Preferred Share Funds: Choices and Characteristics

In last year's review of Canadian preferred share funds, I discussed the explosion in the number of decision-makers in the investment market-place; the decline in Defined Benefit pension plans and corresponding increase in Defined Contribution plans and other forms of saving have changed the investment world from one in which the decisions were made by a relatively small group of specialists to a world in which investment management is just another consumer good. This change has resulted in an explosion of consumer choice and a consequent rise in the importance of marketing to the success of any investment product, as opposed to old-fashioned concepts such as risk and return.

In this essay I will discuss

- the manner in which investment decisions – particularly with respect to index funds – are made
- the use of derivatives by index funds
- the explosion in the number of indices in recent years, as the notion of passive investing has become more fashionable

Investment Decisions

The extent to which investment decisions are made with total disregard of rational factors is well illustrated in a paper by Choi, Laibson and Madrian:[1] the abstract provides a fascinating summary of the work: *Experimental subjects allocate $10,000 across four S&P 500 index funds. Subject rewards depend on the chosen portfolio's subsequent return. Because the investments are not actually intermediated by the fund companies, portfolio returns are unbundled from non-portfolio services. The optimal portfolio therefore invests 100% in the lowest-cost fund. Nonetheless, subjects overwhelmingly fail to minimize fees. When we make fees transparent and salient, portfolios shift towards cheaper funds, but fees are still not minimized. Instead, subjects place high weight on normatively irrelevant historical returns. Subjects who choose high-cost index funds are relatively much less confident about their asset allocation choices.*

I should point out that the abstract's definition of the optimal portfolio is, at best, imprecise: tracking error should be an element of choice; the investor's degree of confidence that the custodian of the fund will not simply abscond with the money should be another; and the degree to which the fund replicates the index through the use of derivatives is still another. This last point is of sufficient interest[2] that it will be discussed in a later section; but none of these elements of risk were discussed by the experimenters.

That being said, there is nothing about the experiment that is not hilarious to those of us who are cynical about market participants in general. The largest subject group consisted of Harvard staff members; the second largest was comprised of Wharton MBA students; the remainder were college students recruited on the Harvard campus (it is not clear whether these participants were actually Harvard students). Despite this, the authors arrived at the following description of mutual fund investing:

- Many people do not realize that mutual fund fees are important for making an index fund investment decision.[3]
- Even investors who realize fees are important do not minimize index fund fees.
- Making fee information transparent and salient reduces allocations to high cost funds.
- Even when fee information is transparent and salient, investors do not come close to minimizing index fund fees.
- Investors are strongly swayed by historical return information.
- Investors do not understand that without non-portfolio services, S&P 500 index funds are commodities.
- Investors in high-cost index funds have some sense that they are making a mistake.

It should be noted that the researchers made "fee information transparent and salient" by providing a one-page summary that was solely related to fees; clearly such information should not be the sole information presented regarding a fund. However, Beshears, Choi, Laibson and Madrian have found:[4] *On the positive side, the Summary Prospectus reduces the amount of time spent on the investment decision without adversely affecting portfolio quality. On the negative side, the Summary Prospectus does not change, let alone improve, portfolio choices. Hence, simpler disclosure does not appear to be a useful channel for making mutual fund investors more sophisticated and for creating competitive pricing pressure on mutual fund companies*. This has obvious implications for the ludicrous "Fund Facts" initiative,[5] which have been ignored by regulators. The purpose of regulation is to provide employment for regulators and debating points for self-proclaimed investor advocates;[6] results are irrelevant.[7]

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1 James J. Choi, David Laibson, Brigitte C. Madrian, *Why Does the Law of One Price Fail? An Experiment on Index Mutual Funds*, Yale ICF Working Paper No. 08-14, available on-line at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1125023 (accessed 2011-9-27)

2 To financial markets junkies, anyway

3 However, there is some evidence that investors have learned to avoid front-end loads; Brad M. Barber, Terrance Odean and Lu Zheng, *Out of Sight, Out of Mind: The Effects of Expenses on Mutual Fund Flows*, Journal of Business, 2005, available on-line at http://faculty.haas.berkeley.edu/odean/Papers%20current%20versions/Out%20of%20Sight.pdf (accessed 2011-9-27)

4 John Beshears, James J. Choi, David Laibson and Brigitte C. Madrian, *How Does Simplified Disclosure Affect Individuals' Mutual Fund Choices?*, 2010-7-2, available on-line at http://www.economics.harvard.edu/faculty/laibson/files/Simplified%2Bdisclosure%2B100702.pdf (accessed 2011-9-27)

5 Ontario Securities Commission, *Point of Sale Disclosure for Mutual Funds (POS Project)*, 2011-8-12, available on-line at http://www.osc.gov.on.ca/en/InvestmentFunds_point-of-sale_index.htm (accessed 2011-9-27)

6 E.g., FAIR Canada, *Key mutual fund information to be delivered after sale*, available on-line at http://faircanada.ca/top-news/key-mutual-fund-information-to-be-delivered-after-sale/ (accessed 2011-9-27)

7 My fearless prediction is that as it becomes more apparent that "Fund Facts" is not having the desired result, regulators will treat it in the same way as they have treated prospectuses: they will insist that more and more information be added to the document. Eventually the verbiage will grow to the point at which it is decided that a requirement to distribute "Fund Quick Facts" be implemented, at which point the cycle will repeat. It's a good living!

These findings join a collection of findings regarding odd decision making processes that should be treasured by all investors. For instance, Shlomo Benartzi and Richard H. Thaler found evidence[8] of what they refer to as the *"1/n strategy": they divide their contributions evenly across the funds offered in the plan*. Thus, for example, TWA pilots, whose plan offered five core stock funds and one core bond fund, invested, as a group, 75% of the value of their accounts in stocks, while University of California employees, offered one stock fund and four bond funds, invested only 34% of their funds in stocks.

Cronqvist and Thaler found[9] that *portfolios individuals formed themselves* [as opposed to the default option in the Swedish Social Security System] *seemed heavily influenced by recent returns (an extrapolation bias) and by a preference for investing at close to home (a "familiarity" bias)*.

Familiarity bias is pervasive! John Hancock Financial Services reports[10] that *The risk ranking for employer stock (as an investment) remained below diversified domestic stock funds and diversified global and international stock funds, and by margins consistent with previous surveys*. This had disastrous consequences for Enron employees, to name but one example: approximately 62% of the firm's $2.1-billion 401(k) retirement savings plan was invested in Enron stock at the end of 2000, which became worthless when the firm declared bankruptcy in December 2001.[11]

Further, Choi, Laibson, Madrian and Metrick found[12] *that an investor's 401(k) contribution rate increases more if she has recently experienced a higher 401(k) portfolio return and/or a lower 401(k) return variance. We find no evidence that this behavior is welfare-improving. These results are explained by a naïve reinforcement learning heuristic: investors expect that investments in which they experienced past success will be successful in the future, whether or not such a belief is logically justified. Consistent with reinforcement learning's Power Law of Practice, return chasing and variance avoidance diminish with age*.[13]

It doesn't help much to pore carefully over mutual fund sales brochures either, as reported by Henrik Cronqvist:[14] *Content analysis shows that only a small fraction of fund advertising is directly informative about characteristics relevant for rational investors, such as fund fees. Higher quantities of advertising do not signal ex ante higher unobservable fund manager ability, because funds that advertise more are not associated with higher post-advertising excess returns. Fund advertising is shown to affect investors' choices, although it provides little information …advertising is found to steer people towards portfolios with higher fees and more risk, through higher exposure to equities, more active management, more "hot" sectors, and more home bias*.

All is not lost, however. As Choi, Laibson and Madrian state: *It is likely that some investors – particularly high net worth investors – have managed to overtake the literacy of Wharton MBA students. Hence, asset markets may be efficient on a dollar weighted basis*. I can only hope that my educational efforts in these appendices are assisting investors to become more literate!

Regulatory Action in Canada

A recent report[15] by Dr. Edwin L. Weinstein of The Brondesbury Group indicates: *Only two common investment terms are understood well by more than 2/3 of investors, namely, 'rate of return' and 'Term deposit/GIC interest'. Understanding drops off quickly to the 4 out of 10 level when we talk about synthetic measures like market indices or 'benchmark funds'. … When we look at how investors assess the performance of their portfolio, we find that most people simply assess the amount of money they gained or lost since their last account statement. The use of market indices and benchmark performance is most common among those with the most money invested*.

As shown by Chart A-4, the use of benchmarking, whether relative to market indices or similar investment accounts, was not considered as important as the absolute gain or loss of the fund since the last statement – even among university graduates, as shown in Chart A-5.

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8 Shlomo Benartzi and Richard H. Thaler, *Naïve Diversification Strategies in Defined Contribution Savings Plans*, American Economic Review 91, pp. 79–98, available on-line at http://faculty.chicagobooth.edu/richard.thaler/research/pdf/DiversificationStrategies.pdf (accessed 2011-9-27)

9 Henrik Cronqvist and Richard H. Thaler, *Design Choices in Privatized Social-Security Systems: Learning from the Swedish Experience*, 2004, American Economic Review Papers and Proceedings 94, pp. 424–428, available on-line at ftp://ftp.cba.uri.edu/classes/dellabitta/PRICE%20SEMINAR%20-%20BUS%20610/ARTICLES%20V1/DESIGN%20CHOICE%20IN%20PRIVATIZED%20SS%20SYSTEM%20-%20THALER.pdf (accessed 2011-9-27)

10 John Hancock Financial Services, *Eighth Defined Contribution Plan Survey*, 2002, available on-line at http://www.jhancockstructures.com/gsfp/survey2002.pdf (accessed 2011-9-27)

11 James J. Choi, David Laibson and Brigitte C. Madrian, *Are Empowerment and Education Enough? Underdiversification in 401(k) Plans*, 2005, Brookings Papers on Economic Activity 2005(2), available on-line at http://www.brookings.edu/~/media/Files/Programs/ES/BPEA/2005_2_bpea_papers/2005b_bpea_choi.pdf (accessed 2011-9-27)

12 James J. Choi, David Laibson, Brigitte C. Madrian and Andrew Metrick, *Reinforcement Learning and Investment Behavior*, Draft, 2007-9-14, available on-line at http://www.economics.harvard.edu/files/faculty/37_reinforcementlearning.pdf (accessed 2011-9-27)

13 Once you're old enough to avoid that mistake, you start making new ones because you have cognitive impairment. The ideal age for financial decision-making is 53. Sumit Agarwal, Xavier Gabaix, John C. Driscoll and David Laibson, *The Age of Reason: Financial Decisions over the Life Cycle and Implications for Regulation*, Brookings Papers on Economic Activity, Fall 2009, available on-line at http://www.brookings.edu/~/media/Files/Programs/ES/BPEA/2009_fall_bpea_papers/2009b_bpea_agarwal.pdf (accessed 2011-9-27)

