The Potential for Straight Perpetual Redemptions[1]

Straight Perpetuals are preferred shares having the following characteristics:

- There is no maturity or put option whereby the holder can force the company to return the capital. The shares will remain outstanding until they are called or the issuer goes bankrupt.
- The preferred shares pay a fixed dividend throughout their life.

The first characteristic distinguishes this class of shares from retractibles[2]; the second distinguishes them from the various types of floating rate issues (which includes FixedResets). A taxonomy of the Canadian preferred share universe is shown in Chart 1; note that there are other subdivisions which may be thought to be important – for instance, a split between financial and non-financial issues, or cumulative and non-cumulative.[3]

There are important analytical differences[4] between Straight Perpetuals that are trading below their call price (PerpetualDiscounts) and those trading above this price (PerpetualPremiums); these differences require the subdivision of the Straight Perpetual class.

Note that when making this division, it is the lowest call price that is used to make the determination, which is always (so far!) equal to the issue price. There are various redemption schedules in use, but most common schedule for a Straight Perpetual issued at $25.00 is a call after five years at $26.00; the redemption price declines by $0.25 annually until nine years after issue; redeemable at $25.00 thereafter.

PerpetualDiscounts are the class of preferred shares most amenable to analysis. To a first approximation, all issues in the class have the same expected term: infinite, although the individual issue's proximity to its call price will have an effect – clearly, the analysis of an issue trading one penny below its call price must assign a greater weight to the chance of a call than the analysis of an issue trading at a substantial discount. However, option theory, as discussed in the January, 2010, edition of this newsletter, provides a good framework for the analysis of the effect of potential calls.

Additionally, PerpetualDiscounts are readily compared with long-term corporate bonds. The credit risks are similar (although not identical, since preferred shares are junior to bonds in the event of a bankruptcy) and the sensitivity to interest rates is also quite similar: as discussed in the April, 2010, edition of this newsletter, the interest-equivalent Modified Duration[5] of PerpetualDiscounts[6] is very close to the Modified Duration of the long corporate universe.[7]

It is for these reasons that I regard the Seniority Spread (the interest-equivalent yield on PerpetualDiscounts less the yield on long corporates) to be the best "connector" between the overall bond market and the relatively tiny preferred share market.

In making this connection, however, it is important not to be blinded by another feature of Straight Perpetuals: they are callable. Corporate bonds are generally not callable at a fixed price.[8]

Consider an investor who purchases a long-term corporate bond yielding 10% and is gratified to find, ten years later, that long corporate yields have dropped to 5%. The decline in yields does not bother him in the slightest, as he has locked in his income stream for thirty years, whereas if he had originally purchased a ten-year bond he would be faced with reinvesting the capital at a much lower rate.[9]

However, an investor who had purchased PerpetualDiscounts instead of the corporate bond at the outset (say, with a dividend yield of 9%, or 12.6% interest-equivalent) will very likely find that the issue has been called. Despite taking the same downside price risk as the bond investor (if yields had risen) he does not achieve the same rewards in an environment of steeply declining market yields.

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[1] This essay was inspired by a question from John Fleming of Ontario. I encourage questions, comments and suggestions, which may be sent to jiHymas@himivest.com. Thanks for the question, John!

[2] See *Perpetual and Retractible Preferred Shares*, Canadian Moneysaver June 2006, available on-line at http://www.himivest.com/media/moneysaver_0606.pdf

[3] Cumulative dividends (i.e., if the issuer does not declare a scheduled dividend, the shareholder retains certain rights (defined in the prospectus) until the shortfall is made up), are thought to be important by many, but I have never seen any figures showing how often this feature becomes critical. I take the view that once a preferred share dividend has been missed, the company is at death's door; the feature has virtually no value for an investment grade issuer. Currently, there is a large premium being paid for cumulativity in the market, but this is due to accounting and regulatory issues: financial issuers cannot include cumulative preferred shares in their Tier 1 Capital; the current premium paid for cumulativity is not for the feature per se, but because the feature serves as a proxy for non-financial issuers, which are not affected by the regulatory constraints applicable to financial issuers.

[4] See, e.g., *Perpetual Hockey Sticks*, Canadian Moneysaver March/April 2007, available on-line at http://www.himivest.com/media/moneysaver_0703.pdf

[5] When calculating Modified Duration, expected cash flows are used and allow the derivation of the sensitivity to a change in the yield determined by those flows. However, a 1% change in dividend yield is equivalent to a 1.40% change in interest-equivalent yield (at the standard conversion factor), therefore the interest-equivalent Modified Duration is 1/1.4 = 0.71 times its Modified Duration based on cash flows.
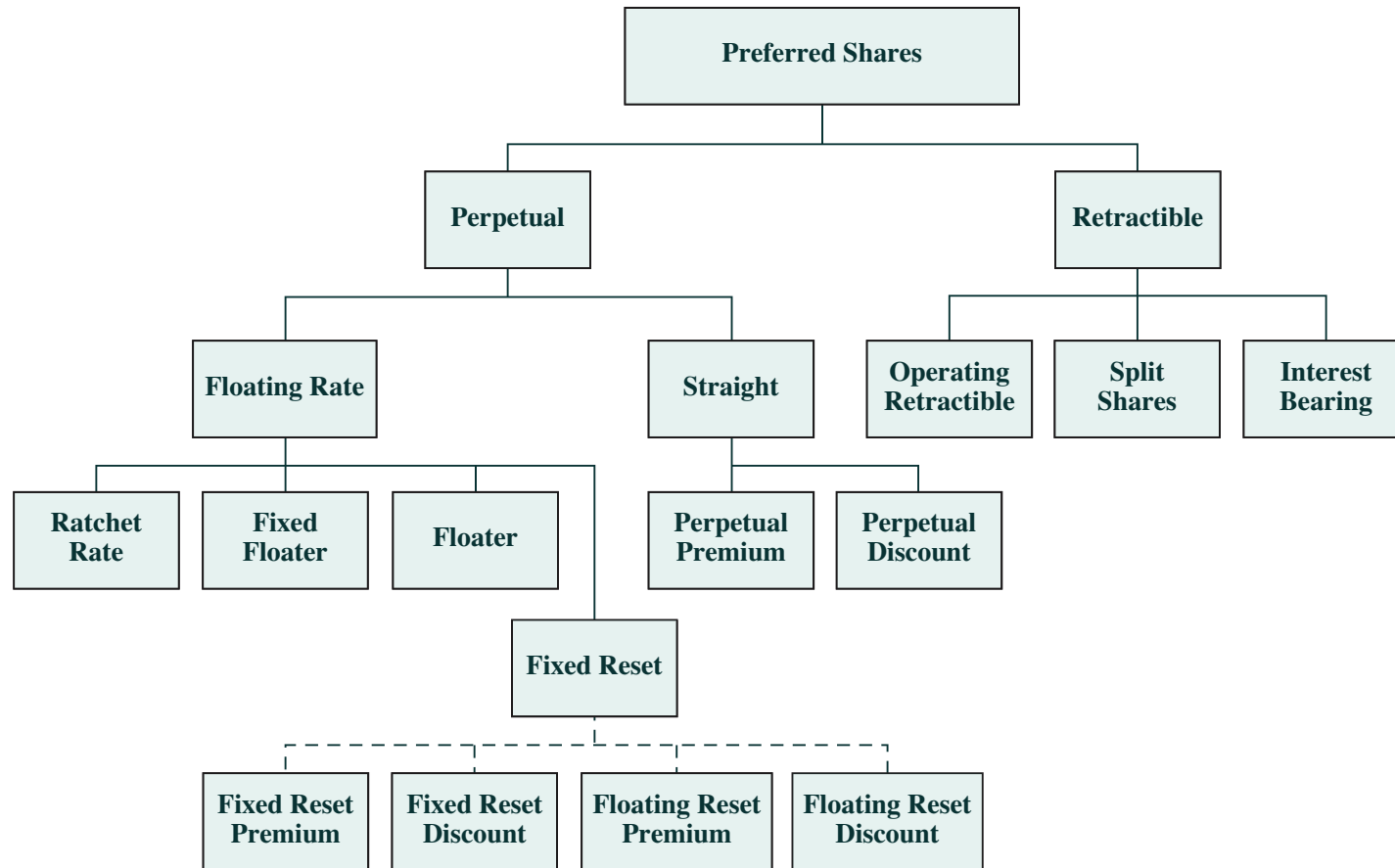
[6] PerpetualDiscount prefereds may be modelled as perpetual annuities – the deeper the discount, the better the approximation. The Modified Duration of a perpetual annuity is the inverse of its yield, i.e., $D_{MOD} = 1/y$ (see http://www.prefblog.com/?p=2582).

