## Interconversion of FixedFloaters and RatchetRates

A class of preferred shares that is of great intrinsic interest is FixedFloaters, which were developed in the 1990's. These issues have an initial fixed rate period of about five years, after which the fixed rate is reset, while holders have the option of converting to ratchet rate preferreds if they prefer to have their dividends computed in that way. On each reset date, either issue may be called at par.

I have previously written about this structure,[1] but the intent is that the RatchetRate component of the pair should trade near par. This intention is given force by varying the percentage of prime paid by the Ratchet Rate; it commences at a relatively arbitrary figure – say 80% – and then is adjusted monthly according to the following standard schedule:[2]

Table FF-2: Adjustment of Prime Percentage Paid for a Representative RatchetRate Preferred	
If the Calculated Trading Price for the preceding month is	The Adjustment Factor as a percentage of Prime shall be
$25.50 or more	-4.00%
$25.375 and less than $25.50	-3.00%
$25.25 and less than $25.375	-2.00%
$25.125 and less than $25.25	-1.00%
Greater than $24.875 and less than $25.125	nil
Greater than $24.75 to $24.875	1.00%
Greater than $24.625 to $24.75	2.00%
Greater than $24.50 to $24.625	3.00%
$24.50 or less	4.00%
The maximum Adjustment Factor for any month will be +/- 4.00%.	

The percentage is constrained to be between 50% and 100% of prime.

This mechanism was very successful for a long time: as may be seen in Chart FF-29,[3] the price of BCE.PR.Y remained at or near par throughout the early period of the Credit Crunch, since as the situation for preferreds grew more serious, the percentage increased from the mid-sixties to its maximum value of 100% in the period April 2007 to January 2008.

FF-29 · BCE.PR.Y (Ratchet Rate): Price & Dividend History
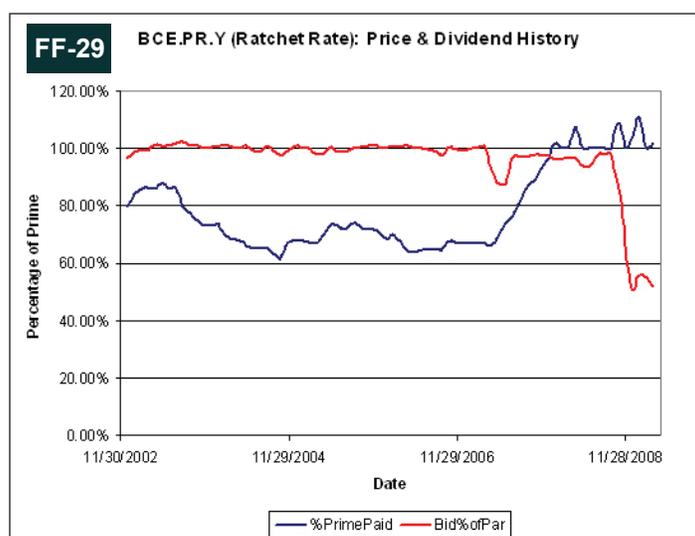
1   See http://www.himivest.com/media/moneysaver_0710.pdf

2   Schedule taken from BAM.PR.E, available on-line at http://www.brookfield.com/_Global/42/documents/preferredshares/Provisions-ClassAPrefShare-Series8.pdf (accessed 2012-5-13)

3   Taken from my seminar on Floating Rate issues, delivered in April, 2009, and available for paid viewing via http://www.prefletter.com/eMailVerification.php?path=vid

However, once the percentage had reached its maximum of 100%, the issue could only react to worsening conditions by losing market value, which it promptly did. BCE.PR.Y is currently quoted at 22.53-79 and continues to pay 100% of Prime.

For the FixedFloater element of the pair, the dividend is reset every five years, with a great deal of discretion given to the issuer:[4] *The holders of the Series 9 Preferred Shares are entitled to receive fixed cumulative preferred cash dividends, as and when declared by the board of directors, payable quarterly on the first day of February, May, August and November in each year, in an amount per share per annum equal to the product of C$25.00 and a percentage (which shall not be less than 80%) of the yield on certain Government of Canada bonds, established for each five year period commencing November 1, 2001 as provided in the share conditions.*

FixedFloater/RatchetRate pairs were never brought out by banks, due to the OSFI restrictions on the characteristics allowable for preferred shares included in Tier 1 Capital:[5] *To ensure that preferred shares are permanent in nature, the following features are **not** permitted:*
- *retraction by the holder*
- *obligation for the issuer to redeem shares*
- *redemption within the first five years of issuance*
- *any step-up* [footnote] *representing a pre-set increase at a future date in the dividend (or distribution) rate*

The footnote reads: *An increase over the initial rate after taking into account any swap spread between the original reference index and the new reference index.*

As the entire point of RatchetRate preferreds is that the initial rate may increase in response to a deterioration in credit quality of the issuer, the banks could not incorporate such issues (or FixedFloaters convertible into such issues) in Tier 1 Capital and hence there was not point in issuing them.

