
3. Substitution: portfolio advisers sometimes trade derivative instruments, such as futures, futures forward contracts or similar instruments instead of the actual underlying investment. The value of that instruments is based on or derived from, the value of the market index or an underlying asset included in the index at the time of the contract is bought or sold. As a result, substitution allows the manager to track the performance of the market index, while not requiring the manager to hold the actual securities. In many cases, this is the only way for broad indices like the Wilshire 5000 to be economically tracked.

Benchmark Index Adjustments

Index funds including actively managed *closet* index mutual funds show their difference markedly when there is an index change that involves a large addition to the benchmark index. Both closet/index mutual funds and ETF's sell the stock leaving the index (triggering capital gains if any) and both (the closet indexer will generally follow along lest he be left behind) buy the stock entering the index. But if the purchase is more than the sale, the mutual fund sells more of the other stocks in the index thereby triggering more gains. The ETF, in contrast, issues more units to the underwriter to finance the additional purchases. The ETF does not need to sell as much stock and thus ends up triggering fewer gains. This isn't significant all the time, but they do occur from time to time. The benchmark index of course does not incur these expenses at all. Again these added expenses are yet another issue for the beleaguered portfolio manager to deal with.

ETF's and your RRSP (and outside too)

There are currently 15 Canadian based ETF's, all 100 percent RRSP /RRIF eligible. (RESP's do not have a foreign content limit). But unlike mutual funds, you are not limited to only Canadian choices. There are now in excess of 100 U.S based ETF's that slice U.S. and international markets by capitalization, style, industry sector and country/regions. They trade on U.S. stock exchanges, primarily the AMEX, and qualify as foreign content. See www.indexfunds.com, or www.amex.com. HOLDRS (Holding Company Depositary Receipts) are a fixed and mostly unchanging basket of investments traded on the AMEX stock exchange and issued by Merrill Lynch. HOLDRS are a quasi- index exchange-traded fund (ETF), but they are more properly known as exchange traded baskets. These narrow (and risky) baskets include biotechnology, B2B, the internet, pharmaceuticals etc. (they trade in board lots of 100 so initial investments need to be quite sizable; no MER is charged –only a \$2.00 U.S. fee. /quarter per 100 shares) See www.holdrs.com. For most investors the best tech choice appears to be the most popular ETF in the world. It's called Qube (AMEX:QQQ) and it lets you invest directly in the performance of the NASDAQ 100, the index of the hundred largest non-financial stocks listed on NASDAQ. The MER on this fund is a reasonable 0.18 % which compares with 0.60 percent for the Barclays iShares Dow Jones U.S. Technology sector index fund (AMEX:IYW) .QQQ “Qubes” is considered foreign content for RSP's.

If the 30 percent foreign content limit is too restrictive for your RSP, Barclays Global Investors Canada offers two 100 % RSP eligible equity ETF's; the i units S&P 500 index RSP Fund (i500R; TSX: XSP) and the i units MSCI international equity index RSP fund (iIntR; TSX: XIN) with MER's of 0.30 % and 0.35 % respectively. The i500R and iIntR are the worlds first synthetic ETF's. They use index futures and currency forwards to replicate, to the extent practicable, an investment in the constituent companies of the S&P 500 and Morgan Stanley Capital International (MSCI) provisional EAFE indices, while remaining Canadian property for the purpose of the foreign content rules for RSP funds (i.e. they don't use up foreign content room). This latter index is designed to measure the investment returns of the developed countries outside of North America. EAFE stands for Europe, Australasia and Far East. The index includes stocks from 20 countries. The MSCI EAFE ensures that the stocks have good liquidity, are freely tradable and all industries are proportionately weighted in the index.