[7] The Modified Duration of the DEX Long Term Corporate Bond Index (http://www.canadianbondindices.com/ltbi.asp) is currently about 11.8. A yield of 6% on PerpetualDiscounts implies a ModifiedDuration of 16.7; or 11.8 interest-equivalent.

[8] But sometimes they are callable at a fixed price; the ability of issuers to call them at a fixed price may be constrained (for instance, some bonds are callable at par in the event that taxation changes make the issuing structure obsolete). The prospectus must always be read carefully, particularly when buying such bonds at a premium. Additionally, many – if not most – corporate bonds in Canada come with a "Canada Call" feature, that allows the issue to be called at any time at some defined yield spread over Canada bonds. This is not as scary a feature, since the call price will generally be at a premium to the fair value of the bond – but it depends on the spread!

[9] The investment in a thirty-year instrument emphasized preservation of income, which plays yin to the preservation of capital's yang. For an introduction to this concept, probably the most fundamental of all fixed-income portfolio decisions, see Preferred Shares and GICs, available on-line at http://www.himivest.com/media/PrefsAndGICs_090814A.pdf Note that issues regarding Preservation of Income are often dealt with under the sobriquet "Reinvestment Risk".

Taxonomy of Preferred Shares

For descriptions of each class, see http://www.prefletter.com/whatPrefLetter.php

There are two ways in which a PerpetualDiscount investor can mitigate this risk:

- Purchasing deeply discounted straight preferreds, so that yields must fall a long way before it becomes profitable for the issuer to call them
- Demand extra yield when making the investment, so that scenarios of stable or rising rates will be favourable enough to counterbalance scenarios of falling rates

Two aspects of this problem will be examined in this appendix: firstly we will consider the potential for PerpetualDiscounts to be called, and secondly we will examine the recent increase in PerpetualDiscount prices and attempt to discern whether the market is properly accounting for the increased call risk.

The Potential for PerpetualDiscounts to be Called

It is tempting to assume that an issue is likely to be called as soon as market yields decline below the issue's dividend rate, but this assumption can be misleading. It costs a fair bit to issue preferred shares, and even "bought deals" (in which the underwriters agree to purchase the issue as principals) attract the standard fee. For example, the recent prospectus for PWF.PR.P[10] states *The Underwriters' fee is $0.25 for each Series P First Preferred Share sold to certain institutions and $0.75 per share for all other Series P First Preferred Shares sold*; these figures are standard.

In the preferred share universe, it is fair to assume that the overwhelming majority of new issue sales will attract the full retail commission of $0.75 per share, which is 3% of the new issue value. In addition, there are other expenses of issue (legal fees, regulatory expenses, etc) which PWF estimated as $325,000 for this issue, or 16bp of the gross value of the issue (before greenshoe[11] exercise). Given that a Straight Perpetual with a yield of 6% will have a Modified Duration of $1/0.06 = 16.67$, then the total costs of issue are approximately equal to 20bp in yield.

Therefore, there will normally be a "buffer zone" for PerpetualPremium preferreds in which the dividend is higher than the market rate, but below the break-even refinancing rate; this buffer will be about $0.75 in price or about 20bp in yield.

We may observe this buffer zone by examining historical trends in Straight Perpetual issuance and redemption, which are shown in Chart 2. In this chart, the "Redemption Yield" is calculated as the annual dividend divided by the redemption price – for nine of the eighteen redemptions, the redemption price was a premium to the issue price.

The oddity of the redemption series is BT.PR.E, Telus Communications Inc. $1.21 Pr, redeemed July 2, 2004 at 26.00, having survived thirty-nine years after their issuance by BC Tel in 1965.[12] There were less than a million of these shares outstanding at the time,[13] Telus redeemed all of its public preferred shares at that time – nine issues with a total book value of about $69.7-million.

One way or another, Chart 2 lends support to the view that 20bp or so over new issue yields is about the extent of the safety zone, within which PerpetualPremiums can trade with an adverse but low-probability chance of redemption.