However, inventive minds are always at work and the FixedReset structure was developed, in which the FixedFloater resets its rate at a fixed spread to the Government of Canada five year bond and the Floating Rate component of the pair pays a fixed spread to three-month treasury bills. Such instruments qualify as Tier 1 Capital (provided, of course, they meet all the other conditions) since the spreads are fixed for the life of the issue.

Prime and 3-month bills are related figures, but it is important to understand the relationships. Values for the past ten years are plotted in Charts FF-30 and FF-31.

FF-30 — 3-Month Bills and Prime: Yields

FF-31 — 3-Month Bills and Prime: Spread
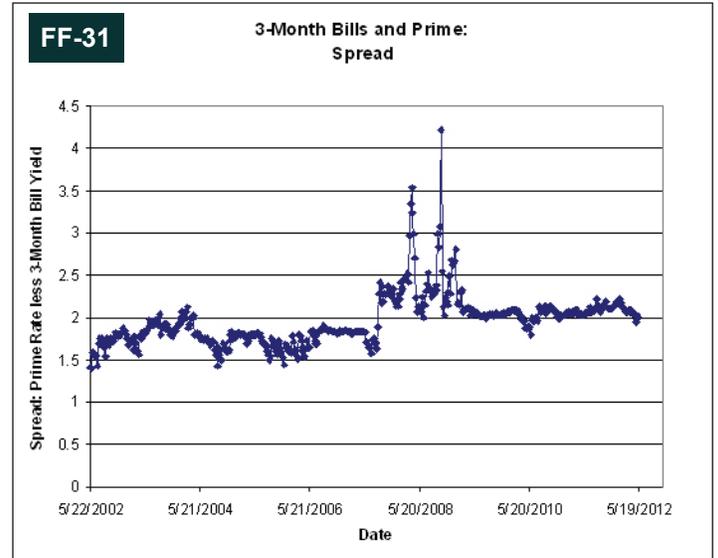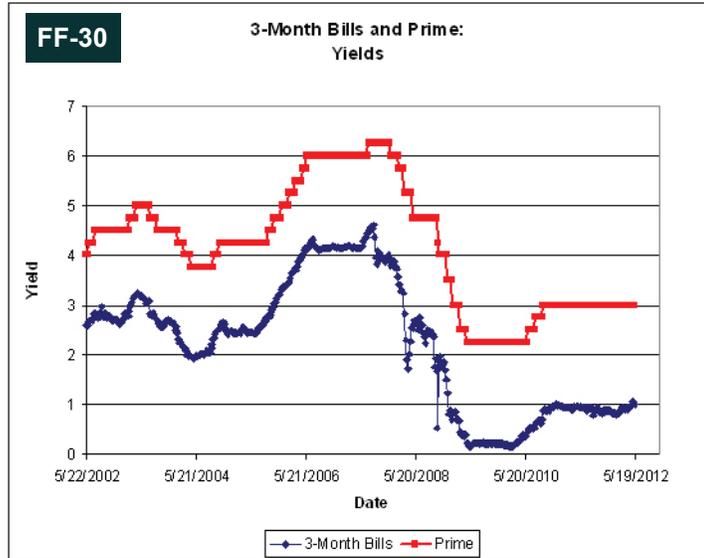
4　These are typical terms, as stated for BAM.PR.G at http://www.brookfield.com/_Global/42/documents/preferredshares/Provisions-ClassAPrefShare-Series9.pdf (accessed 2012-5-13)

5　See http://www.osfi-bsif.gc.ca/app/DocRepository/1/eng/guidelines/capital/guidelines/CAR_A1_12_e.pdf (accessed 2012-5-13)

As has often been the case for financial graphs in recent times, there are some clear periods apparent in the graph of spreads: Pre-Crisis, Crisis, and post-crisis! The maximum spread was reached on 2008-10-8, shortly following the Lehman bankruptcy, when three-month bill yields had collapsed to 0.53%, while bankers were too deeply in shock to mark down prime, which remained at 4.75%.[6] The average spread between Prime and 3-Month Bills since 2009-3-4 has been 206bp ± 6bp.