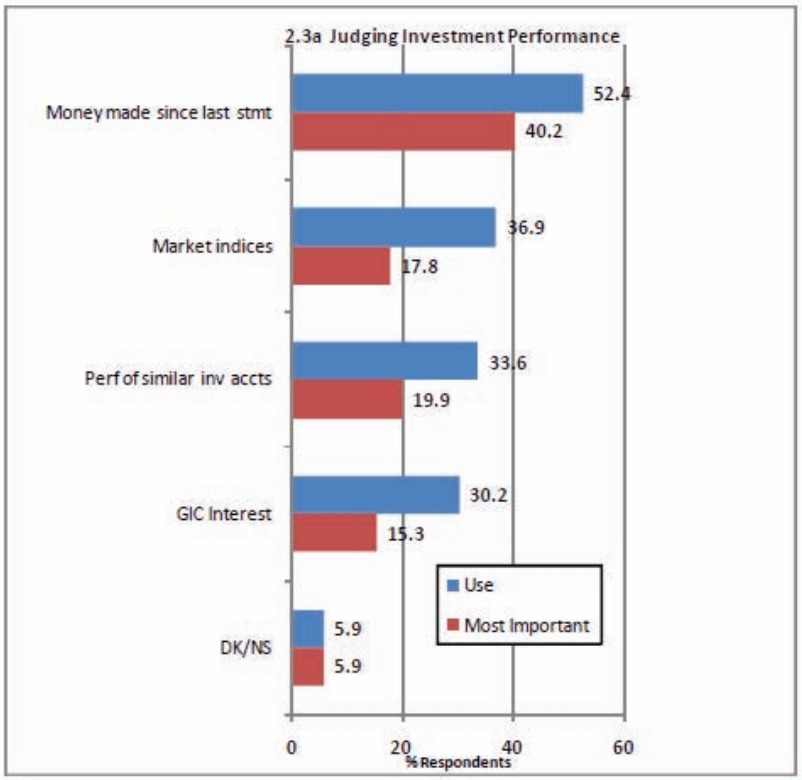
14 Henrik Cronqist, *Advertising and Portfolio Choice*, Dissertation, The University of Chicago Graduate School of Business, 2006-7-26, available on-line at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=920693 (accessed 2011-9-27)

15 Edwin L. Weinstein, *Report: Performance Reporting and Cost Disclosure*, The Brondesbury Group, September 17, 2010, available on-line at http://www.osc.gov.on.ca/documents/en/Securities-Category3/rpt_20110622_31-103_perfomance-rpt-cost-disclosure.pdf (accessed 2011-10-05)

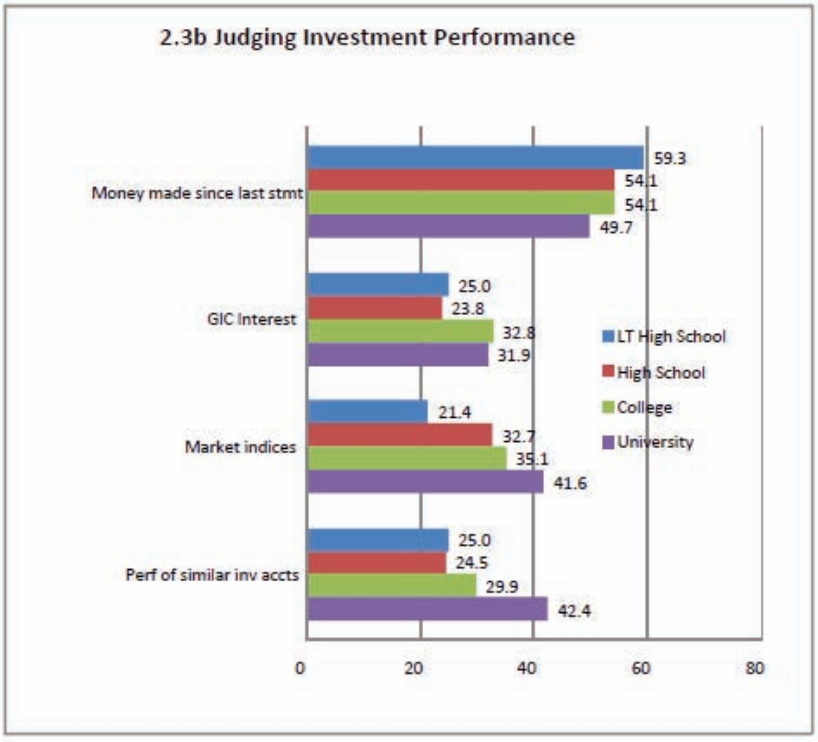
With their customary aplomb, the Canadian Securities Administrators are proposing[16] that, rather than educate investors and guide them to rational decisions by ensuring that information reported to them is relevant, they will pander to the ridiculous nature of uninformed decision making by requiring that "the original cost of each security [is] added to account statements" – information that is only tangentially related to intelligent portfolio decision making.[17]

The performance reporting[18] that forms part of the proposal is supported by Allen Research Corporation in one of the most trivial reports[19] it has ever been my misfortune to have read: only eighteen investors were interviewed, there appears to have been no effort devoted to determining whether the proposed document enables investors to make better decisions and there is a focus is on the document's "overall appeal".

A-4



A-5



[16] Canadian Securities Administrators, *Notice and Request for Comment on Proposed Amendments to National Instrument 31-103 Registration Requirements and Exemptions and to Companion Policy 31-103CP Registration Requirements and Exemptions*, June 24, 2011, available on-line at http://www.osc.gov.on.ca/documents/en/Securities-Category3/ni_20110622_31-103_rfc-pro-amd.pdf (accessed 2011-10-5)

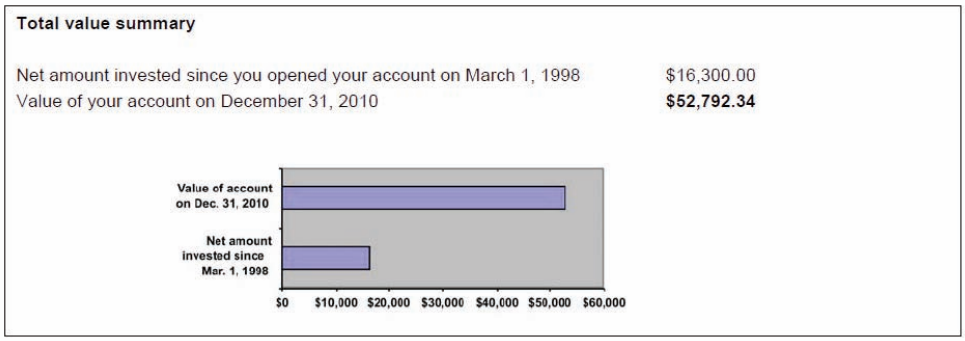
[17] E.g., for tax planning purposes.

[18] See pages 31–32 of the *Request for Comment* dated 2011-6-24, supra

[19] ARC – Allen Research Corporation, *Canadian Securities Administrators Performance Report Testing*, February 2011, available on-line at http://www.bcsc.bc.ca/uploadedFiles/securitieslaw/policyBCN/CRM2_AllenResearch.pdf (accessed 2011-10-5)

For example, Chart A-6, extracted from the sample report, was praised in the research effort: *Many investors very much liked the total value summary. It gives them a very quick snapshot of how their account is performing. For many, having it from opening of their account was a great bonus*. Readers of this will remember from the Choi, Laibson and Madrian paper discussed above that it has been shown that incorporation of totals since inception actually leads to inferior decision-making; the misleading nature of the regulators' efforts is made all the worse since the *"Net amount invested is all deposits and transfers into your account, minus all withdrawals and transfers out of your account"* – without any reference to the relative timing or amounts of all those deposits and withdrawals.

A-6



While the "Rate of Return Table" discussed in the report is a little better – there is at least an attempted comparison to benchmarks – it is also a rather useless make-work project, since the only benchmarks listed are pure stocks and pure bonds, which are compared to the total portfolio return in the complete absence of any indication of the account's policy allocation. Additionally, all periodic returns presented have the same end-point (the calculation date of the report) giving rise to significant end-point bias, which may serve to reinforce the naïve reinforcement learning heuristic discussed[20] by Choi, Laibson, Madrian and Metrick. However, further research is necessary to investigate this point – research that I feel quite certain is not even contemplated.

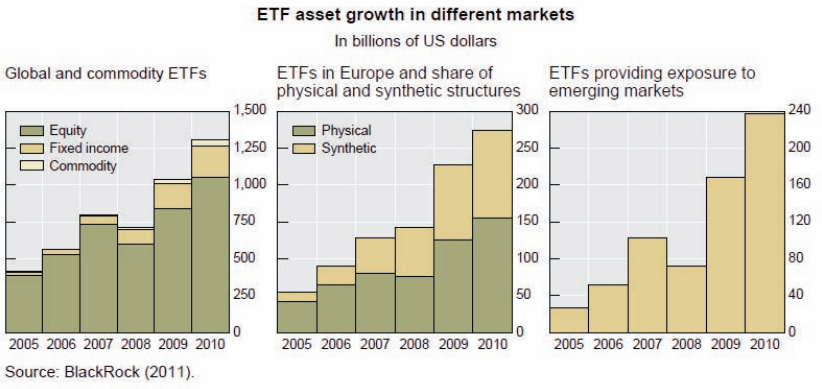
In short, Canadian investors should not expect any help – or even any useful research - from Canadian regulators!

Derivatives and Exchange-Traded Funds[21]

There is a growing concern that the recent explosion in assets held by Exchange-Traded Funds (ETFs) has implications not simply for investors (who might pay a relatively high management fee) but also for global financial stability, particularly with respect to Synthetic ETFs, which achieve their goals through the use of derivatives. Hector Sants, CEO of the UK's Financial Services Authority,[22] has been widely quoted[23] as saying "From the investor's point of view, I think there are question marks over whether synthetic ETFs really are appropriate for all types of the retail marketplace," In fact, there is some speculation[24] that European regulators may seek a ban or partial restrictions on retail's ability to purchase these instruments.

In a working paper published in April[25] Srichander Ramaswamy noted that global ETF assets under management more than tripled in the period 2005–2010, to over $1.3-billion (see Chart A-1), although even now ETFs represent slightly under 6% of the size of the mutual fund market.

A-1



[20] Supra

[21] Huge chunks of this part of the essay have been lifted shamelessly from the Ramaswamy report, infra.