Chart 3 shows the distribution of annual dividend rates in the PerpetualDiscount sector. It is skewed to the lower end of the scale, which is exactly what we might expect: issuers will be tempted to refinance higher dividend issues whenever they can. In fact, it is somewhat surprising that the distribution is not even more highly skewed than it is – but relative yield is only one input to a call probability analysis.[14]

For example, the two oldest members of the PerpetualDiscount index are CM.PR.P and PWF.PR.E, both of which were issued in late 1997 with an annual dividend of 1.375, a rate of 5.5% at issue price. However, the former issue is not callable until on and after October 29, 2012, when it becomes callable at par, while the latter is not callable until January 31, 2013. Thus, even had the issuers wished to, they could not have refinanced these issues at the lowest yield in the interim, 4.5% in early 2007. Those were the good old days, when investors could get a good long lock-out period![15]

The highest coupon rate in the Straight Perpetual issues currently outstanding is CL.PR.B, issued at the end of 2001 with an annual dividend of $1.5625, which was 6.25% of issue price. This issue has the "normal" call schedule and became callable at $26 after five years, with the premium declining by $0.25 annually until December 31, 2010, on and after which it will be callable at par. Thus, a call in early 2007 would have cost the company $26 (the issue was bid in a range of $26.01-76 in 1Q2007), implying a redemption yield (as defined above) of just over 6%. This was still well in excess of the new issue yield at that time but the company (part of the GWO-PWF-POW structure) had other fish to fry and the issue remains outstanding.[16]

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[10] Power Financial Corporation, Prospectus Supplement, June 18, 2010, *$200,000,000 4.40% Non-Cumulative 5-Year Rate Reset First Preferred Shares, Series P*, available from http://www.sedar.com (accessed 2010-7-8)

[11] The greenshoe is the option granted to the underwriters to purchase more of the issue, increasing its size, at the issue price if they so wish. Underwriters therefore have an incentive to underprice new issues.
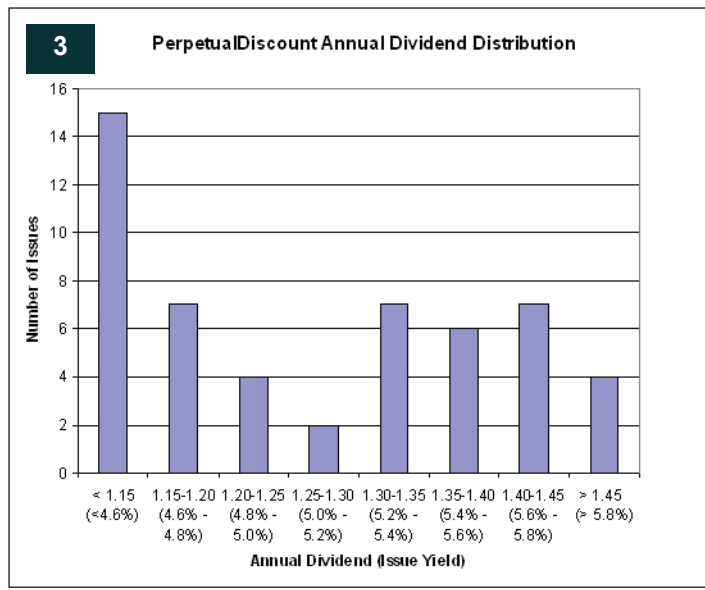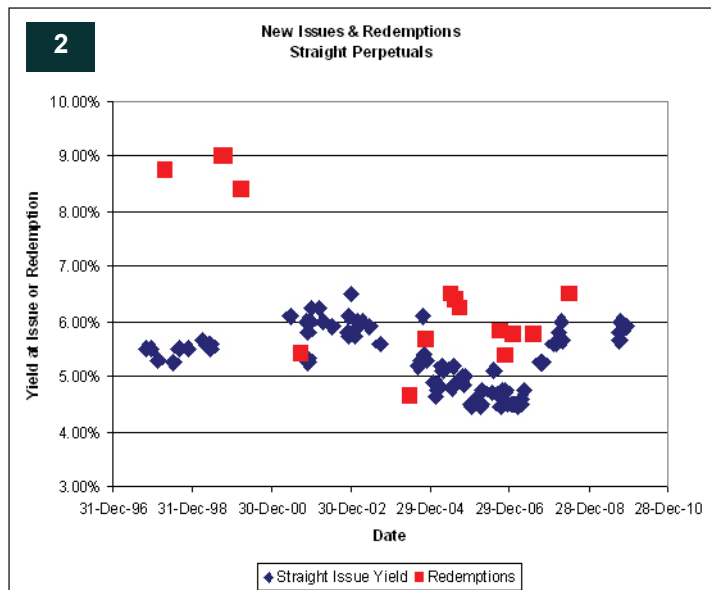
[12] Financial Post, *FP Equities – Preferreds and Warrants 1999*, ISBN 1-55251-017-1. This book cost me $69.95. Isn't the Internet wonderful?

[13] Telus Corporation, *Annual Report 2004*, via http://www.sedar.com

[14] Prepayment assumptions are very important in the US mortgage market, where homeowners can typically get a 30-year term mortgage with no prepayment or refinancing penalty. Since these mortgages are typically securitized, modelling mortgagee behavior has become an important part of quantitative fixed income analysis in the States. See, for example, Bloomberg *Mortgage Prepayments Rise as Rates Spur Refinancing*, on-line at http://noir.bloomberg.com/apps/news?pid=newsarchive&sid=aYzc4wNEhnWs (accessed 2010-7-8). One of the attractions of sub-prime Residential Mortgage Backed Securities in the US was that sub-prime borrowers are historically less likely to refinance when yields are in their favour.

[15] Readers will remember that my principal complaint with the FixedReset structure is that the lockout period is only five years.

[16] In fact, the group missed the boat completely and issued no preferreds in 1Q07.

New Issues & Redemptions
Straight Perpetuals

PerpetualDiscount Annual Dividend Distribution
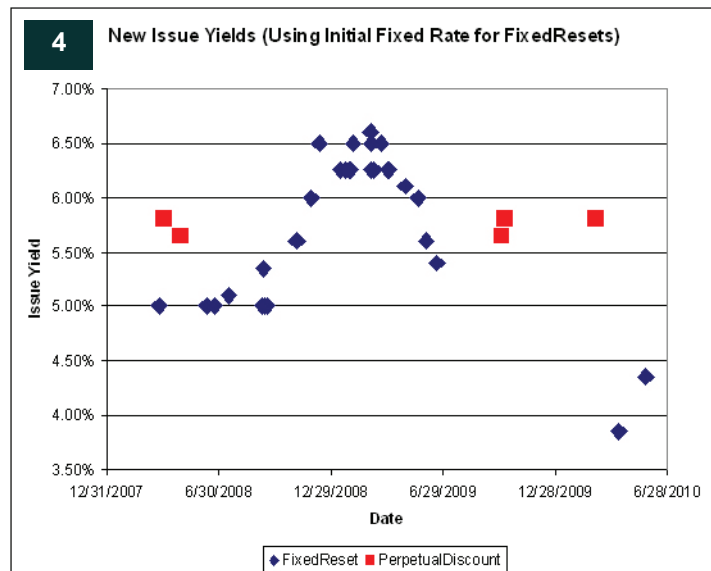
Straight Perpetuals: Potential for Calls at Par

As shown in Chart 3, there are seventeen Straight Perpetual issues currently outstanding with an annual dividend equal to or in excess of $1.40, representing a 5.6%+ yield at issue time. These issues are listed in Table 1.