Thus, it is reasonable to guess that a Floating Rate yield of three-month bills plus 200bp is roughly equivalent to 100% of prime – unless the situation changes again! It will be noted, however, that should a RatchetRate preferred and a FloatingReset preferred of equivalent credit quality be offered to us on such terms, the FloatingReset would be the issue of choice – because the RatchetRate percentage of prime paid may decline below 100% – all the way to a mere 50% – if it trades above par. This simplification of analysis is one of the few good points of the FixedReset structure!

However, my purpose in this essay is to discuss the interconversion feature. Obviously, the fact that two issues are interconvertible will give rise to the potential for arbitrage – or at least 'almost-arbitrage' given that prior to the opportunity to convert, one element of the pair will pay dividends that are not known with certainty at the time of calculation. But one can always make an educated guess!

In the February, 2010, edition of this newsletter, I discussed Preferred Share Interconvertibility and provided a calculator[7] which provided a framework for the decision as to which element of a pair should be held. In this essay, I return to the topic and review historical and current instances of interconversion to determine how efficient the market has been in recognizing the potential for 'almost-arbitrage' in the past.

This will be an increasingly important topic in the coming years: while the vast majority of investment-grade FixedResets currently outstanding are expected to be called, there are a few that will not be – and it may be anticipated that both elements of the pair will be outstanding as the second Exchange Date approaches five years later. Additionally, virtually all of the junk-grade FixedResets are expected to remain in existence, and this will give rise to many almost-arbitrage opportunities as the second Exchange Date approaches for them.

Current Strong Pairs Outstanding

Table FF-3 provides a summary of the Strong Pairs currently outstanding and the implied average prime rate until the Conversion Date:

Table FF-3: Currently Outstanding Strong Pairs								
Fixed	Ratchet	Exchange Date	Rate Fixed	Price Fixed	Price Ratchet	T	**Incorrect** Equation (1b)	**Correct** Equation (2a)
BAM.PR.G	BAM.PR.E	11/1/2016	3.800%	21.54	23.50	4.48	4.15%	5.90%
BBD.PR.D	BBD.PR.B	8/1/2012	5.267%	18.80	15.51	0.22	4.35%	-54.23%
BCE.PR.T	BCE.PR.S	11/1/2016	3.393%	21.47	22.40	4.48	3.54%	4.37%
BCE.PR.Z	BCE.PR.Y	12/1/2012	4.331%	21.94	22.53	0.56	4.45%	8.67%
BCE.PR.A	BCE.PR.B	9/1/2012	4.800%	22.44	22.70	0.31	4.86%	8.21%
BCE.PR.C	BCE.PR.D	3/1/2013	4.600%	22.50	22.80	0.81	4.66%	6.15%
BCE.PR.F	BCE.PR.E	2/1/2015	4.541%	23.77	22.39	2.73	4.28%	2.25%
BCE.PR.G	BCE.PR.H	5/1/2016	4.500%	24.00	22.30	3.98	4.18%	2.47%

As was discussed in the February, 2010, edition of this newsletter, elements of the pairs were trading on the basis that their current yields were equal; that is, formula (1) gave a very good fit to the observed data.

$$R_F * (25 / P_F) = R_R * (25 / P_R) \qquad \text{(1) [Incorrect!]}$$

Where

R_F is the dividend yield on the FixedFloater, expressed as a percentage of par
P_F is the price of the FixedFloater
R_R is the dividend yield on the RatchetRate, expressed as a percentage of par
P_R is the price of the RatchetRate

If Equation (1) is correct, we can rearrange the terms and solve for the break-even prime rate, Equation (1a)

$$R_R = R_F * (25 / P_F) * (P_R / 25) \qquad \text{(1a) [Incorrect!]}$$
$$R_R = R_F * (P_R / P_F) \qquad \text{(1b) [Incorrect!]}$$

However, these equations ignore Interconvertibility – the property that the prices of these issues must be equal on their conversion date (or, to be more precise, on the last date on which holders must give notice for conversion). The above incorrect equations implicitly assume that the current Fixed Rate, R_F, will be paid forever – which is not the case.