[22] Financial Services Authority, *Hector Sants*, available on-line at http://www.fsa.gov.uk/pages/about/who/board/sants.shtml (accessed 2011-10-5). See also Jill Treanor, *Beware of the ETF: Watchdog expresses fear over financial instrument*, Guardian, 2011-6-24, available on-line at http://www.guardian.co.uk/business/2011/jun/24/etf-watchdog-fears-over-financial-instrument (accessed 2011-10-5)

[23] Lindsay Fortado, Kevin Crowley, *ETFs Face U.K. Serious Fraud Office Review*, Bloomberg, 2011-7-5, available on-line at http://www.bloomberg.com/news/2011-07-05/exchange-traded-funds-marketing-said-to-face-u-k-fraud-prosecutor-review.html (accessed 2011-10-5)

[24] Paul Amery, *Regulators Consider Ban on Retail Purchase of Synthetic ETFs*, available on-line at http://www.indexuniverse.eu/europe/opinion-and-analysis/7859-regulators-consider-ban-on-retail-purchases-of-synthetic-etfs.html (accessed 2011-10-5)

[25] Srichander Ramaswamy, *Market Structures and systemic risks of exchange-traded funds*, April 2011, Bank for International Settlements, Working Paper No 343, available on-line at http://www.bis.org/publ/work343.pdf (accessed 2011-9-28)

Problems become apparent when when one considers how the fund replicates its chosen index or market strategy. Almost all US ETFs benchmarked against fixed income or equity are straightforward structures and attempt to replicate their desired benchmark directly, but in Europe almost half achieve their goals with a synthetic structure, based on derivatives.

Synthetic structures are logical in illiquid markets, in which the cost of physical replication increases and tracking error becomes larger. In a typical "unfunded swap ETF structure":

- The ETF enters into a derivative swap agreement with a Counterparty, whereby it can achieve a return related to its target in exchange for the return on the Collateral Basket
- The ETF delivers cash to the Counterparty equal to the notional amount of the swap
- The ETF receives a basket of collateral securities (the "Collateral Basket") from the Counterparty. Importantly, the precise contents of the Collateral Basket can change daily as the Counterparty recycles its inventory.

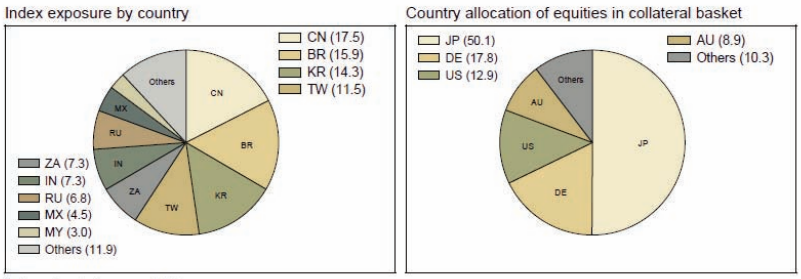
Through such a structure, the ETF reduces its tracking error risk at the price of an increase in counterparty risk. However, since the Counterparty has the ability to substitute securities in the Collateral Basket, it can therefore use the facility to finance its inventory: this is a valuable benefit; therefore it pays for this benefit by offering better terms on the transaction than it would otherwise; therefore gross returns to the fund will generally be somewhat higher than they would be otherwise. It is also the case that the incentive for the Counterparty to finance its inventory in this manner will increase under the new Basel III banking regulations.

The composition of the Collateral Basket can therefore be quite different from the underlying index, depending on the Counterparty's financing requirements, as shown in Chart A-2.

A-2

MSCI Emerging Markets ETF index and collateral composition[1]

In per cent



[1] As of end-January 2011.

Source: Deutsche Bank.

Ramaswamy details four major risks to financial stability associated with synthetic ETFs

- **co-mingling tracking error risk with the trading book risk by the swap counterparty could compromise risk management.** I don't see this as a major problem in and of itself in normal times, but the author points out that *the capacity of the swap counterparty to bear the tracking error risk while providing the market liquidity needed when there is sudden and large liquidation of ETFs is untested. Hedge funds often manage the liquidity risk through techniques such as "gating", ie by restricting investor withdrawals when market liquidity conditions are poor. There is no such mechanism in existing ETF synthetic replication schemes to manage liquidity risk when faced with large investor redemptions*.
- **collateral risk triggering a run on ETFs in periods of heightened counterparty risk;** Crisis experience has shown that the collateral assets pledged by a failed swap counterparty could be frozen by a bankruptcy administrator even when they are held in client accounts[26]
- **materialisation of funding liquidity risk when there are sudden and large investor withdrawals:** The cheap funding for the Counterparties in a synthetic ETF is secured by marketing a tradable index portfolio through the ETF sponsor, but not charging investors adequately for the liquidity option that they have been granted. Because ETF redemptions will require cash to be delivered against collateral assets that might be illiquid, market-making activities could be severely hampered, as funding these assets might take priority.
- **increased product complexity and options on ETFs undermining risk monitoring capacity:** by employing a variety of markets and players to replicate their benchmark indices, ETFs complicate risk assessment of the end product sold to investors. There is little transparency and no investor monitoring of the index replication process when this function is taken over by the swap counterparty. Financial innovation has added further layers of complexity through leveraged products and options on ETFs. Again, crisis experience has shown that market risk assessments tend to be closely tied to the underlying assumptions about the market liquidity of products. The Financial Stability Board notes[27]: *Since the swap counterparty is typically the bank also acting as ETF provider, investors may be exposed if the bank defaults. Therefore, problems at those banks that are most active in swap-based ETFs may constitute a powerful source of contagion and systemic risk*

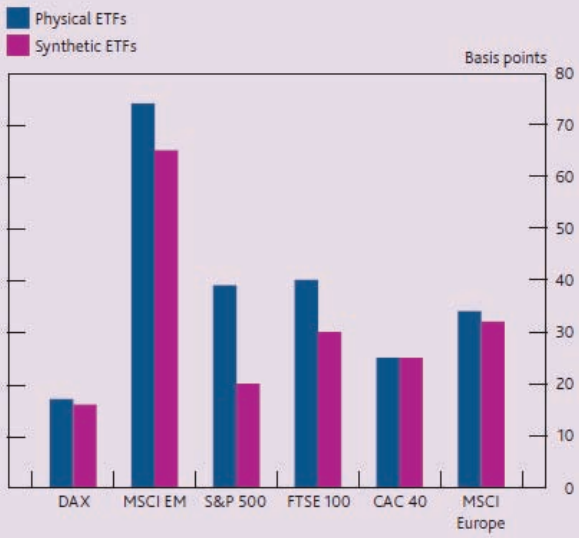
[26] Ingo Fender, Allen Frankel and Jacob Gyntelberg, *Three market implications of the Lehman bankruptcy*, BIS Quarterly Review, December 2008, pp 6-7, available on-line at http://www.bis.org/publ/qtrpdf/r_qt0812.pdf (accessed 2011-9-29)

[27] Financial Stability Board, *Potential financial stability issues arising from recent trends in Exchange-Traded Funds (ETFs)*, April, 2011, available on-line at http://www.financialstabilityboard.org/publications/r_110412b.pdf (accessed 2011-9-29)

With all this complexity and hidden risk, one might be forgiven for wondering how on earth synthetic ETF sponsors are able to find buyers for their wares. However, one of the central mantras of index investing is "Costs Matter",[28] when in fact a more precise expression would be "Costs Matter and so do a lot of other things". The Bank of England notes[29] *Although both types of ETF effectively offer the same service to investors, synthetic ETFs appear to do so at a generally lower cost (Chart A). This cost differential might reflect synergies between the asset management service provided by the ETF and banks' investment banking operations. But it is also possible that the additional risks associated with synthetic replication might not be fully understood by investors who are attracted by the lower costs*.

A-3

Chart A Total expense ratios (TERs) of physical and synthetic ETFs listed in Europe[(a)(b)]



Source: BlackRock Global ETF Research and Implementation Strategy.

(a) Asset-weighted average TERs. TER calculated as the fund's total operating costs to its average net assets.
(b) The sample covers physical and synthetic ETFs listed in Europe and tracking major global equity indices.

We may examine a synthetic ETF in the context of Canadian preferred shares by reference to Advantaged Preferred Share Trust (PFR.UN), which I have discussed in a prior article.[30] According to the fund's prospectus[31] *the Trust will use the net proceeds of the Offering to pre-pay its obligation to purchase the Securities Portfolio under the Forward Agreement which the Trust will enter into with the Counterparty*. The Securities Portfolio is defined in the Confirmation of Share Basket Forward Transaction[32] as being initially comprised "exclusively of XIUs" (the term is not defined in the Confirmation, but is presumably iShares S&P/TSX 60 Index Fund, which trades on the Toronto Exchange as XIU), but: *If, during the term of the Transaction, (i) an Extraordinary Event occurs in relations to any Shares in the Basket (ii) any Shares in the Basket cease to be Canadian securities for the purposes of the Income Tax Act (Canada), or (iii) the parties agree, acting reasonably, to replace any Shares in the Basket, then the parties will replace such Shares with alternate shares (the "**Replacement Shares**") acceptable to Party A that are "Canadian securities" for the purposes of the Income Tax Act (Canada). The Replacement Shares and their issuer will be deemed the "Shares" and an "Issuer", respectively.*

So in this case the Counterparty, Royal Bank of Canada, does not have complete discretion over the composition of the collateral, but it will be noted that both parties to the agreement have engaged RBC Dominion Securities Inc. as their agent, who signed on their behalf. It is of interest to note that the compositions of the collateral is not disclosed in the most recent Annual Report.[33]

[28] E.g., John C. Bogle, *The Relentless Rules of Humble Arithmetic*, available on-line at http://www.vanguard.com/bogle_site/sp20060101.htm (accessed 2011-9-30)

[29] Bank of England, *Financial Stability Report*, June 2011, available on-line at http://www.bankofengland.co.uk/publications/fsr/2011/fsrfull1106.pdf (accessed 2011-9-30)

[30] James Hymas, *Closed End Preferred Funds: Effects of Calls*, Advisor's Edge Report October 2006, available on-line at http://www.himivest.com/media/advisor_0610.pdf with errata and extra material available at http://www.prefblog.com/?p=333

[31] Available via SEDAR (http://www.sedar.com) "Advantaged Preferred Share Trust"/May 25, 2006/Prospectur"

[32] Available via SEDAR (http://www.sedar.com) "Advantaged Preferred Share Trust"/June 20, 2006/Other Material Contract(s)

[33] Advantaged Preferred Share Trust, *Annual Report, December 31, 2010*, Available via SEDAR (http://www.sedar.com) "Advantaged Preferred Share Trust"/Feb 4, 2011/Annual report – English

The fund's net asset value is currently[34] about $64-million; performance has been quite good since inception; and the management expense ratio (excluding issue costs and leverage costs) is a mere 30bp p.a. I may have a suspicious mind, but the low fees, potential for collateral substitution and lack of disclosure are matters I find rather fascinating.

Another example of a Canadian synthetic ETF is Horizons S&P/TSX 60™ Index ETF (HXT)[35], which has a management expense ratio of 8bp.[36] In this transaction, National Bank acts as the Counterparty to the fund and receives the pledge of its assets, which are invested in short term securities. The fund gains exposure to the S&P/TSX 60 index via a total return swap.[37] However, the disclosure that "Cash and cash equivalents includes collateral issued to the counterparty of the ETF's total return swap agreement," makes many mechanisms for unlocking the value of that cash possible. Even more directly, I can find nothing to contradict the hypothesis that the 'cash and equivalents' consists largely or entirely of deposits in National Bank accounts or investments in its commercial paper.