As previously noted, a high proportion of Straight Perpetual calls has been executed at a premium to the issue price; this generally occurs when new issue yields have moved sufficiently below the issue yield on the called instrument to make paying the premium worth-while. This is precisely the same mechanism as applies to a homeowner determining whether or not to pay a penalty to escape his existing mortgage and refinance." new para "Thus, we must calculate the redemption yields of all of the currently callable Straight Preferreds and compare these redemption yields with new issue yields. Chart 4 makes it easy to see why there have been no Straight Perpetual redemptions in the past few years!

Table 1: Characteristics of High-Dividend Straight Perpetuals					
Ticker	Annual Dividend	Issue Date	First Call Date at Par	Quote, 2010-7-8	Yield, 2010-7-8
CL.PR.B	1.5625	2001-12-31	2010-12-31	25.26-37	4.64%-2.05%
PWF.PR.I	1.50	2003-3-11	2012-04-30	24.86-88	6.03-03%
GWO.PR.F	1.475	2003-6-19	2012-9-30	24.33-50	6.10-05%
PWF.PR.G	1.475	2002-7-16	2011-7-17	24.27-44	6.08-03%
GWO.PR.M	1.45	2010-3-4	2019-3-31	23.97-20	6.09-02%
PWF.PR.O	1.45	2009-10-9	2018-10-31	23.90-00	6.07-04%
BMO.PR.L	1.45	2008-4-2	2017-5-25	25.03-13	5.87-84%
CM.PR.D	1.4375	2003-1-29	2012-4-30	24.25-30	5.93-91%
PWF.PR.H	1.4375	2002-12-9	2011-12-10	23.49-90	6.12-00%
RY.PR.H	1.4125	2008-4-29	2017-5-24	24.72-75	5.79-78%
GWO.PR.L	1.4125	2009-10-2	2018-12-31	23.66-74	6.01%-5.99%
TD.PR.Q	1.40	2008-1-31	2017-1-31	24.40-49	5.74-72%
TD.PR.R	1.40	2008-3-12	2017-4-30	24.35-45	5.75-72%
CM.PR.E	1.40	2003-9-23	2012-10-31	23.50-60	5.96-93%
BNS.PR.O	1.40	2008-1-31	2017-4-26	24.54-62	5.71-69%
CM.PR.P	1.375	1997-11-4	2012-10-29	23.45-54	5.84-82%
PWF.PR.E	1.375	1997-12-16	2013-1-31	22.80-95	6.02%-5.98%

Those concerned about a wave of potential calls – a group that includes me! – can relax somewhat given the data in Table 1. Of the seventeen highest dividend Straight Perpetual issues, none are currently callable at par and only three issues reach that stage before the end of 2011. Note, however, that virtually all of these issues are callable at a premium prior to becoming callable at par.

Straight Perpetuals: Potential for Calls at Premium

4 New Issue Yields (Using Initial Fixed Rate for FixedResets)

As previously noted, a high proportion of Straight Perpetual calls has been executed at a premium to the issue price; this generally occurs when new issue yields have moved sufficiently below the issue yield on the called instrument to make paying the premium worth-while. This is precisely the same mechanism as applies to a homeowner determining whether or not to pay a penalty to escape his existing mortgage and refinance.

Thus, we must calculate the redemption yields of all of the currently callable Straight Preferreds and compare these redemption yields with new issue yields. Chart 4 makes it easy to see why there have been no Straight Perpetual redemptions in the past few years!
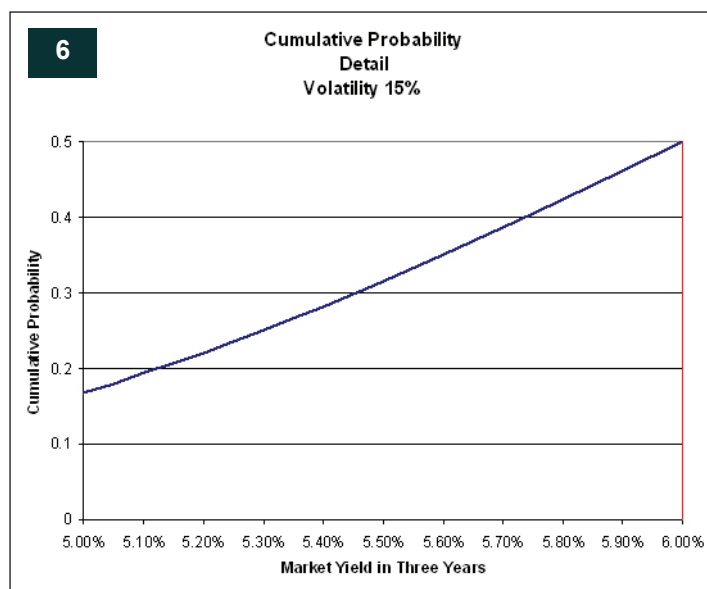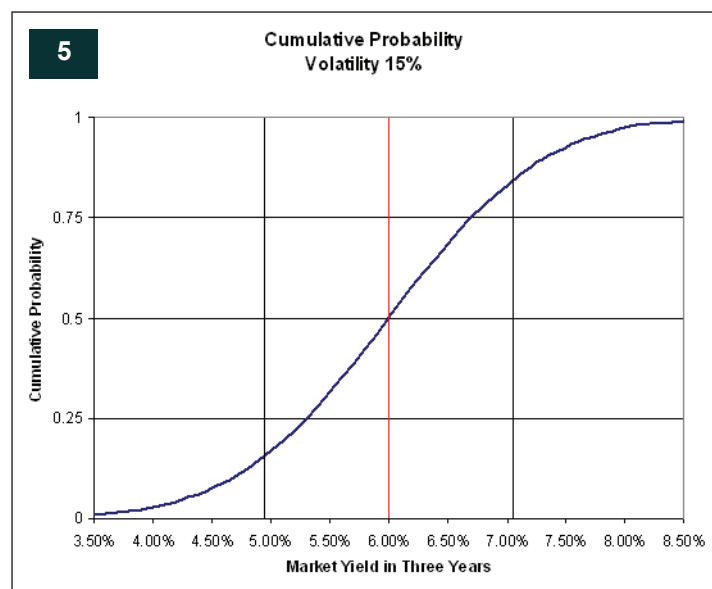
The eventual Redemption Yields, with a call at par, will of course be equal to the issue yields, shown in Chart 3. However, only fifteen of the fifty-two Straight Perpetuals rated Pfd-1(low) by DBRS are currently callable. These issues are listed in Table 2.