Taxation and Tax Efficiency

**“ In Canada, it's not what you earn that counts,
It's what you get to keep.”**

-CIBC Wood Gundy ad, Fifty Plus magazine, Sept. 2002

Michael Thorfinnson and Jason Kiss of TD Quantitative Capital published a classic paper “The Overlooked Piranha” regarding mutual fund taxation in the Fall 1996 issue of Canadian Investment Review. Using typical MER's, portfolio turnover rates, tax rates, etc., they concluded “Portfolio turnover is the largest detriment to after tax returns, yet may be the hardest portfolio variable for active managers to control... Selecting an investment strategy which maximizes after-tax returns through low turnover is therefore critical in determining ultimate performance”.

While the capital gains tax rate has come down in recent years, the tax still remains a serious impediment to wealth accumulation. But just how damaging are taxes to your investment returns?

Portfolio Turnover Lowers Your Returns *

(assumes 15 % pre-tax portfolio annual return, 34 % tax rate and 5 year hold period)

Portfolio Turnover	0 %	20 %	50 %	75 %	100 %
5 year net return	15 %	12.1 %	10.5 %	9.8%	9.4 %

* **Bourbonniere Paul, Polson Bourbonniere Financial Planners, “Five Keys to successful investing “, Money Digest, Oct. 2000, www.pbfinancial.com**

Clearly, the higher the portfolio turnover i.e. the more active your manager is (buying and selling stock) then the larger the realized taxable capital gains due to distributions in a given year. The Canadian mutual fund industry is finally growing more tax sensitive. Many use turnover to either harvest losses or take advantage of the sheltering power of the Capital Gains Refund Mechanism (CGRM). Hence, the natural turnover rate of Canadian managers is somewhat difficult to pin down. Estimates range from 20% to 90 % and up for Canadian equity managers but can be highly variable from year to year. It's best to check the 5-year historical figures in the Prospectus.

While some trading activity in a portfolio can be welcome to either protect capital, or take advantage of new opportunities, it is important to keep high tax investments in registered accounts such as RRSP's and RRIF's. ETF's however get around the issue because of their very low turnover rates. Canadian equity funds typically run 70 % and up. The current highest capital gains tax rate in Ontario is 23.2 %.

Canadian investors must report all domestic and foreign income on their Canadian tax returns. Whether the foreign income is a dividend or otherwise it is treated as regular income for Canadian tax purposes. In the case of ishares country index stocks, the country represented may withhold tax on distributions even before taxes are withheld by the United States, and the country's withholding tax isn't eligible for foreign income tax credit on a Canadian tax return. However, these distributions are usually small and after all the real purpose for international indexing is diversification and capital appreciation. You are responsible for including all Spiders and i shares payouts including taxes withheld, calculated Canadian dollars on your annual income tax return. These calculations should be done for you on your T5 slip mailed by your broker at tax time. You should usually receive a tax credit for the U.S. tax withheld by entering the tax paid to a foreign country in the foreign tax credit part of Schedule 1. An excellent paper on the tax implications of ETFs can be found at: http://iunits.com/english/foradvisors/etf_tax_paper.pdf written by PriceWaterHouse Coopers.

Caution: The new money and redemptions that lead to tracking error can also cause funds to realize--and distribute--gains. Funds that use a lot of options/ derivatives to track the index and park the cash used to cover them in bonds will also generate highly taxed interest income rather than lower taxed dividends and capital gains. Never hold a RSP index fund in a taxable account. Also when switching active funds within a family, a switch is considered a disposition and thus is a taxable event. When you're considering any index fund or any fund for a taxable account, check those *after-tax* returns. As a Tax loss strategy—An investor can sell a security that is

underperforming and claim a tax loss but retain exposure to its sector by investing in an ETF without breaking any short term trading CCRA tax rules.

For those investors with large asset bases or involved tax issues, it's always best to consult a professional tax accountant. Canadian residents with large U.S. holdings, including ETF's, should consult with estate planners to deal with complex U.S. estate taxes.