Given the fact that synthetic ETFs pose significant risks that are well-known in the industry but less appreciated amongst the investing public, it is rather surprising that the "ETF Screener" available on the website of the Toronto Stock Exchange[38] (which is provided by PUR Investing Inc.[39]) does not allow for segregation by the physical/synthetic attribute. In fact, PUR's discussion of the screener[40] does not even contain either of the words "synthetic" or "derivative", nor does an article by the firm's president, titled "The Evolving Revolution of ETFs".[41]

I will be the first to agree that the synthetic/physical attribute is not the most important characteristic of any randomly chosen ETF, but given the intense regulatory interest in the matter – and the rather fearsome warnings voiced by European regulators – I am somewhat surprised by the complete lack of discussion of the issue. In fact, I am reminded of the Canadian non-bank ABCP fiasco, in which the weaknesses of the structure had been publicized well in advance of the collapse;[42] these weaknesses were ignored until they suddenly became critical[43], at which point all parties involved pretended surprise.[44]

Bogus Indices

MSCI Barra calculates over 120,000 indices daily.[45] S&P does not appear to disclose the number of indices it calculates,[46] but the number is surely massive. FTSE, a joint venture of the London Stock Exchange and The Financial Times[47], calculates over 120,000 end of day and real-time indices covering more than 80 countries and all major asset classes.[48] The Russell Global Indexes calculate over 50,000 benchmarks daily.[49] This plethora of indices is due, at least in part, to a desire by some market participants for custom indices, which are touted by S&P[50] as providing "the opportunity to leverage a well-known, well-respected and objective brand that signifies immediate legitimacy to the underlying index."

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[34] Advantaged Preferred Share Trust, *2011 Semi-Annual Management Report on Fund Performance*, Available via SEDAR (http://www.sedar.com). "Advantaged Preferred Share Trust"/August 9, 2011/ Management report of fund performance – English

[35] Horizons BetaPro, Horizons S&P/TSX 60™ Index ETF (HXT), available on-line at http://www.hbpetfs.com/pub/en/etfs/?etf=HXT&r=o (accessed 2011-9-29)

[36] Horizons Exchange Traded Funds, *Prospectus*, September 8, 2011, available on-line at http://www.horizonsetfs.com/Pdf/Prospectus/HJE_HXS_HXT_Prospectus.pdf (accessed 2011-9-29)

[37] Horizons S&P/TSX 60 Index ETF, *Annual Report, December 31, 2010*, available on-line at http://www.horizonsetfs.com/pdf/financials/annualreports/2010/HXT-EN-AR2010.pdf (accessed 2011-9-29)

[38] TMX Money, *ETF Screener*, available on-line at http://www.tmxmoney.com/en/sector_profiles/exchange_traded_funds/screener.html (accessed 2011-11-11)

[39] http://www.purinvesting.com (accessed 2011-10-11)

[40] Pur Investing Inc., *Maslow's Hammer: An ETF Screener for Portfolio Managers*, canadianetfwatch.com, May 2011, available on-line at http://www.purinvesting.com/c/document_library/get_file?uuid=67d95e6a-06c1-4552-a31b-946e939b256e&groupId=11293 (accessed 2011-10-11)

[41] Mark Yamada, *The Evolving Revolution of ETFs*, canadianetfwatch.com, March 2011, available on-line at http://www.purinvesting.com/c/document_library/get_file?uuid=1eeb5b43-8976-4cc0-880d-6e57114df1ff&groupId=11293 (accessed 2011-10-11)

[42] Paula Toovey and John Kiff, *Developments and Issues in the Canadian Market for Asset-Backed Commercial Paper*, Bank of Canada, Financial System Review, June 2003, available on-line at http://www.bankofcanada.ca/wp-content/uploads/2010/04/fsr_2003.pdf (accessed 2011-10-11)

[43] There is a model for this sort of market freeze: Viral V. Acharya, Douglas Gale and Tanju Yorulmazer, *Rollover Risk and Market Freezes*, January 20, 2011, available on-line at http://www.afajof.org/afa/forthcoming/7457.pdf (accessed 2011-1-20). "We then show that a small change in the asset's fundamental value can be associated with a catastrophic drop in the debt capacity, the kind of market freeze observed during the crisis of 2007 to 2008."

[44] Although note that I consider the ABCP collapse in Canada to be noteworthy not because a few investments went bad (lots of them do that, as we all very well know), but because so many investors were very highly concentrated in them. See http://www.prefblog.com/?p=6463 for more discussion; see also my article *IIROC's Slush Fund* at http://www.himivest.com/media/advisor_1106.pdf

[45] MSCI Barra, *MSCI International Equity Indices*, May 2010, available on-line at http://www.mscibarra.com/products/indices/international_equity_indices/MSCI_International_Equity_factseet_0510.pdf (accessed 2011-10-13)

[46] See, e.g., Standard & Poor's, *S&P Indices*, August 31, 2011, available on-line at http://www.standardandpoors.com/servlet/BlobServer?blobheadername3=MDT-Type&blobcol=urldata&blobtable=MungoBlobs&blobheadervalue2=inline%3B+filename%3DFactsheet_SP_Indices_Directory.pdf&blobheadername2=Content-Disposition&blobheadervalue1=application%2Fpdf&blobkey=id&blobheadername1=content-type&blobwhere=1243988446735&blobheadervalue3=UTF-8 (accessed 2011-10-13)

[47] London Stock Exchange, *Annual Report 2011*, available on-line at http://www.londonstockexchangegroup.com/investor-relations/financial-performance/financial-key-documents/lseg-annual-report-2011.pdf (accessed 2011-10-14)

[48] FTSE, *Welcome*, available on-line at http://www.ftse.com/ (accessed 2011-10-14)

[49] Russell Investments, *Russell Expands Investment Discipline Indexes*, Press Release 2011-9-22, available on-line at http://www.russell.com/US/news/press-release.aspx?link=press-releases/2011/PR20110922.htm (accessed 2011-10-14)

[50] Standard & Poor's, *Custom Indices*, available on-line at http://www.standardandpoors.com/indices/custom-indices/en/us (accessed 2011-10-14)

Some promoters are not so fussy about branding. When the New York based Global X Funds launched what it described[51] as the "first ETF to target Canadian companies that issue preferred stock", they selected the "Solactive Canada Preferred Stock Index" as their benchmark; the index is constructed by the Frankfurt based[52] Structured Solutions AG,[53] and contains fifty issues.[54] The fund, Global X Canada Preferred ETF, trades with the ticker symbol CNPF on the NYSE-ARCA[55] currently has net assets of about USD 7.7-million.[56]

In addition to the rise of custom indices developed by brand-name firms and those still seeking to achieve that status, there is a growing tendency on the part of fund sponsors to develop their own indices with the intent of providing funds that track them,[57] with iShares and John Hancock applying to the SEC to launch ETFs based on indices constructed by their parents.

This course of action embodies several advantages:

- It is much cheaper than attempting active management
- It is cheaper than licensing the use of external indices; it also allows for savings by calculating index values in-house
- It allows for faster product development
- It allows for increased product differentiation
- It appeals to investors who seek passive management
- Perhaps most importantly, it makes it more difficult to perform comparisons between competing products

The first company to base ETFs on self-developed indices was Wisdom Tree, which commences its introduction page[58] with the nonsensical statement "The vast majority of today's ETFs are market cap-weighted. So by design, they buy more of a company's stock as its price is going up, and sell more as it's going down." The authors of that sentence are to be commended for deprecating the negative convexity for portfolios implied by such a strategy, but it should be apparent that in the absence of cash flows, there will be no trading by a capitalization-weighted index fund; as the price goes up, the weighting in the index will increase proportionately, and the weighting in the ETF will increase by the same percentage – no trading is indicated. In fact, I suspect that Wisdom Tree's approach[59] of incorporating stocks into their so-called indices in accordance with their dividends or earnings will lead to a high correlation with strategies based on price momentum and to negative convexity in the portfolio's returns and offset, at least to some degree, the advantages of focusing on earnings and dividends in portfolio construction. This suspicion is given some credence by the performance of their dividend-weighted ETFs versus major indices for the five years ending 2011-6-30,[60] but naturally a lot more investigation into detailed transaction reports would be necessary prior to drawing any firm conclusions.

The majority of these redundant indices are well intentioned; they may use different techniques for index construction but, when viewed objectively, cannot be considered either better or worse than there better-established counterparts. Some indices, however, are best described by the epithet "bogus".

Most bogus indices are constructed by third-parties, often the "brand-name" firms who construct the mainstream indices. In a previous article[61] I criticized the DEX HYBrid Bond Index[62] as an example of an index that appears to have been created for marketing purposes rather than the more useful objectives of a market index, which may be cogently described as:[63]

- Act as a performance standard for active managers.
- Serve as a proxy for asset allocation purposes.
- Become a purchasable and replicable vehicle for passive investment strategy.

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51 Global X Funds, *Global X Funds Launches First Canada Preferred ETF (CNPF)*, Press Release, 2011-5-25, available on-line at http://www.globalxfunds.com/NewsFile/CNPF_FINALweb.pdf (accessed 2011-10-14)

52 Structured Solutions AG, *Structure Solutions AG*, available on-line at http://www.structured-solutions.eu/impress.html (accessed 2011-10-14)

53 Structured Solutions AG, *Structured Solutions launches new indices – Fertilizer/Potash and Canada Preferred Stocks*, Press Release, 2011-5-31, available on-line at http://www.structured-solutions.eu/view-news/items/structured-solutions-launches-new-indices---fertilizerpotash-and.html (accessed 2011-10-14)

54 Structure Solutions AG, *Current composition Solactive Canada Preferred Stock Index*, available on-line at http://www.structured-solutions.eu/aktuelle-zusammensetzung.html?isin=DE000SLA1CP5 (accessed 2011-10-14)

55 See http://www.nyse.com/about/listed/lcddata.html?ticker=cnpf (accessed 2011-10-14)

56 Global X Funds, *Global X Canada Preferred ETF*, available on-line at http://globalxfunds.com/CNPF (accessed 2011-10-14)

57 Jackie Noblett, *More US fund firms aim for DIY indices*, Financial Times, 2011-9-11, available on-line at http://www.ft.com/cms/s/0/a9b73762-da2a-11e0-90b2-00144feabdc0.html#axzz1Zx7HgaK2 (accessed 2011-10-5)

58 Wisdom Tree, *Welcome to Fundamental Wisdom*, available on-line at http://www.wisdomtree.com/about/index.asp (accessed 2011-10-5)

59 Wisdom Tree, *Investment Philosophy*, available on-line at http://www.wisdomtree.com/etfs/investment-philosophy.asp (accessed 2011-10-5)