Table 2: Currently Callable Straight Perpetuals			
Issue	**Dividend**	**Current Redemption Price**	**Current Redemption Yield**
CL.PR.B	1.5625	25.25	6.19%
PWF.PR.I	1.50	25.50	5.88%
PWF.PR.G	1.475	25.25	5.84%
GWO.PR.F	1.475	25.75	5.73%
CM.PR.D	1.4375	25.50	5.64%
PWF.PR.H	1.4375	25.50	5.64%
CM.PR.E	1.40	25.75	5.44%
PWF.PR.F	1.3125	25.25	5.20%
CM.PR.G	1.35	26.00	5.19%
GWO.PR.G	1.30	26.00	5.00%
RY.PR.W	1.225	26.00	4.71%
BNS.PR.K	1.20	26.00	4.62%
CM.PR.H	1.20	26.00	4.62%
SLF.PR.A	1.1875	26.00	4.57%
MFC.PR.B	1.1625	26.00	4.47%

Refinancing Through Issue of Straight Perpetuals

This is the standard assumption and may be modelled with option theory, as discussed in the July, 2009, edition of this newsletter.

Using 15% volatility, a mean expected yield of 6% and a three year term results in the probability distribution shown in Charts 5 and 6. This calculation shows a significant risk that the issues listed in Table 2 will be called given the potential for a decline in yields. It must be emphasized that risk is the operative word – there is a tendency amongst many investors to believe that calls are a good thing, particularly if the call price is above the purchase price.

However, the presence of a call puts a limit on the potential for capital gains for the shareholder, without limiting the potential loss if yields should fall. Given that nobody – and I must repeat and emphasize, nobody – can forecast future market yields, we must ensure that our risk-return profile is as symmetrical as possible: ideally, for every loss we expect to experience in bad times, we should experience an equal gain in the event things work out well for us.

This desire for symmetry should result in a higher yield for issues at risk of being called; should this be the case, then, relative to deeply discounted issues with much less call risk:

  • In an environment of rising yields, the higher yielding (near call) issues will outperform by the yield differential (although still experiencing a loss)
  • In an environment of stable yields, the higher yielding (near call) issues will outperform by the yield differential
  • In an environment of falling yields, the lower yielding issues will outperform, since they can achieve greater capital gains before being called by the issuer.

When probabilities are assigned to the three scenarios and careful computations of relative returns in each of these scenarios performed, one should be – at least to a first approximation – indifferent as to which issue is owned. Some issues will perform better in certain conditions, but worse in other conditions; but if all issues are fairly priced then, by definition, the probability weighted expected return (possibly with the addition of a risk premium) will be equal for all issues.

This process has been formalized by using option theory to determine – given several assumptions – the yield differential that should exist for the higher-dividend PerpetualDiscounts, as explained in the January, 2010, edition of this newsletter. However, as we shall see in a later section of this issue, the market appears to be minimizing the potential for future calls.

Refinancing Through Issue of FixedResets

This is a much more grave risk for investors given the low issue yields on FixedResets. Both Power Financial[17] and TransCanada Corporation[18] recently issued shares with an initial dividend rate of 4.4% a rate which, even given a 20bp allowance for the frictional costs of a new issue, places thirteen of the fifteen currently callable PerpetualDiscounts in jeopardy of being called.

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[17] Power Financial Corp, Press Release, *Issue of Preferred Shares*, June 17, 2010, available on-line at http://www.powerfinancial.com/news/2010_0617_eng.pdf (accessed 2010-7-9)

[18] TransCanada Corporation, Press Release, *TransCanada Announces Preferred Share Issue*, June 17, 2010, available on-line at http://www.transcanada.com/5373.html (accessed 2010-7-9)

However, this conclusion assumes the correctness (or at least market acceptance) of my argument that the reset feature is worthless. This argument, implicit in the calculation of Break-Even Rate Shock,[19] is supported by a plethora of research into the pricing of Real Return Bonds[20] and other inflation-indexed government bonds[21] by central banks and others[22] that shows that the inflation risk premium on these instruments is negligible; the differences between the Break-Even Inflation Rate and inflation expectations (as measured by a variety of techniques) is due to liquidity differences between inflation-indexed and nominal bonds. The Cleveland Fed used to publish an index of inflation expectations measured by the spread between Treasury Inflation Protected Securities (TIPS) and nominal treasuries, but this series was discontinued when it became apparent during the Panic of 2007[23] that established methods of estimating the effect of liquidity on government bond yields had broken down.[24]

But what if that's wrong? It is my belief that the market is currently ascribing a value to the Reset Feature of about 55bp, this being the difference between the Current Yield on FixedResets and the Current Yield on PerpetualDiscounts, which I have termed[25] the "Bozo Spread" in recognition of the fact that this is a meaningless number.

The number is meaningless because Current Yield (the annual dividend divided by the current price) is meaningless in an environment in which premium issues (almost all FixedReset issues trade at a high premium to their call price) are expected to be called (almost all FixedResets are expected to be called at the issuers' first opportunity). Thus, the expected capital loss on the call date must be factored into the calculation of yield[26] to provide a measure of the net return to an investor buying at the current market price – this yield is called the Yield-to-Worst (YTW, as it is the scenario, barring default, which is worst for an investor) and I have dubbed the difference between Current Yield and YTW for FixedResets the FixedReset Computation Spread – another theoretically ridiculous number that is nevertheless quite useful in understanding why FixedResets are priced the way they are.

Under this interpretation of the relative pricing of FixedResets and PerpetualDiscounts, we hypothesize that an investor first makes a choice between the two classes on the basis of current yield. Having made the decision to invest in FixedResets ("because the spread is only 55bp!") he is then convinced to buy a new issue yielding 4.40% because the expected capital loss on call is zero. Another interpretation that leads to a similar result is that investors evaluate PerpetualDiscounts as if they were FixedResets with the same current yield (about 6%) and an expected capital loss of $3.00. The latter interpretation will fit PerpetualDiscounts nicely on a continuous (and theoretically meaningless) regression line relating the Current Yield of FixedResets to their price, as shown in Appendix 2, Chart 1. Time will tell which, if any, interpretation is correct.

If, however, we can take the Bozo Spread as being a reasonable long-term market valuation (accepted by both investors and issuers) of the reset feature, then it would appear that any PerpetualDiscount with a Redemption Yield of 5.15% or greater is in jeopardy of being called:

> FixedReset New Issue Yield + Bozo Spread + New Issue Frictional Costs
> = 4.40% + 0.55% + 0.20%
> = 5.15%

By this measure, nine of the fifteen currently callable PerpetualDiscounts listed in Table 2 are in jeopardy of a call.