Bear market performance

The classic argument against indexing is that active management outperforms passive management in a bear market. The current reasoning is that because passive portfolios generally are fully invested, they don't provide downside protection. In contrast some fully managed equity mutual funds hold cash in tactical trading strategies, increasing the component in a bear market and thus cushioning the blow. They can also make smart stock picks or a decision to reduce exposure to the market. Well, if you truly believe you (or your fund manager) can accurately determine when a bear market is about to begin, then the correct strategy would be to sell all your equities and wait for the bear to end. However, the fund manager first has to be right in assessing when a bear market has begun. Practically speaking he can't sell his entire portfolio because this would be a breach of the fund mandate and would cause a unitholder uproar to pay 2.3 % MER to manage cash. The empirical evidence to support a fund manager's ability to do this is mixed. For example in the 1990 and 1992 down markets, actively managed mutual funds outperformed the TSE 300 (now the S&P/TSX Composite) by 3.4 percent and 5.6 percent respectively on a pre-tax basis. However in the 1998 down market the average mutual fund underperformed the TSE300 by 2.2 percent. This can be due to poor stock selection as well as nervous investors wanting out of the market, forcing fund managers to satisfy redemptions. In any event, ETF's provide various low-cost options strategies to capitalize on anticipated bear markets.

Index Mutual funds vs. ETF's

If you find indexing appealing, the question arises whether you should buy index funds or ETF's. Index mutual funds are managed by mutual fund companies or bank subsidiaries who buy stocks in the index (or use derivatives) in proportions close to the index they're tracking. CIBC has the widest selection of no-load index funds. To discourage short-term trading, many fund companies impose a minimum holding period, usually 90 days, or charge a short-term trading fee, typically 2 percent. They do no market research or stockpicking and also make few transactions emulating a buy and hold strategy. As a result, management fees in Canada are less than half of those charged on actively managed mutual funds, typically 1.00 % and more. (Frustrated Canadian investors can only look longingly at the tantalizing selection of low-cost index funds sponsored by the Vanguard group-Unfortunately, Canadians are prohibited from buying U. S. mutual funds but the whole universe of U.S. ETF's is open to enterprising Canadians.) ETF's do the same thing but have MER's typically below 0.25 %. Because they trade on stock exchanges however, you have to pay commissions every time you buy or sell-typically \$25 to \$30 at an on-line discount broker. You should consider index funds if you plan to sock away a certain amount on a regular basis, say by using the discipline of dollar cost averaging. ETF's should be considered, however if you plan to buy and hold. ETF's or their options however, can be used by active traders with reasonable amounts to invest without being constrained by short term trading fee penalties.

Bond Index Funds vs. bonds

Bond funds invest in bonds, mortgages or both. Many of these funds are RRSP eligible. This fund category includes Canadian bond, Canadian mortgage, Canadian short-term bond, Foreign Bond and high yield Bond. Bond funds are best for investors who do not have the capital to buy bonds directly or would have to pay more when buying as an individual. A low MER is crucial to successful bond fund returns.

“A recent research study from the US. concluded that bond fund returns and expenses have a direct *negative* one-to one relationship .In other words a one percent increase in fees results in a one percent decrease in bond fund returns. This relationship gets stronger as the investment horizon lengthens “.

Source: top funds 2002

Most Canadian bond index funds were launched within the last few years and are designed to match the performance of the Scotia Capital Universe Bond Index-Canada's benchmark bond index. For the 10-year period ending July 31st, 2002 the SCM universe Bond index achieved an average annual return of 8.37 % .-the average bond fund gained 6.63 % over the same period. Most actively managed bond funds have difficulty beating the bond index because of their 1.5 %+ MER's.

Barclays Global Investors (BGI) has two 0.25 % MER Canadian bond ETF's-iG5 (TSX: XGV) and iG10 (TSX: XGX) traded as i Units. These ETF bond funds are ideal for the small bond investor-someone who otherwise would have had to pay more when buying individual bonds directly. BGI has just launched four funds with a thrifty 0.15 % MER for those interested in U.S. bond index ETF's. These are:

i shares Lehman 1-3 year Treasury bond fund (AMEX: SHY) -BGI
i shares Lehman 7-ten-year Treasury bond fund (AMEX:IEF)-BGI
i shares Lehman 20+ year treasury bond fund (AMEX:TLT)-BGI
ishares GS\$ InvesTop corporate bond fund (AMEX:LQD)-Goldman Sachs

The iShares line-up mimics indices, whereas the i units hold single Government of Canada bond issues. For your long-term or tradable fixed income portion of your portfolio these low-cost innovative ETF products are hard to beat.