It is pointless to attempt to outguess the company and develop an investment strategy based on a projection of the future Fixed Rate, since we will know this figure for a certainty prior to the last day of conversion notice. It is much more sensible – and prudent – to assume that the company will choose a fixed rate so low as to essentially force conversion into the RatchetRate – and if we are happy with that prospect, we can then determine if we'd rather own it now, or buy the FixedFloater and convert it later. If the company should choose a very high fixed rate – well, that's just a bonus, and we can convert in the other direction! We can account for the Interconvertibility Effect by adding a term to the right-hand-side of Equation (1) to produce the correct Equation (2)

$$R_F * (25 / P_F) = R_R * (25 / P_R) + (P_F − P_R)/(P_R * T) \qquad (2)$$

Which may be rearranged to:

$$R_R = (P_R * R_F)/P_F + (P_R − P_F)/(25*T) \qquad (2a)$$

As may be seen from Table FF-3, the market still seems to prefer the incorrect equation 1(b) to the correct equation 2(a) – and even then appears to be assigning a very large value to expected Prime!

Past Reorganizations
BAM.PR.E was originally issued in 1996 as The Edper Group Limited Class A Preference Shares, Series 8 and were converted into EdperBrascan Corporation Class A Preference Shares, Series 8 upon amalgamation with Brascan.[8] The name was changed to Brascan Corporation effective April 28, 2000.[9] The Initial Fixed Rate period for these shares ended 2001-11-1.

In 2001, the company reduced the rate on its 6.25% Series 8 fixed rate preferred shares in accordance with their terms, which resulted in shareholders converting them into $174 million of 5.63% Series 9 fixed rate preferred shares and $26 million of Series 8 floating rate preferred shares.[10] In October, 2005, the stock symbol was changed to BAM in advance of the formal name change to Brookfield Asset Management.[11]

BCE.PR.E was originally issued by Bell Canada in 1999.[12] Shareholders consented to an exchange into BCE shares in January, 2007.[13]

BCE.PR.G was originally issued by Bell Canada in 2001,[14] and similarly exchanged in January 2007.

Methodology
Data
Quotation data is gathered for each Strong Pair examined for a period of one year prior to the effective date of the exchange. These data were obtained from the Toronto Stock Exchange data service; as such, it will be remembered that they are Last Quotes, not Closing Quotes.

The difference between the two is that Closing Quotes reflect the quote at 4:00pm, when the regular trading session ends. After this time, any order in the book may be cancelled, but new orders may be entered only at the closing price; that is, the price of the last board lot to be traded during the regular session. The Last Quote reflects the order book at the end of the special trading session and, as should be clear, will only very rarely reflect a tighter market than the Closing Quote.

A tighter market could result if, for instance, the last trading price is inside the Closing Quote and an order is placed during the special trading session at the last trading price. Another mechanism for a tighter quote would be if the last trading price is on the closing bid or offer and subsequent orders change that price to the offer or bid, respectively.

In most cases, this will not make a difference; but I will point out that this came to my attention when investigating[15] the quote provided for GWO.PR.J on 2010-12-2. The Last Quote was 24.81-27.54; the Closing Quote was 27.04-54. This can be a source of great confusion: Bloomberg, for example, reports[16] that the closing quote was 24.81-27.54.

8   See http://www.sedar.com, Brookfield Asset Management Inc., Jun 13 1997, Management proxy/information circular – English (BC, ON – Form 30, QC) (accessed 2012-5-11)

9   See http://www.sedar.com, Brookfield Asset Management Inc., May 1 2000, Press release – English (accessed 2012-5-11)

10   See http://www.sedar.com, Brookfield Asset Management Inc., Mar 27 2002, Annual report – English (accessed 2012-5-11)

11   See http://www.sedar.com, Brookfield Asset Management Inc., Sep 30 2005, News release – English (accessed 2012-5-11)

12   Bell Canada, *Prospectus: Cumulative Redeemable Class A Preferred Shares Series 15*, 1999-12-16, available on-line at http://www.bce.ca/assets/Uploads/Documents/preferredShares/psaeafen.pdf (accessed 2012-5-11)