A further complicating factor is that all of these nine instruments are issued by either CM or the CL-GWO-PWF-POW group. The latter group has been very active lately calling its OperatingRetractibles for redemption, as shown in Table 3:

Table 3: Recent Redemptions of Power Group OperatingRetractible Preferred Shares				
Ticker	**Redemption Date**	**Redemption Price**	**Total Amount**	**Annual Dividend**
PWF.PR.J	2010-7-30	25.50	$153-million[27]	$1.175
PWF.PR.D	2010-10-31	25.40	$152-million[28]	$1.30
GWO.PR.E	2010-3-31	25.25	$200-million[29]	$1.175
GWO.PR.X	2009-12-31	26.00	$574-million[30]	$1.20
IGM.PR.A	2009-12-31	26.00	$374-million[31]	$1.4375

[19] See the June, 2009, edition of this newsletter and the article *Breakeven Rate Shock*, Canadian Moneysaver, October 2009, available on-line at http://www.himivest.com/media/moneysaver_0910.pdf

[20] Christopher Reid, Frédéric Dion and Ian Christensen, *Real Return Bonds: Monetary Policy Credibility and Short-Term Inflation*, Bank of Canada Review, Autumn 2004, available on-line at http://www.bankofcanada.ca/en/review/autumn04/reid.pdf (accessed 2010-7-10)

[21] Pu Shen, Kansas City Fed Economic Review, 1Q09, *Developing a Liquid Market for Inflation-Indexed Government Securities: Lessons from Earlier Experiences*, available on-line at http://www.kansascityfed.org/PUBLICAT/ECONREV/PDF/09q1Shen.pdf

[22] Several papers have been reviewed on PrefBlog: see http://www.prefblog.com/?cat=20&s=tips

[23] A sobriquet for the recent excitement introduced by Joseph S. Tracy of the New York Fed in a speech titled *What the Fed did and why*, available on-line at http://www.bis.org/review/r100707e.pdf (accessed 2010-7-10)

[24] Federal Reserve Bank of Cleveland, *TIPS Expected Inflation Estimates*, October 31, 2008, available on-line at http://www.clevelandfed.org/research/data/tips/ (accessed 2010-7-10)

[25] See the June, 2010, edition of this newsletter

[26] See calculators at http://www.telusplanet.net/public/kbetty/ytc.xls and http://www.prefblog.com/xls/ytc_resets.xls

[27] Power Financial Corporation, Press Release, *Redemption of Preferred Shares*, 2010-6-28, available on-line at http://www.powerfinancial.com/news/2010_0628_eng.pdf (accessed 2010-7-10)

[28] Power Financial Corporation, Press Release, *Issue of Preferred Shares*, 2010-6-17, available on-line at http://www.powerfinancial.com/news/2010_0617_eng.pdf (accessed 2010-7-10)

[29] Great-West Lifeco, Press Release, *Great-West Lifeco Preferred Share Issue and Redemption of Series D Preferred Shares*, 2010-2-23, available on-line at http://www.greatwestlifeco.com/web5/groups/common/@public/documents/web_content/s7_009672.pdf (accessed 2010-7-10)

[30] Power Financial Corporation, *Annual Report 2009*, available on-line at http://www.powerfinancial.com/powerfinancial/annual/annrep2009/annrep/ar_eng_complete.pdf (accessed 2010-7-10)

[31] Power Financial Corporation, *Annual Report 2009*, available on-line at http://www.powerfinancial.com/powerfinancial/annual/annrep2009/annrep/ar_eng_complete.pdf (accessed 2010-7-10)

The redemptions totalling $1,453-million shown in Table 3 have been financed, in part, by the issue of new series of preferred shares totaling $900-million, as shown in Table 4.

Table 4: Recent Issues of Power Group Preferred Shares				
Ticker	**Issue Date**	**Type of Preferred**	**Total Amount**	**(Initial) Dividend**
PWF.PR.O	2009-10-9	Straight	$150-million[32]	$1.45
PWF.PR.P	2010-6-29	FixedReset	$280-million[33]	$1.10
GWO.PR.L	2009-10-02	Straight	$170-million[34]	$1.4125
GWO.PR.M	2010-3-4	Straight	$150-million[35]	$1.45
IGM.PR.B	2009-12-8	Straight	$150-million[36]	$1.475

Clearly, Power Group made an explicit decision to clean up their balance sheet by redeeming the OperatingRetractible issues on their books![37]

Of more interest for investors, however, is their willingness to finance these redemptions partially through the issuance of Straight Preferreds in a hostile market, with the issue yields on these shares being in a range of 5.65%–5.90%, even though, as shown[38] in Chart 4, FixedResets could probably have been issued at a much cheaper rate – and probably in greater size as well. It appears, however, that there is little chance of Power Group's Straight Preferreds being called given current conditions.

Less information is available regarding the Canadian Imperial Bank of Commerce, which has not issued preferred shares since CM.PR.M closed on 2009-3-6.[39] The company has two issues of OperatingRetractibles outstanding, as shown in Table 5.

Table 5: CM OperatingRetractible Issues Currently Outstanding[40]				
Ticker	**Annual Dividend**	**Par Call Date**	**Retraction Date**	**Issue Size**
CM.PR.A	$1.325	2010-10-31	2011-7-31	$400-million
CM.PR.R	$1.2375	2013-4-30	2013-4-30	$200-million

At the very least, it is likely that the bank will be redeeming its OperatingRetractible issues before it considers refinancing its Straight Perpetuals.

Market Accounting for Straight Perpetual Redemption Risk

As I discussed in the January, 2010, edition of this newsletter, the redemption risk experienced by PerpetualDiscount can be modelled using Black-Scholes option theory, and a simple calculator has been developed so that investors may calculate the degree of implied volatility from market prices.[41]

However, an implicit assumption made within that theory is that all the issues plotted are immediately callable at par and, as discussed above, this implicit assumption does not stand up to detailed examination.

Another implicit assumption is that PerpetualDiscounts are subject to call risk only due to the potential for refinancing by other PerpetualDiscounts, which does not account for the potential that they may be refinanced by FixedResets – something that has not yet occurred but, as discussed above, is certainly possible.

With this in mind, it is useful to examine the relative performance of PerpetualDiscount issues during the recent rally in that sector of the market. Between May 20 and June 28, this sector experienced 26 consecutive trading days of gains, with a total return for the period of +7.43% – a nice rally by any standards. This period provides a good opportunity to examine the impact of the option effect.