If your fixed income allocation is too small for you to diversify, and you will want to invest in a bond fund, then consider a bond index fund over an actively managed bond fund. Note however that tracking errors, management expense fees and the need for some cash reserves mean that bond index funds will still underperform the bond index. If you're able to buy funds directly and competitively, it's still the best way to go. After all, the purpose of fixed income is to preserve your capital at maturity and to generate income in the meantime. Unlike individual bonds, index products do not have a fixed maturity date where you are guaranteed by the issuer to receive your principal back. (unit prices fluctuate as fund managers make bets on changes in interest rates and weightings among the different types of bonds.) .Holding individual bonds also permits laddering of maturity timelines.

Option Strategies

Index options (when available) can be used to sell covered calls (you give a buyer the right to buy your ETF at a certain price for a defined period in exchange for a call premium-you do however give up the right to any gains above the strike price) for extra income (for tax- advantaged capital gains income) or to buy puts to protect a portion of a portfolio against downside risk in an anticipated bear market. Puts give you the right, but not the obligation, to sell the ETF at a certain price; the option premium is like an insurance premium. These are very conservative uses of options and can be readily understood by even novice investors willing to learn. Admittedly, this is a stretch without some self-initiative on behalf of individual GIC refugee Canadian investors (sometimes jokingly referred to as “fin-peasants” the financial equivalent of technology-challenged “ techno-peasants “). To execute option trades you’ll need to be approved by your broker –another daunting step perhaps for those lacking financial education and self-confidence). See Appendix I for some ME ETF share trading guidelines.

Index Fund Risks

Risks? William Sharpe received the 1990 Nobel prize in economics for proving, among other things, that the only perfectly diversified portfolio is the capitalization-weighted portfolio of all stocks. Anything less exposes the investor to diversifiable that he or she could have avoided. As a practical matter, 30 stocks is probably adequate diversification. But it's hard to argue that an active fund with a few stocks is less risky than an index fund with all stocks.

ETF’s use “passive management”; as a result, some minor risks are involved in that the index fund or ETF return may not exactly match the underlying index.

Regardless of whether the manager holds the same companies in the same proportion as the market index or uses optimization/ sampling or substitution, the net result is similar. Some level of tracking error, albeit small, occurs. Additionally, index funds may have limits on the percentage of any one company that they can invest in, typically 10 percent. If at any time the securities of any company exceeds this limit, the fund will not track that portion of the index. Also, as a result of expenses, such as trading costs/use of derivatives, charged to the fund and the method of passive management implementation used by the manager, the rate of return of an index fund may not be identical to that of the index being tracked. “Dividend drag “ is also another factor that could alter results. During the bull market of the 1990’s, the dividend drag of S&P 500 SPDRs was about 0.25% a year. For Canadians wanting to track a foreign index there is a possibility of significant deviation unless the fund hedges the Canadian dollar i.e. “currency neutral”. If it does not, and the Canadian dollar rises than actual returns in Canadian dollar terms will be lower and vice versa. Finally, index ETF's bear all the market risks of the underlying index. Refer to the Fund Prospectus for a complete listing of risks.

Drawbacks to owning Exchange Traded Funds

ETF's, like all investments are not perfect or a panacea:

- Unlike mutual funds, there is no general provision for re-investing dividends or capital gains distributions. RB/Action Direct and some others do however have a DRIP program. Also, there is no means of contributing small amounts monthly other than paying brokerage commissions and systematic withdrawal plans are non-existent.