60 Wisdom Tree, *Wisdom Tree ETF Monthly Performance Report As of August 31, 2011*, available on-line at http://www.wisdomtree.com/etfs/pdf/WisdomTree-August_2011_Performance_Report-774.pdf (accessed 2011-10-5)

61 James Hymas, *Shaken and stirred: How the OSFI wants to manipulate bond investors*, Advisors' Edge Report, April, 2011, available on-line at http://www.himivest.com/media/advisor_1104.pdf. See also additional detail (mainly footnotes) via http://www.prefblog.com/?p=15117

62 PC Bond Analytics, *DEX Hybrid Bond Index*, 2010-8-20, available on-line at http://www.canadianbondindices.com/pdf/DEX_HYBrid_BI_Methodology.pdf (accessed 2011-10-5)

63 Russell Investments, *Russell U.S. Indexes: Construction & methodology*, available on-line at http://www.russell.com/indexes/data/us_equity/russell_us_indexes_methodology.asp (accessed 2011-10-5)

Even mainstream indices can become corrupted, lose sight of the three objectives that a well-constructed index should achieve, and therefore become bogus. In my article referenced above, I decried the reported pressures exerted by OSFI to have Innovative Tier 1 Capital Bonds with a Non-Viability Contingent Capital clause incorporated into Canada's main bond index, regardless of the fact that such instruments simply are not bonds; also of great interest are Rowland Fleming's charges[64] that Bre-X was incorporated in the TSX composite because it was *forced by the index committee over the objections of TSE management, including the CEO and those in charge of market regulation at the exchange, is an easily verifiable event. I was there and, on threat of having the board fire me later that day, I made the decision to accede to the index committee pressure.*

The committee was comprised of representatives from four big firms.

I consider it most unfortunate that Mr. Fleming did not outline the arguments inherent in the dispute, because I suspect that in that particular case I might well have sided with the index committee! In order for any index to serve its three major purposes, it should act on the basis of a minimal number of rules, particularly when the index purports to represent the action of an entire market. I have no more faith in Mr. Fleming's ability to outperform a 'meta-index' constructed in accordance with simple rules than I have in that of an index committee comprised of representatives from stockbroking firms.

Clearly, then, an investor cannot buy 'a passive fund,' even one that is 'based on an index', without a great deal of investigation! In order to assist the investigative process, this essay will look at a few preferred share funds and compare them according to external metrics of portfolio composition.

Methodology

Data for Malachite Aggressive Preferred Fund (MAPF) were extracted from the fund's internal records.[65]

Data for the Claymore S&P/TSX CDN Preferred Share ETF[66] were downloaded from the fund's Holdings page[67] dated 2011-8-31. Returns for this fund are calculated from downloads available on the Prices page[68] and the Distributions page[69] and verified against monthly records from the Performance page.[70] The following positions were not included in the analyzed portfolio:

- BAM.PR.C: This issue is not tracked by HIMIPref™

Position data for Diversified Preferred Share Trust[71] were recovered from their June, 2011, interim financial statements.[72] The following positions were not included in the analyzed portfolio:

- CM.PR.H: This security was redeemed July 31, 2011.[73]
- BAM.PR.C: This security is not tracked by HIMIPref™

Data for the S&P/TSX Preferred Share Index (TXPR) total return was purchased from TMX DataLinx.[74]

Constituent data for the BMO CM 50 Preferred Share Index (BMO-CM 50) was received from BMO Capital Markets.

Effect of Index Changes on Prices

On 2010-7-9 Standard & Poor's announced[75] some important revisions to their methodology for the maintenance of TXPR.[76]

- No limit to the number of preferred share issues included from any given issuer (the prior limit had been three)
- Maximum weight of 10% of index per issuer
- Issues with a remaining term of less than one year not to be added
- Existing issues must have minimum average daily dollar value traded in last three months of $100,000
- Quarterly rebalancing to commence January 2011

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64 Rowland Fleming, *Maple bid: Old boys' club is back*, Financial Post, 2011-6-21, available on-line at http://business.financialpost.com/2011/06/21/maple-bid-old-boys-club-is-back/ (accessed 2011-10-5)

65 For more information regarding MAPF, see http://www.himivest.com/malachite/MAPFMain.php

66 For more information regarding CPD, see http://www.claymoreinvestments.ca/en/etf/fund/cpd (accessed 2011-10-6)

67 http://www.claymoreinvestments.ca/en/etf/fund/cpd/holdings (accessed 2011-10-6)

68 http://www.claymoreinvestments.ca/en/etf/fund/cpd/history (accessed 2011-10-7)

69 http://www.claymoreinvestments.ca/en/etf/fund/cpd/distributions (accessed 2011-10-7)

70 http://www.claymoreinvestments.ca/en/etf/fund/cpd/performance (accessed 2011-10-6)

71 http://sentry.ca/en/products/structuredproducts/dpst.html?fundId=163# (accessed 2011-10-6)

72 Diversified Preferred Share Trust, *2011 Interim Financial Statement*s, available on-line at http://sentry.ca/assets/files/pdf/FinancialStatements/NVTZ_semi_en.pdf (accessed 2011-10-6)

73 Canadian Imperial Bank of Commerce, *CIBC to Redeem Preferred Shares Series 30*, Press Release, 2011-5-26, available on-line at http://micro.newswire.ca/release.cgi?rkey=1905267125&view=16497-0&Start= (accessed 2011-10-6)

74 http://marketdata.tsx.com/cgi-bin/index.cgi (accessed 2011-10-6)

75 Standard & Poor's, *Standard & Poor's Announces S&P/TSX Preferred Share Index Methodology Changes*, Press Release, 2010-7-9, available on-line at http://www.cnw.ca/en/releases/archive/July2010/09/c3371.html (accessed 2011-10-7)

76 Standard & Poor's, *S&P/TSX Preferred Share Index: Index Methodology*, July 2010, available on-line via http://www.standardandpoors.com/ (Direct linking not possible)

It seems clear that these changes were introduced for the purpose of decreasing the proportion of the index represented by any given issue; it may that Claymore Investments, the only licensed user of the index for ETF purposes of which I am aware, is quite reasonably seeking to reduce its tracking error that results from trading triggered when issues are added or deleted to the index.

On July 8, S&P announced[77] that its review of the TXPR index had resulted in two additions and nine deletions from the index. We can examine the price behaviour of some the affected issues and compare them with similar issues not affected by the change in an effort to determine the impact of index changes on the prices for these issues over the short term.

Table A-1: Issues Selected for Investigation from July, 2011, Changes to TXPR and Their Comparables

Affected Issue	Comparable Issue
BCE.PR.B Added Ratchet Rate	BCE.PR.Y Deleted Held 146,321 shares[78] (value $3,491,000) HIMIPref™ Average Trading Value $120,590 Ratchet Rate
WN.PR.D Deleted: Held 160,976 shares[79] (value $3,736,000) HIMIPref™ Average Trading Value $126,172 Straight Perpetual (pays $1.30)	WN.PR.C No Change Straight Perpetual (pays $1.30)

At first glance it seems rather surprising that BCE.PR.B should have been substituted for BCE.PR.Y in the index, since according to HIMIPref™ the latter issue is more liquid than the former. However, a review of the definition of liquidity and an examination of the trading patterns in these issues explains the situation.

Chart A-7 shows the Average Daily Trading Volume as computed by HIMIPref™; this is calculated as an exponential moving average of the adjusted daily spot volume, that is:

$$A_i = A_{i-1} * DF + (1-DF)*V_i$$

Where A_i is the Average Volume calculated on day i

DF is the Damping Factor (usually 0.98, but this can change to 0.96 if V_i is significantly less than A_{i-1} – this allows the computed volume to stabilize more rapidly when there is a sharp reduction in trading volumes, such as may occur after a new issue is distributed)

V_i is the Adjusted Daily Spot Volume; the adjustment is a cap placed on the value if V_i is significantly more than A_{i-1} – this ensures that sporadic block trades will not distort reasonable expectations of what amount might trade on any given day.

Chart A-8, which plots the Daily Spot Volume, provides the explanation of S&P's action in this case. As may be seen, there were three days of very high volume for BCE.PR.B – these were largely ignored by HIMIPref™ due to its use of the Adjusted Spot Volume, which caps the volume used for calculation purposes if it would otherwise be much higher than the existing average; but these raw volumes were used on an equally-weighted basis by S&P due to its policy[80] on volume calculation for possible constituents: *The preferred stocks must have a minimum trailing three-month average daily value traded of C$ 200,000 as of the rebalancing reference date.*

The relatively modest trading requirement for inclusion in the index suggests the potential for market manipulation via the index by unscrupulous operators – similar issues could be traded in large blocks prior to the index calculation date, allowing the account to keep its exposure to the economic substance of the original holdings, while boosting measured volume and thus driving the three month trailing arithmetic average daily value towards the key level of $200,000.

[77] Standard & Poor's, *Standard & Poor's Announces Review of S&P/TSX Preferred Share Index*, Press Release, 2011-7-8, available on-line at http://www.newswire.ca/en/story/783217/standard-poor-s-announces-review-of-s-p-tsx-preferred-share-index (accessed 2011-10-14)

[78] Claymore ETFs, *Claymore S&P/TSX CDN Preferred Share ETF, Interim Management Report of Fund Performance and Interim Financial Statements (unaudited) June 30, 2011*, available on-line at http://www.claymoreinvestments.ca/libraries/literature_en/2011_if_cpd.pdf (accessed 2011-10-14)

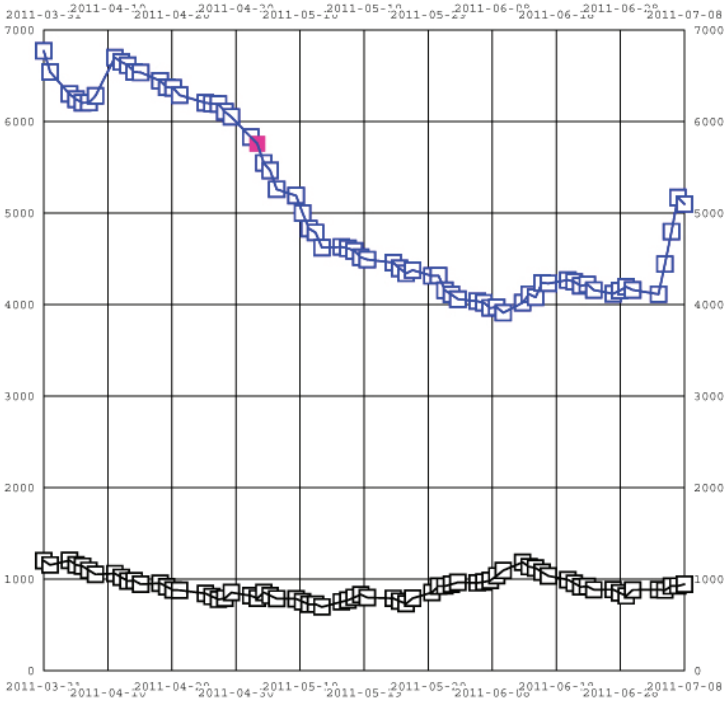
[79] Claymore ETFs, *Claymore S&P/TSX CDN Preferred Share ETF, Interim Management Report of Fund Performance and Interim Financial Statements (unaudited) June 30, 2011*, available on-line at http://www.claymoreinvestments.ca/libraries/literature_en/2011_if_cpd.pdf (accessed 2011-10-14)