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[32] Power Financial Corporation, Press Release, *Closing of Preferred Share Issue*, 2009-10-9, available on-line at http://www.powerfinancial.com/news/2009_1009_eng.pdf (accessed 2010-7-10)

[33] Power Financial Corporation, Press Release, *Closing of Preferred Share Issue*, 2010-6-29, available on-line at http://www.powerfinancial.com/news/2010_0629_eng.pdf (accessed 2010-7-10)

[34] Great-West Lifeco Inc., Press Release, *Great-West Lifeco Inc. completes offering of Preferred Shares*, 2009-10-2, available on-line at http://www.greatwestlifeco.com/web5/groups/common/@public/documents/web_content/s7_009336.pdf (accessed 2010-7-10)

[35] Great-West Lifeco Inc., Press Release, *Great-West Lifeco completes offering of Preferred Shares*, 2010-3-4, available on-line at http://www.greatwestlifeco.com/web5/groups/common/@public/documents/web_content/s7_009695.pdf (accessed 2010-7-10)

[36] IGM Financial, Press Release, *IGM Financial Announced Closing of Preferred Share Issue*, 2009-12-8, available on-line at http://www.marketwire.com/press-release/IGM-Financial-Announces-Closing-of-Preferred-Share-Issue-TSX-IGM-1087211.htm (accessed 2010-7-10)

[37] OperatingRetractibles must be reported as debt on companies' balance sheets, while perpetuals can be reported as equity; this is important to pseudo-quants who evaluate credit quality by plugging in numbers from standard databases. For a discussion of the accounting issues, see Alastair Murdoch, *Management Reaction to Mandatory Accounting Changes: The Canadian Preferred Shares Case*, available on-line at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=133128 with commentary at http://www.prefblog.com/?p=7950 and Alastair Murdoch, *Are Preferred Shares Debt or Equity?: Some Canadian Evidence*, available on-line at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=16553 with my commentary at http://www.prefblog.com/?p=7948

[38] The IGM.PR.B issue is not shown on Chart 4 as it is rated lower than Pfd-1(low) by DBRS

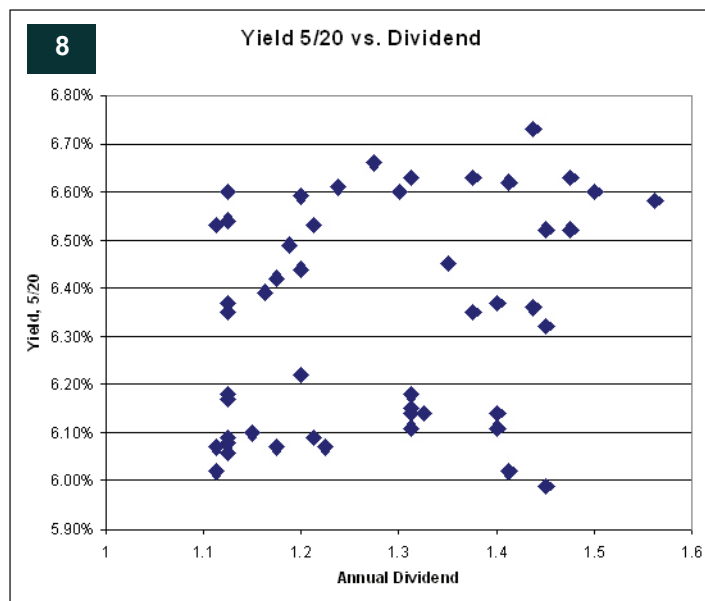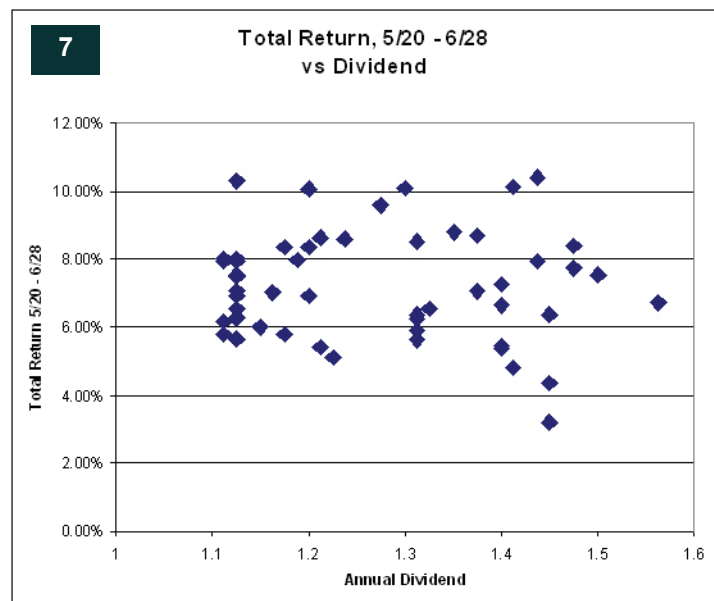[39] Canadian Imperial Bank of Commerce, Press Release, *CIBC announces completion of offering of Preferred Shares*, 2009-3-6, available on-line at http://micro.newswire.ca/release.cgi?rkey=1703066284&view=14730-0&Start=0 (accessed 2010-7-10)

[40] Data taken from CIBC, *Consolidated Financial Statements 2009*, available on-line at http://www.cibc.com/ca/pdf/investor/2009-financial-results.pdf (accessed 2010-7-10)

[41] This calculator is available at http://www.prefblog.com/xls/PDTheoreticalPricing.xls

As is usual in investigations of this nature, all data and commentary is restricted to issues rated Pfd-1(low) by DBRS: this minimizes the effect of changes in credit spreads and, as a bonus, restricts the data set to financial issues. It is always important to ensure that heterogeneity in the data is restricted, as far as is possible, to the variable one wishes to analyze – which in this case is the annual dividend rate.

Chart 7 shows the total return through the period related to the annual dividend of the individual issues and does not show much of a pattern at all – in fact, R-squared, a measure of how much of the dispersion of the independent variable (total return) is explained by the variation of the explanatory variable (dividend rate) is less than 1%, tempting us to conclude that there was no effect at all.

However, Chart 8 shows the yield of the individual issues on May 20, the start of the period, also plotted against the annual dividend and shows considerable dispersion, implying that our data sample is not as homogeneous as we might wish: if the data were homogeneous, we would expect to see a linear pattern in the data, but differences in the market's perceived credit quality of each issuer (together with other factors, such as liquidity, issuer concentration, and sub-segment of the financial sector) make the use of these data for our purpose somewhat suspect.

Clearly, if there was an option effect – which we would expect to increase through the period, as the market price of the issues came closer to their call price – it will be discernable only through further disaggregation of the data.