- You will never beat the index. In theory at least, you *can* beat a foreign index return depending on currency rates relative to the Canadian dollar when you bought/sold your ETF. If investing in HOLDR's, you must buy in board lots of 100 shares. Depending on the investment, this could easily cost over \$10,000 Canadian.
- Depending on the ETF chosen, it could be volatile as some represent a thin sliver of the overall market.
- ETF's with foreign market exposure and currency exposure may not track as well as domestic ETF's. *For retail investors this can be a major consideration.* With-holding taxes could also be a minor irritant in non-registered accounts.
- Commission costs can negate low MER's if investable amounts are small or a discount broker is not used.
- Because of Ultra-low fees there is no money wired into the MER to provide adviser advice, biased or otherwise. Some cynics claim this may actually be an advantage.
- In the U.S., which is home to most ETFs, ETF (and U.S. mutual fund / common stock) Canadian investors will have to deal with things like potential U.S. estate taxes (for wealthier folks), foreign exchange issues (i.e. rate that applies when buying through a Canadian broker), and tax issues (i.e. distributions from U.S. funds are fully taxable in Canada even if they are capital gains per U.S. definition). Made- in- Canada ETF's are treated just like Canadian mutual fund's so you'll receive a T3 tax slip.
- Investors must factor in bid -ask spreads vs. commissions and MER's to come up with total cost.
- An index may be slower to dump securities that have soured. If a company is going bankrupt, it is normally not removed from an index until five days after the bankruptcy notice whereas an active manager can get the fund out and preserve something.
- Investors who want a moral/ethical/socially responsible component to their investing simply cannot use an index product or strategy because they will inevitably be putting their money, through the index, into tobacco stocks, defense contractors, liquor stocks and the like.
- Index investors have to live with what's in the index. Most indexers (and active mutual funds too) were victims of one of the biggest stock frauds in Canadian history when Bre-X Minerals Ltd. was added to the TSE 300 (now the S&P/TSX Composite) in 1997. This immediately attracted hundreds of millions of dollars of new investment money from the index products and ultimately cost investors hundreds of millions of dollars.
- Detractors argue that indexes aren't immune from style drift in a sense. Technically, they always follow the same general goal of tracking an index, but consider what happens when a fund changes indexes (http://www.indexfunds.com/articles/20020826_VGproxy_new_gen_JS.htm) or when indexes cease calculation. What happens when the index provider itself changes their own methodology? (Recall the MSCI switch to "free float " when index changes occurred in Nov 2001 and May 2002. It was a big deal in the U.S., though not so much in Canada only because the only Canadian -sold MSCI index funds were based on the EAFE markets and those few funds were so young that most sported accrued losses. See http://www.indexfunds.com/articles/20010620_MSCIchange_iss_intl_DH.htm to revisit that issue.)
- The very popularity of an index can cause the included stocks to be pricier (higher P/E) than comparable non-index stocks (on the plus side, this might give you a little leeway for some excitement and pick a few of your own winners with some small portion of your investment cash)
- Some niche ETF's have limited trading activity throughout the day so purchase/sale may be a minor problem occasionally. Because of the creation and redemption process, new

- units can easily be created to meet demand or be redeemed to soak up excess supply. Also, market makers will facilitate the extra demand or absorb the excess supply to keep the market in equilibrium. Having said that, the retail investor can be comfortable that trade orders placed at market will be executed with minimal impact on the price.
- ETF's, like mutual funds, do not disclose their share voting practices. In the case of Barclays Global Investors (BGI), BGI employs ISS (Institutional Shareholder Services) to perform due diligence on shareholder issues. As an independent consultant, ISS will make recommendations on voting issues which BGI will review and vote accordingly. The Global Proxy Group will carry out shareholder votes in accordance to the established guidelines. The BGI Proxy Committee has oversight over the voting proxy process and is comprised of senior partners of the firm.
 - If an ETF is trading at a premium when you buy shares, you will pay more than it was worth; if you sell at a discount, you receive less than the shares are worth. With a regular mutual fund, you receive the Net Asset Value, calculated daily-end of day.