[80] Standard & Poor's, *S&P/TSX Preferred Share Index: Index Methodology*, supra

A-7

BCE.PR.B (Security A39018) Properties from 2011-03-31 to 2011-07-08

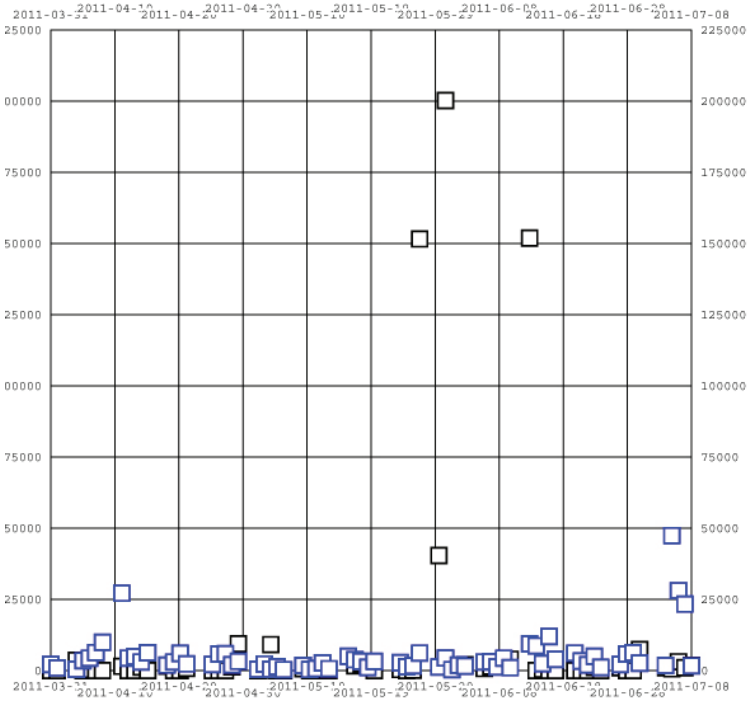
Volume - average
Tax Identifier: 6
BCE.PR.Y
X-Axis: Date
Y-Axis: Volume - average



A-8

BCE.PR.B (Security A39018) Properties from 2011-03-31 to 2011-07-08

Volume - spot
Tax Identifier: 6
BCE.PR.Y
X-Axis: Date
Y-Axis: Volume - spot

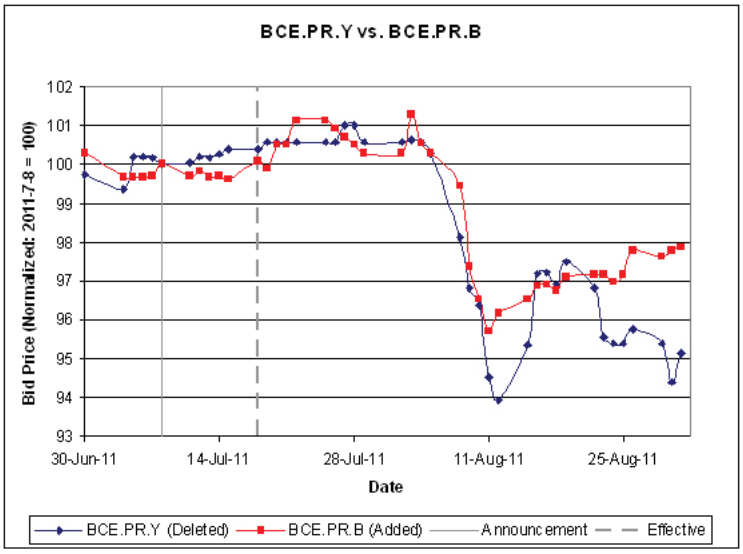


Charts A-9 and A-10 show the evolution of bid prices from June 30 to August 31 for the two pairs of comparables listed in Table A-1. As may be seen, there is some indication that issues deleted from the index experience significant underperformance in the six weeks following the effective date of the deletion, but the effect is by no means beyond challenge.

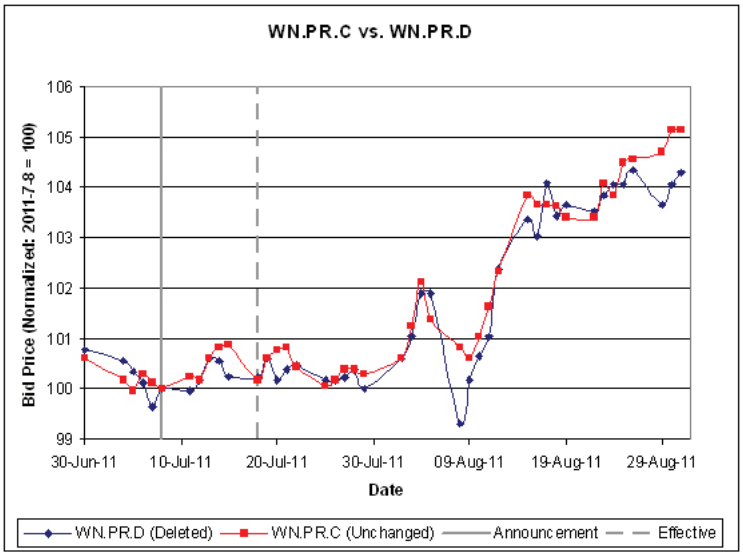
Interestingly, and in distinction to the results observed last year, there is no indication in the data plotted that there is a "meta-index" effect between the announcement date and the effective date – underperformance of deleted issues during this period would decrease the performance of the index itself relative to a meta-index which retained them.

Clearly, a thorough investigation would be necessary in order to derive confidence levels for the presence of an effect, either before or after the effective date of the index change – but given the continued tracking error of CPD (discussed below) and the fact that underperformance of deleted issues has been observed in other markets[81] [82] provide at least some support for the idea that (changes in) the composition of the TXPR index has an effect on the market prices of low volume issues, at the very least.

A-9



A-10



[81] Anthony W. Lynch, Richard R. Mendenhall, *New Evidence on Stock Price Effects Associated with Changes in the S&P 500 Index*, Journal of Business, 1997, available on-line at http://pages.stern.nyu.edu/~alynch/pdfs/jb97lm.pdf (accessed 2011-10-14)

[82] Honghui Chen, Gregory Noronha and Vijay Singal, *The Price Response to S&P 500 Index Additions and Deletions: Evidence of Asymmetry and a New Explanation*, The Journal of Finance, 2004, available on-line at http://www.finance.pamplin.vt.edu/faculty/vs/pdfs/2004JF-ChenNoronhaSingal-SP500Changes.pdf (accessed 2011-10-14)

Tracking Error

We can compare the performance of CPD to its TXPR benchmark.

Table A-2: Total Return of CPD Against its Benchmark, TXPR

Period Ending August Month-End	1 Year	2 Years	3 Years	4 Years
2011	**7.66%** 8.44%	**6.36%** 7.22%	**6.24%** 6.97%	**2.82%** 3.46%
2010	**5.08%** 6.02%	**5.54%** 6.24%	**1.25%** 1.85%	
2009	**6.01%** 6.47%	**-0.61%** -0.18%		
2008	**-6.82%** -6.41%			
Total Return of CPD NAV (annual/annualized) Total Return of TXPR (annual/annualized)				

Given an assumption of a constant 50bp MER we can construct Table A-3, showing the Excess Tracking Error of the fund, which is the difference between the actual return on the fund and the index return less 50bp:

Table A-3: Annual Excess Tracking Error for CPD

Period Ending August Month-End	Excess Tracking Error
2011	-28bp
2010	-44bp
2009	+4bp
2008	+9bp

It should be noted that Excess Tracking Error does not necessarily result solely from rebalancing to adjust to index changes, although this is almost certainly the largest source of error. It may also arise from the creation of units, according to the prospectus[83]: *For each Prescribed Number of Units issued, a Designated Broker or Underwriter must deliver payment consisting of, in the Manager's discretion, (i) one Basket of Securities and cash in an amount sufficient so that the value of the securities and the cash received is equal to the NAV of the Units next determined following the receipt of the subscription order; (ii) cash in an amount equal to the NAV of the Units next determined following the receipt of the subscription order; or (iii) a combination of securities and cash, as determined by the Manager, in an amount sufficient so that the value of the securities and cash received is equal to the NAV of the Units next determined following the receipt of the subscription order.*

To the extent that Claymore accepts cash in satisfaction of the creation order, and that this cash is not invested in the underlying securities at prices equal to those used for the calculation of the NAV, tracking error will result.

Additionally, the S&P index calculation methodology[84] states that the index has a total return counterpart, which assumes dividends are reinvested in the index after the close on the ex-date, whereas the fund will accumulate these dividends as a cash balance that is distributed to unitholders periodically; thus, tracking error will result to the extent that the returns on this cash (which is only received on the pay-date, which may be long after the ex-date) does not equal the return of the index for this period. This may be at least part of the reason that Claymore decided to move to monthly distributions for CPD.[85]

A minor source of Excess Tracking Error will be trading expenses: the fund incurred about $92.000 of such costs in 11H1 which, relative to initial assets of about $593.9-million, represents a little under 2bp. The fund reports a Trading Expense Ratio of 3bp.

[83] Claymore ETFs, *Prospectus*, 2011-5-12, available on-line at http://www.claymoreinvestments.ca/libraries/literature_en/prospectus_crq_clu_cie_cjp_cdz_cyh_cpd_clo_cmw_cww_cbq.pdf (accessed 2011-10-14)

[84] Standard & Poor's, *S&P/TSX Preferred Share Index: Index Methodology*, supra

[85] Claymore Investments, Inc., *Claymore Increases the Number of ETFs Paying Monthly Distributions*, Press Release, 2010-6-21, available on-line at http://www.claymoreinvestments.ca/libraries/literature_en/claymore_increases_the_number_of_etfs_paying_monthly_distributions.pdf (accessed 2011-10-14)

Table A-4: Composition of Portfolios by Preferred Share Type, 2010-8-31				
Sector	**CPD**	**DPS.UN**	**BMOCM-50**	**MAPF**
Investment Grade				
Ratchet	0%	0%	0%	0%
FixFloat	0%	0%	0%	0%
Floater	0.4%	3.8%	3.2%	0%
OperatingRetractible	3.9%	5.6%	8.0%	0%
SplitShare	0%	0%	0%	9.8%
Interest Bearing	0%	0%	0%	0%
PerpetualPremium	5.2%	12.4%	3.6%	0%
PerpetualDiscount	3.9%	10.1%	4.7%	.9.5%
FixedReset	38.8%	18.3%	35.2%	8.8%
DeemedRetractible	28.2%	23.3%	30.6%	59.4%
Junk				
Ratchet	0.6%	3.9%	2.9%	0%
FixFloat	4.6%	4.8%	7.5%	0%
Floater	0%	0.4%	0%	0%
OperatingRetractible	2.6%	5.4%	2.6%	1.6%
SplitShare	0%	0%	0%	0%
Interest Bearing	0.3%	0%	0%	0%
PerpetualPremium	0%	0%	0%	0%
PerpetualDiscount	1.6%	3.4%	1.6%	3.3%
FixedReset	9.9%	6.0%	0%	2.6%
DeemedRetractible	0%	2.5%	0%	2.7%

The most dramatic shifts in allocation over the past year occurred in MAPF, in which investment-grade split-shares increased to 9.8% from 0.6%. The fund also increased its total allocation to Junk issues (while remaining, as we will see, less exposed than the other three vehicles).