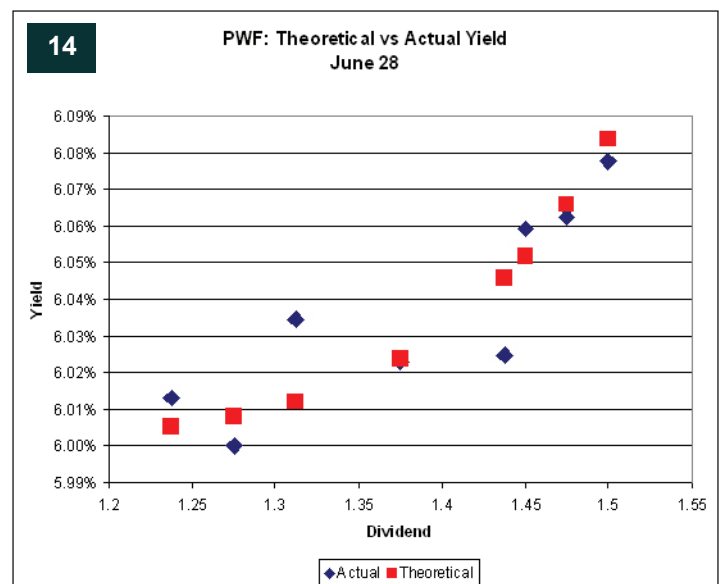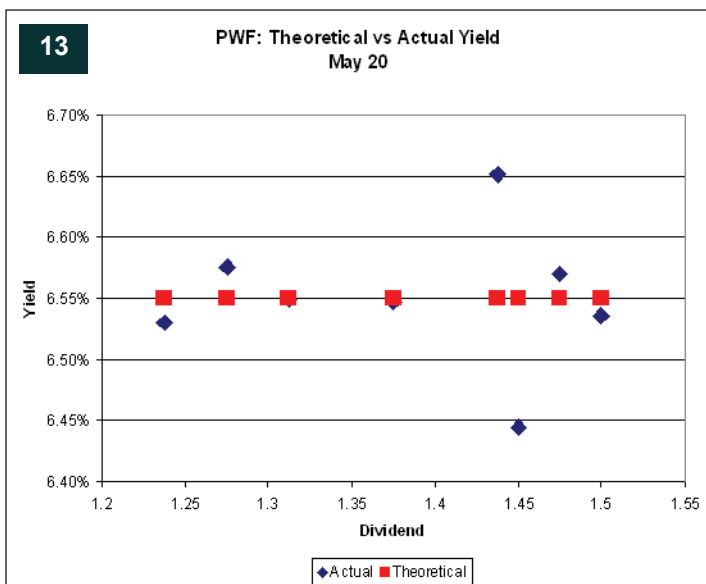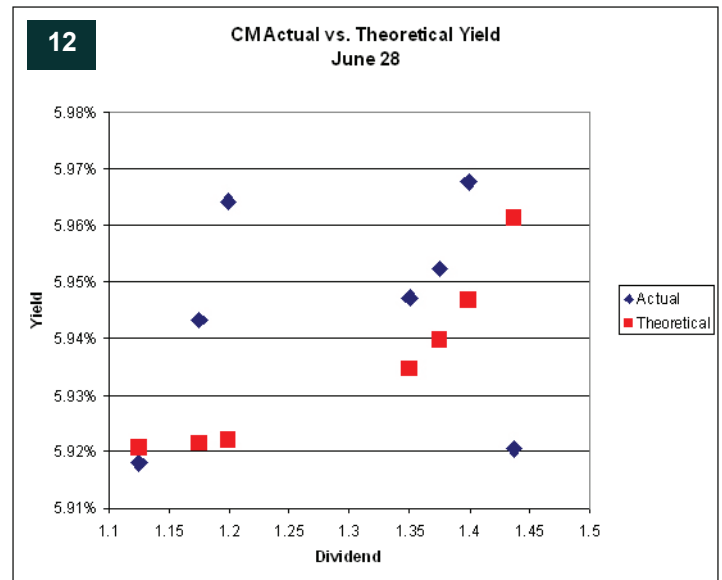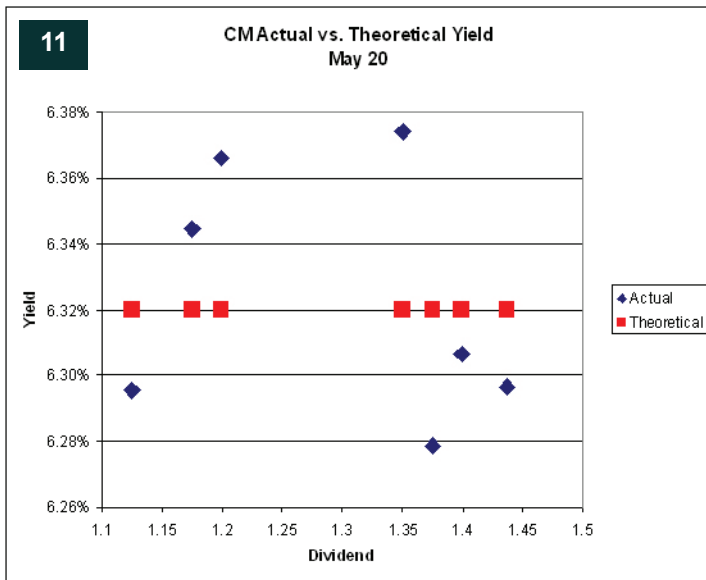| Table 6: Results of Implied Volatility Calculations for Three Issuers on Two Dates				
Issuer	**Date**	**Pure Yield**	**Volatility**	**Error**
PWF	5/20	6.55%	1%	0.26
PWF	6/28	6.00%	9%	0.02
CM	5/20	6.32%	1%	0.09
CM	6/28	5.92%	8%	0.06
GWO	5/20	6.45%	1%	1.06
GWO	6/28	5.96%	10%	0.01
All computations were done with a "term" equal to three years.				
**The calculator cannot evaluate a volatility of 0%, so the 1% listed for all issuers on May 20 is the effective minimum.*				

Accordingly, Charts 9–14 show the graphical representation of implied volatility calculations for GWO, CM and PWF issues – all good credits with a wide range of annual dividends in their outstanding issues – and Table 6 shows the numeric results of each calculation.

We may therefore tentatively conclude that the option effect is visible in the market and became stronger as the market rose; however, the effect is somewhat weaker than the theory would lead us to expect. I have previously estimated the 'fair' value of implied volatility to be 15%, given the assumptions inherent in the calculation, as discussed in the July, 2009, edition of this newsletter.

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GWO: Theoretical vs Actual Yield
May 20

10

GWO: Theoretical vs Actual Yield
June 28

11

CM Actual vs. Theoretical Yield
May 20

12

CM Actual vs. Theoretical Yield
June 28

13

PWF: Theoretical vs Actual Yield
May 20

14

PWF: Theoretical vs Actual Yield
June 28

Conclusions Affecting Investment Strategy

The redemption and new-issue frenzy of 2005–07 substantially changed the characteristics of the PerpetualDiscount segment of the Canadian preferred share market. The distribution of annual dividends became highly skewed towards the lower end of the range and the potential for redemptions decreased due to the five-year complete black-out on any calls and the nine-year blackout period for calls at par.

However, there remains significant potential for redemption calls within a reasonable investment time-frame to affect adversely the total returns that may be realized by a long-term investor. Beyond the normal ebb and flow of market yields, there is also the potential for the new class of preferred shares, FixedResets, to be used to finance PerpetualDiscount redemptions.

Thus, a long-term investor should continue to favour deeply discounted PerpetualDiscounts and invest in the higher-dividend issues only if there is a substantial yield pickup to be earned for incurring this risk.