Surprisingly, Canada's market with so many restrictions on foreign ownership (airlines, banks, telecom, media) is one of the few indexes that disregards ownership restrictions in its index construction (noncompliant with free float ideals).

The key to successful ETF investing is to understand what you are buying, the risk/reward parametrics and to ensure they fit into your overall financial plan/portfolio and investment horizon.

Conclusion

ETF's are in a sense the easiest way to invest, because it's easy to monitor the funds once you've selected them and opened a brokerage account. Asset allocation is a key success factor. Various studies have demonstrated that low-cost index investing is likely to beat all other methods. Inexplicably, less than 100,000 Canadians capitalize on these low cost funds. Their very low MER's and portfolio turnover means ETF's deliver a higher after-tax return. Passive investing is suitable for smaller investors who can't afford or attract the services of a competent advisor, don't know a lot about investing, are quite happy to achieve market-like returns and are fed up with high MER's from the fund factories. If you lust for the big score, love the trading game or have a short investment horizon, than ETF's *may* be too boring and "average" for you.

As John Mark Markese the President of the American Association of individual Investors said: "Good timing can't be beat; the problem is " it just can't be done". If you insist on trying to time the market, the best way is to invest in the market itself, and ETF's are absolutely the best way to do that.

Indexing works best in efficient markets, active management works best in inefficient markets. Even in foreign markets though, the active results are not particularly great. Assuming truly superior managers exist, they must be extremely rare, you must be able to find them AND have access to them. This is like looking for a needle in a haystack. For all the time and effort involved, the average investor is best served by " buying the averages "and paying more attention to preparing a financial plan, asset allocation and rebalancing.

*"With indexing, you trade off the **low possibility** of doing better than the index for the **high probability** of doing better than most other funds."*

-Ted Cadsby, CIBC

ETF's are experiencing a rapid explosion in new product announcements, investor interest and media coverage. Currently numbering in excess of a 100, deciding which ones to buy is becoming time consuming and somewhat confusing. In index investing you will receive the return of the index, it is therefore imperative that the management fee (MER) be as low as possible. Fee based accounts, for those requiring advice, should really go for ETF's as advisers make more money and investors get a lower cost product-a clear case of WIN/WIN.

The alternatives to high-cost, tax- efficient open-ended mutual funds are now sufficiently numerous and attractive, that to disregard them is financial masochism.

ETF's are not a panacea but make a lot of sense in a Core and Satellite portfolio composition.

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Suggested Reading and Web site visits

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www.amex.com: Information on all ETF's listed on AMEX, including top holdings and MER's, quotes and graphing tools.

www.amextrader.com: This site provides historical distribution information for all U.S. ETF's

www.bylo.com: Site run by a Canadian private investor about do-it-yourself mutual fund investing and indexing

www.djindexes.com: Site for information on methodology and maintenance of indices.

www.financialengines.com: Nobel prize-winning economist, William Sharpe's site.

www.globefund.com: An excellent site for the Canadian mutual fund investor. It's unique features include easy-to-use fund charting functions, a quick link to relevant Globe and Mail fund articles, and links to their monthly report on mutual funds.

www.holders.com: Details on the 11 holding company depositary receipts created by Merrill Lynch.

www.indexfunds.com: News and views on U.S. ETF's and index funds in general.

www.investorism.com: Great site for mutual fund buyers run by investor advocate Joe Killoran.

www.iunits.com: Details on ETF's offered in Canada by Barclays Global Investors.

www.ishares.com: Barclays sites for its approx. 60 U.S. funds, called iShares including tracking against the index.

www.mackenziefinancial.com A 34-page document "Your Tax Guide" is available on this site regarding taxation of mutual funds - well worth the read. (Planning Tools)

www.mfda.ca The official web site of the Mutual Fund Dealers Association of Canada
<<http://www.morningstar.ca> :Is one of the best and more informative mutual fund sites in Canada. Getting the best of their free information only requires a registration. You'll get detailed information on most funds and analyst opinions on many. The most useful information on this site is something called Manager Monitor - profiles of mutual fund managers.