Some Preferred Share Funds: Credit Quality[86]

DBRS has muddied the waters somewhat with its announcement[87] that it was changing the definition of default[88] so that *With respect to preferred share securities, the non payment of a dividend will only be considered as a "default" if the non payment constitutes default per the legal documents. As such, the non payment of a dividend does not necessarily give rise to the assignment of a 'D' rating*.

Their clarification[89] made the situation even more confusing: *DBRS does not view the ability to defer payments as a credit risk, but rather, a risk that holders of the deferrable instruments have agreed to as per the contractual terms of the instrument and DBRS does not consider "deferral" as being equal to "default".*

This sentiment is reiterated in their discussion of preferred share rating scales.[90]

[86] A large part of the discussion in this section has been copied from last year's commentary, which remains relevant

[87] DBRS, *DBRS Updates Default Definition*, 2009-11-9, available on-line at http://www.dbrs.com/research/230546 (accessed 2010-9-11)

[88] DBRS, *Rating Definitions & Other Rating Information*, available on-line at http://dbrs.com/about/ratingDefinitions?anchor=default#default (accessed 2010-9-11)

[89] DBRS, *DBRS Clarifies its Approach to Rating Bank Subordinated Debt and Hybrid Instruments*, 2009-12-21, available on-line at http://www.dbrs.com/research/230963/dbrs-clarifies-its-approach-to-rating-bank-subordinated-debt-and-hybrid-instruments.html (accessed 2010-9-11)

[90] See http://www.dbrs.com/about/ratingScales (accessed 2010-9-11)

This attitude may be contrasted with their earlier treatment of Quebecor World:[91] *While the cumulative nature of the Series 3 and Series 5 preferred shares affords Quebecor World the flexibility to suspend dividends, provided dividends are paid in arrears, DBRS notes preferred shareholders maintain a level of expectation that these dividends will be paid in a timely manner, and this expectation is reflected in the preferred share ratings.*

Having not met the expectation of preferred shareholders, DBRS notes the preferred shares are more reflective of a "D" rating.

It is also of great interest to note that the word "default" does not occur in – to take one example at random – the Supplementary Prospectus for CM.PR.E[92]. or in the base prospective it supplements.[93] Given that the word does not occur … when does default occur? This is rather important, as the credit rating should be taken as a rough estimate of the probability of default, although this presumption is not explicitly supported in their discussion of the preferred share rating scales[94] – it arises from the structure of their transitions studies.[95]

The meaning of default becomes still murkier when considering OSFI's finalization of the Non-Viability Contingent Capital Advisory[96] which provides that *Non-common Tier 1 and Tier 2 capital instruments must have, in their contractual terms and conditions, a clause requiring a full and permanent conversion into common shares of the DTI upon a trigger event*, where "trigger event" is defined to mean, essentially, the whim of the Superintendent.[97]

Despite my disdain for the mechanism of activating the trigger, DBRS has announced[98] that it considers that *the triggers are well defined and permit an assessment of the risks* but that the mechanism *means the starting point for notching preferred share ratings is the intrinsic assessment (IA) rating rather than the final senior debt rating, and the degree of notching from the IA rating to the preferred share rating widens to reflect our perception of the increased risk in these capital instruments*.

Still more confusion arose when DBRS placed the "NVCC Eligible"[99] preferred share issues of CM,[100] TD,[101] RY,[102] and BMO[103] on Review-Negative, citing an "elevated risk of conversion" and "potential for the holder of this instrument to incur losses" but shied away from using the term "Default" even though the definition[104] of the Preferred Share Scale Rating "D" states that *A security rated D implies the dividend or principal payment is in default per the legal documents, the issuer has made it clear that this will be the case in the near future or in certain cases, that there has been a distressed exchange*. If we are to believe that no future Superintendant will ever abuse the powers of the office, it would seem evident that triggering the NVCC clause would qualify as a "distressed exchange".

In short, we are really no closer to a precise understanding of what is meant by DBRS Preferred Share Ratings than we were last year at this time.

S&P has muddied the waters further with their announcement[105] that CM.PR.D and CM.PR.E were being downgraded due to these issues having achieved recognition as NVCC instruments[106] (oddly, CM.PR.G is not rated by S&P). In this announcement, S&P continued their laudable criticism of OSFI's indefensible "low trigger" approach (which was discussed in the January, 2011, edition of this newsletter): "*In our opinion, because the conversion would occur at the point of nonviability, and not early enough to preempt nonviability, the formal designation of these instruments as NVCC does not in itself reduce the issuer's default risk,*" *said* [Standard & Poor's credit analyst] *Mr.* [John] *Bartko.*

All in all, we are left somewhat adrift by the ratings agencies on this issue. We know they are ranking bank hybrid securities against each other – and I have very few quibbles with these relative rankings – but there is very little sense of what the absolute risk is supposed to be. Without such firm definitions, it is very difficult to understand how any given rating level may be used to compare risks across industries, particularly when one of those industries is a bank.

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91 See http://www.dbrs.com/research/216489/quebecor-world-inc/downgrades-preferred-shares-to-d.html (accessed 2010-9-11)

92 Available on-line at http://www.cibc.com/ca/pdf/investor/preferred-shares/series-27-prospectus-en.pdf (accessed 2010-9-11)

93 Available on SEDAR, http://www.sedar.com, "Canadian Imperial Bank of Commerce", "Dec 6, 2001", "Final short form prospectus – English"

94 See http://www.dbrs.com/about/ratingScales (accessed 2010-9-11)

95 See http://www.dbrs.com/research/232188/2009-dbrs-corporate-rating-transition-and-default-study.pdf (accessed 2010-9-11)

96 Office of the Superintendent of Financial Institutions, *Non-Viability Contingent Capital*, Advisory, August 2011, available on-line at http://www.osfi-bsif.gc.ca/app/DocRepository/1/eng/guidelines/capital/advisories/nvcc_e.pdf (accessed 2011-10-14)

97 There is no appeal and no legal process; criteria are shown but these are given "without limiting the generality of the foregoing".

98 Dominion Bond Rating Service, *DBRS Canadian Banks' NVCC Instruments Rateable Based On OSFI Advisory*, Press Release 2011-8-17, available on-line at http://www.dbrs.com/research/241526/dbrs-canadian-banks-nvcc-instruments-rateable-based-on-osfi-advisory.html (accessed 2011-10-14)

99 Those bank issues with a clause permitting the conversion of the preferred shares into common stock at the sole discretion of issuer, as discussed in the June edition of this newsletter.

100 Dominion Bond Rating Service, *DBRS Places CIBC's Non-Cum. Class A Preferred Shares, Series 26, 27 and 29, Under Review-Negative*, Press Release, 2011-8-17, available on-line at http://www.dbrs.com/research/241665/dbrs-places-cibc-s-non-cum-class-a-preferred-shares-series-26-27-and-29-under-review-negative.html (accessed 2011-10-14)

101 Dominion Bond Rating Service, *DBRS Places TD's Non-Cumulative Class A 1st Preferred Shares, Series M and Series N, Under Review with Negative Implications*, Press Release, 2011-8-17, available on-line at http://www.dbrs.com/research/241667/dbrs-places-td-s-non-cumulative-class-a-1st-preferred-shares-series-m-and-series-n-under-review-with-negative-implications.html (accessed 2011-10-14)

102 Dominion Bond Rating Service, *DBRS Places RBC's Non-Cumulative First Preferred Shares, Series W Under Review-Negative*, Press Release, 2011-8-17, available on-line at http://www.dbrs.com/research/241666/dbrs-places-rbc-s-non-cumulative-first-preferred-shares-series-w-under-review-negative.html (accessed 2011-10-14)

103 Dominion Bond Rating Service, *DBRS Places BMO's Non-Cumulative Perpetual Class B Preferred Shares, Series 10 Under Review-Negative*, Press Release, 2011-8-17, available on-line at http://www.dbrs.com/research/241664/dbrs-places-bmo-s-non-cumulative-perpetual-class-b-preferred-shares-series-10-under-review-neg.html (accessed 2011-10-14)

104 Dominion Bond Rating Service, *Rating Scales: Preferred Shares, DBRS Ratings Policies*, available on-line at http://www.dbrs.com/research/236755/preferred-shares.pdf (accessed 2011-10-14)

105 Standard & Poor's, *Two Preferred Issues of Canadian Imperial Bank of Commerce Downgraded to 'BBB+'; All Other Ratings Affirmed*, 2011-9-16, available on-line at http://www.standardandpoors.com/prot/ratings/articles/en/us/?articleType=HTML&assetID=1245320617503 (accessed 2011-9-16)

106 Canadian Imperial Bank of Commerce, *CIBC announces it has received confirmation of non-viability contingent capital treatment for its Class A preferred shares, Series 26, 27 and 29*, Press Release, 2011-8-17, available on-line at http://micro.newswire.ca/release.cgi?rkey=1908173569&view=14730-0&Start=0&htm=0 (accessed 2011-10-14)

Despite uncertainties in this matter, however, we will prepare Table A-5, showing how the credit qualities of the four sampled portfolios compare.

Table A-5: Composition of Portfolios by DBRS Credit Rating, 2011-8-31

DBRS Credit Rating	CPD	DPS.UN	BMO-CM "50"	MAPF
Pfd-1	0%	0%	0%	0%
Pfd-1(low)	57.8%	41.4%	56.3%	47.7%
Pfd-2(high)	9.3%	12.7%	12.9%	20.4%
Pfd-2	1.6%	1.7%	1.4%	0%
Pfd-2(low)	11.7%	17.8%	14.8%	19.2%
Pfd-3(high)	10.8%	14.8%	13.0%	2.7%
Pfd-3	5.5%	8.4%	1.6%	8.8%
Pfd-3(low)	3.3%	3.2%	0%	0%

Two companies included in the portfolios are not rated by DBRS. ELF has been assigned to Pfd-2(low), based on its rating when coverage ceased[107] and CSE has been assigned to Pfd-3 based on its S&P rating of P-3.