www.msci.com: Site specific to Morgan Stanley International indices.

www.spdrindex.com: Data on select sector SPDR's-Standard and Poors Depositary Receipts.

www.spyglobal.com: Site for extensive information on Standard and Poors indices, their methodology and maintenance.

www.sterlingmutuals.com -This is an excellent site with good educational materials, financial links and mutual fund research. Sterling Mutual Funds Inc. is a Windsor based no-load mutual funds broker representing over 60 fund companies. Sterling Mutuals Inc. is registered as a mutual fund dealer in Ontario, British Columbia, Alberta, and Manitoba.

www.strategicsector.com: This site is run by prominent investment adviser/portfolio doctor Hans Merkelbach (IPC Investment Counsel). Contains some excellent material on mutual funds, financial links and a complimentary /confidential mutual fund portfolio review.

www.streettracks.com: Details on ETF's run by State Street Global advisors.

www.tdassetmanagement.com: Deals with ETF's, closed-end funds and pleural index and quantitative funds.

<http://www.telusplanet.net/public/kbetty/retireinvest.htm>> This is a site run by a retired scientist with a passion for investing. There's a ton of useful information on the site, including an essay on the author's methodology for finding his favourite type of stock - one that pays a high and sustainable dividend.

www.tickertalks.com: A wonderful Canadian investment site run my Mike Bowman of Wickham Investment Counsel of Hamilton, Ont.-several good articles on ETF's.

www.wealthyboomer.com This is a great site. The lively Wealth discussion forum is moderated by Jonathan Chevreau, consumer-friendly personal finance columnist for the National Post. The discussion forum is moderated by Chevreau and is lively

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Appendix I Montreal Exchange Option Guide

Using Index Options

FUTURES

Specifications	SXO, WXO S&P Canada 60 Index Options	XIU, WIU Options on iunits™ S&P®/TSX™ 60 Index Participation Fund
Trading Unit	Multiplier: C\$100 per S&P/TSX 60 index point.	100 units of the S&P/TSX 60 Index Participation Fund (i60s). Barclays Global Investors Canada Limited is the trustee and manager of the units.
Contract Months	Nearest two months plus the next two months in the designated quarterly cycle March, June, September and December. Annual expiry of December (long term).	Nearest three months plus the next two months in the designated quarterly cycle March, June, September and December. Annual expiry of March (long term).
Price Quotation	Quoted in index points, expressed to two decimals.	Quoted in Canadian currency.
Last Trading Day/Expiration	Trading ceases on the trading day prior to the Expiration Day (the 3rd Friday of the contract month, providing it be a business day; if not, the 1st preceding day).	Trading ceases on the 3rd Friday of the contract month, providing it be a business day; if not, the 1st preceding day. The option will expire on the Saturday following the last trading day.
Contract Type	European style. Cash settlement. The final settlement price is the Official Opening Level of the underlying index on the expiration day.	American style Exercise and delivery

<p>Minimum Price Fluctuation</p>	<p>0.01 index point = C\$1 per contract, for premiums of less than 0.10 index points; and 0.05 index points = C\$5 per contract, for premiums of 0.10 index points and over.</p>	<p>C\$0.01 for premiums of less than C\$0.10; and C\$0.05 for premiums of C\$0.10 and up.</p>
<p>Strike Prices</p>	<p>Set at a minimum of 2.5 index points. Set at a minimum of 5 index points (long term).</p>	<p>Set at a minimum of C\$0.50 intervals. Set at a minimum of C\$1.00 intervals (long term).</p>
<p>Reporting Limit</p>	<p>1,500 contracts on the same side of the market in all contract months combined.</p>	<p>500 contracts on the same side of the market in all contract months combined.</p>
	<p>Montreal Exchange, Montreal Que., Canada</p> <p>Trading Hours 8:30 a.m. to 4:15 pm (EST)</p>	<p>Canada's option trading center exchange</p> <p>Web site: www.me.org</p>

Source: Montreal Exchange