Some Preferred Share Funds: Liquidity

As discussed above in the section "Effect of Index Changes on Prices" HIMIPref™ calculates the Average Daily Trading Value in a different manner than the industry standard, which is an arithmetic average over a fixed period of time or number of trading days. This is considered prudent as the sole reason for wishing to know this figure is as a predictor of how many shares we may reasonably expect to trade at reasonable prices on any given day in the future. As noted in the discussion of BCE.PR.Y and BCE.PR.B, this leads to some amusing circumstances – the former issue was deleted from TXPR due to low volume, while the latter was added as it had achieved sufficiently high volume, but the HIMIPref™ liquidity measure reports the reverse ranking of two highly illiquid issues.

The liquidity of the issues held in the portfolios of interest is summarized in Table A-6.

Table A-6: Composition of Portfolios by Average Trading Value, 2011-8-31

Average Daily Trading Value Range	CPD	DPS.UN	BMO-CM "50"	MAPF
< 50M	1.5%	8.9%	2.6%	5.9%
50M – 100M	4.8%	19.0%	9.1%	21.2%
100M – 200M	31.2%	29.0%	21.9%	18.5%
200M – 300M	33.5%	23.2%	28.9%	25.2%
> 300M	29.0%	20.05	37.4%	28.2%

M means thousand, not million! We're all Fixed Income guys here and we understand this, right?

[107] Dominion Bond Rating Service, *DBRS Discontinues E-L Financial's Preferred Share Rating*, Press Release, 2010-9-20, available on-line at http://www.dbrs.com/research/235405/dbrs-discontinues-e-l-financial-s-preferred-share-rating.html (accessed 2011-10-14)

Yields[108]

In October, 2006, Advisor's Edge Report published my essay *Closed End Preferred Funds: Effect of Calls*[109] in which I warned that the very high proportion of issues held by closed end funds that were trading above their call price led to the conclusion that their dividend pay-outs were unsustainable – as these issues with their high coupons were called, the principal would have to be reinvested in lower-coupon issues and the distributions from the fund would necessarily suffer.

Of the issues held by DPS.UN at the time of that essay, no less than 57.1% were trading at levels that indicated a probable call within five years. As it turns out, the forecast was gloomy in some respects – a YTW calculation assumes a constant market environment and the precipitous decline in market prices since that time has taken most of those issues below their call price. Holders might be forgiven for considering this a rather small blessing!

The nice thing about the investment business is that if you keep saying the same thing for long enough, eventually you'll be right – so I am gratified to note that now, having repeated the above two paragraphs for the third time, DPS.UN has reduced their indicated distribution[110] from $1.20 to $1.00 annually, effective with the fourth quarter distribution paid to unitholders of record December 30, 2011.

I have pointed out that FixedResets appear to be trading on the basis of their Current Yield with, at best, an imperfect accounting for the amortization of their premia to their expected call price. With this in mind, we can compare the Current Yields to the Yields-to-Worst to gain some understanding of the prospects for future income distributions, as shown in Table A-7:

Table A-7: Portfolios Yields and Modified Duration, 2011-8-31

	CPD	DPS.UN	BMO-CM "50"	MAPF
Current Yield	5.16%	5.15%	4.92%	5.71%
Yield-to-Worst (unadjusted)	3.92%	3.81%	3.20%	6.31%
Yield-to-Worst (adjusted)	3.90%	3.99%	3.75%	5.41%
Modified Duration (YTW Scenario)	7.55	8.40	7.32	7.93

In previous years, I have computed the Adjusted Yield-to-Worst for the portfolios by resetting the negative yields-to-worst to zero. This has been repeated this year, but in addition I have also reset the yields of the four YLO issues to zero. This has not been done because I have changed my investment opinion from that which I expressed in the August edition of this newsletter, but because I know there are those who violently disagree with my assessment and because the very high computed yields on these issues might otherwise be thought to be distorting the results. The affected issues are shown in Table A-8 – readers may decide for themselves how reasonable this adjustment is and, if desired, perform their own adjustments!

Table A-8: Holdings Resulting in Adjustments to Portfolio Weighted Average Yield-to-Worst

		CPD		DPS		BMO-CM 50		MAPF	
Issue	YTW	Weight	Adj (bp)	Weight	Adj (bp)	Weight	Adj (bp)	Weight	Adj (bp)
BPO.PR.F	-15.08%	0.65%	-9.8	0.71%	-10.7	1.41%	-21.2	0%	0.0
CU.PR.B	-4.31%	0%	0.0	0.82%	-3.5	0%	0.0	0%	0.0
ENB.PR.A	-11.29%	0%	0.0	0.70%	-7.9	0%	0.0	0%	0.0
FTS.PR.C	-11.57%	0.35%	-4.0	0.72%	-8.3	0%	0.0	0%	0.0
LB.PR.D	-11.80%	0%	0.0	0.76%	-9.0	0%	0.0	0%	0.0
NA.PR.K	-6.84%	0.79%	-5.4	0.79%	-5.4	1.39%	-9.5	0%	0.0
TD.PR.M	-0.65%	0.91%	-0.6	0.68%	-0.4	2.45%	-1.6	0%	0.0
TD.PR.N	-10.91%	0.47%	-5.1	0%	0.0	1.41%	-15.4	0%	0.0
WN.PR.A	-4.34%	0.58%	-2.5	0.80%	-3.5	1.61%	-7.0	0%	0.0
YLO.PR.A	45.09%	0.44%	+19.8	0.41%	+18.5	0%	0.0	0%	0.0
YLO.PR.B	28.02%	0.20%	+5.6	0.33%	+9.2	0%	0.0	1.6%	+45.0
YLO.PR.C	12.86%	0.28%	+3.6	0.27%	+3.5	0%	0.0	2.2%	+28.0
YLO.PR.D	12.83%	0%	0.0	0%	0.0	0%	0.0	1.3%	+17.0
Totals		**4.67%**	**+2.0**	**6.99%**	**-18.0**	**8.27%**	**-55.0**	**5.10%**	**+90.0**

[108] The first two paragraphs of this section are a straight copy-paste from the September 2010 edition and were in turn copy-pasted from the September 2009 edition. Some things never change!

[109] Available on-line at http://www.himivest.com/media/advisor_0610.pdf (accessed 2009-9-12)

[110] Sentry Select, *Diversified Preferred Share Trust (TSX:DPS.UN) announces change to quarterly distribution rate*, Press Release, 2011-9-26, available on-line at http://sentry.ca/en/news/press_release.html?id=3144 (accessed 2011-10-24)

It will be noted that two of the issues listed in Table A-8, TD.PR.M and TD.PR.N, have already been called for redemption[111] – it doesn't pay to tempt fate!

Issuer Group Concentration

As I regularly point out in my recommendations in this newsletter, it is necessary to calculate exposure to a single issuer in accordance with its group. There are a plethora of inter-related companies issuing preferred shares in Canada and unless one is wary one can find that one has much greater exposure to a single issuer than a single scan of unique ticker symbols might otherwise have indicated.

The two major issuing groups are the Power group, tabulated for each vehicle in Table A-9, and the Brookfield Group, tabulated in Table A-10.

Table A-9: Issuer Group Concentration – Power Group

Issuer	CPD	DPS.UN	BMO-CM "50"	MAPF
GWO	4.42%	4.69%	1.68%	19.30%
IGM	0.41%	0.70%	0%	0%
POW	1.56%	3.28%	1.34%	0%
PWF	3.37%	6.36%	2.63%	0%
Total	**9.76%**	**15.03%**	**5.65%**	**19.30%**

Table A-10: Issuer Group Concentration – Brookfield Group

Issuer	CPD	DPS.UN	BMO-CM "50"	MAPF
BAM	4.87%	6.50%	6.10%	0%
BPO	3.92%	2.96%	2.60%	0%
BPP	0%	0.42%	0%	0%
BNA	0%	0%	0%	9.80%
BRF	0.67%	0.67%	0%	0%
Total	**9.46%**	**10.55%**	**8.70%**	**9.80%**

Performance

For the past few months, Sentry Select has been publishing returns to the end of the prior calendar month too late for inclusion in the regular performance table – but since this essay is a "month behind", it will be useful to provide a complete review, which is done in Table A-11.

Table A-11: Performance for Periods Ending 2011-8-31

Period	TXPR[112]	CPD[113]	DPS.UN[114]	BMO-CM "50"	MAPF
One Month	-0.57%	-0.64%	-0.2%	-0.70%	+0.73%
Three Months	+0.32%	+0.10%	+2.0%	+0.14%	-0.38%
One Year	+8.44%	+7.66%	+10.2%	+10.86%	+14.73%
Two Years*	+7.22%		+8.6%	+8.53%	+12.08%
Three Years*	+6.97%	+6.20%	+9.1%	+8.51%	+25.82%
Four Years*	+3.46%			+4.83%	+18.41%
Five Years*			+3.1%	+3.93%	+15.23%
Six Years*				+3.88%	+13.63%
Seven Years*				+4.04%	+12.58%
Eight Years*				+4.27%	+13.25%
Nine Years*				+4.50%	+13.81%
Ten Years*				+4.38%	+13.13%
Figures for TXPR, BMO-CM "50", and MAPF are the author's calculations.					

Conclusion[115]

After this analysis, readers might be forgiven for asking for a clear recommendation of one of the passive vehicles over another – to the undoubted surprise of some cynics, I will restrain my natural inclination to recommend my Malachite Aggressive Preferred Fund.

Sadly, a simple choice is not possible. Some investors, having particular portfolio objectives, will choose one; other investors with differing objectives will choose the other. The important thing to realize is that not all passive vehicles are identical; as noted earlier, the preferred share market in Canada is too heterogeneous to be treated with such simplicity and it is necessary to look inside each vehicle and determine its holdings, as well as other risks that might be inherent in the investment's structure.

[111] The Toronto Dominion Bank, *TD Bank Announces Redemption of Class A First Preferred Shares, Series M and Series N*, Press Release, 2011-9-19, available on-line at http://td.mediaroom.com/index.php?s=43&item=1399 (accessed 2011-10-14)

[112] TXPR is the S&P/TSX Preferred Share Index. Calculations by author, with raw data from TMX DataLinx

[113] Reported by Claymore for NAV at http://www.claymoreinvestments.ca/en/etf/fund/cpd/performance (accessed 2011-9-10)

[114] Reported by Sentry Select at http://sentry.ca/en/products/structuredproducts/dpst.html?fundId=163 (accessed 2011-9-10). It is not clear whether these values reflect market price or NAV. The published figures have been updated only to the end of July and so have been ignored.

[115] The two paragraphs of this section are copy-pasted from last year's effort, with a small addition to the end of the second paragraph: Reduce, Re-Use and Recycle, that's me!