13   BCE Inc., *Announcement of Approval of Bell Plan of Arrangement for Exchange of Bell Canada Preferred Shares*, Press Release, 2007-1-23, available on-line at http://www.bce.ca/news-and-media/releases/show/announcement-of-approval-of-bell-plan-of-arrangement-for-exchange-of-bell-canada-preferred-shares?page=1&perpage=10&year=2007&month=1&keyword= (accessed 2012-5-11)

14   Bell Canada, *Prospectus: Cumulative Redeemable Class A Preferred Shares*, Series 17, 2001-3-21, available on-line at http://www.bce.ca/assets/Uploads/Documents/preferredShares/ps17en-060316-1.pdf (accessed 2012-5-11)

15   For details, see http://www.prefblog.com/?p=13456

16   See http://www.prefblog.com/?p=13796

I have asked the TMX to sell Closing Quotes in addition to their Last Quotes, but it is not a big priority for them; they took a survey of their customers that indicated total disinterest, but I suspect that that survey was completed by database personnel in large companies – not by investment personnel who could, possibly, understand the critical difference between the two sets of figures. I will note that Last Quotes have very little, if any, independent significance: their sole value is determined by the degree to which they reflect the Closing Quotes.

At any rate, the Last Quotes used throughout this essay were obtained from the TMX and have been incorporated in the HIMIPref™ database since the time of purchase.

A large portion of the dividend data used has also been purchased from the TMX, but many data points have been simply added by hand to the database when required.

The final set of data required is the value of Canadian Prime, for which early values were obtained from the Bank of Canada.[17] Later values have been obtained from the HIMIPref™ database, which is maintained contemporarily.

Issue data is obtained from the HIMIPref™ database, which is maintained contemporarily using information from the prospectus for each issue.[18]

Calculations

A sample calculation, showing the potential profit from a switch between BAM.PR.G and BAM.PR.E on 2010-11-3, is shown in Table FF-1.

Table FF-1: Calculation of Switch Potential Between BAM.PR.G (FixedFloater) and BAM.PR.E (RatchetRate), 2010-11-3.			
Figure	Notation	Value	Note
BAM.PR.G Bid Price	Bid_{FF}	22.00	Data
BAM.PR.E Bid Price	Bid_{RR}	22.00	Data
BAM.PR.E Par Value	Par_{RR}	25.00	
Conversion Date		2011-11-1	Data
Remaining RatchetRate Dividends Count	$DivCount_{RR}$	12	Count of ex-Dividend dates prior to Conversion Date
Remaining Value FixedFloater Dividends	$SumDiv_{FF}$	1.0875	By summation of dividend data
Required Average RatchetRate Dividend	$RequiredDiv_{RR}$	0.090625	Note
Gross Required Prime	$ReqPrime_{Gross}$	4.35%	Note
Actual Prime	Prime	3.00%	Data
Friction Effect	Friction	0.40%	Note
Net Required Prime	$ReqPrime_{Net}$	3.95%	Note
Expected Profit (Loss) (from Ratchet to FixedFloater)	$Profit_{Dollars}$	-0.24	Note
Expected Profit (Loss) % (from Ratchet to FixedFloater)	$Profit_{Percent}$	-1.08%	Note

Required Average RatchetRate Dividend

This is a straightforward calculation that answers the query: what must be the value of each remaining RatchetRate dividend, if the total return of the two instruments is to be the same?

In this particular case, it is calculated as:

$$RequiredDiv_{RR} = (Bid_{FF} + SumDiv_{FF} - Bid_{RR}) / DivCount_{RR}$$
$$= (22.00 + 1.0875 - 22.00) / 12$$
$$= 0.090625$$

Gross Required Prime

This answers the question: what must the Prime Rate be if the requirement for RatchetRate dividends, $RequiredDiv_{RR}$, is to be met?

$$ReqPrime_{Gross} = RequiredDiv_{RR} * 12 / Par_{RR}$$

Friction Effect

As may be seen from the above, the calculations are performed on a bid-to-bid basis, which is unreasonable. A certain amount of friction is inevitable due to the bid-offer spread and the usually negligible cost of trading.

To account for these effects in a reasonable way, the Friction Effect is calculated, defined as

$$Friction = 0.1 * 12 / DivCount_{RR}$$

That is, the cost of trading is estimated as $0.10/share and this effect is applied (see below) to the Gross Required Prime in order to arrive at a figure for the required prime that will reflect the necessity of recouping trading costs when considering a potential swap.

It may be objected that $0.10 is too low a figure considering the bid-offer spreads that routinely apply in this segment of the preferred share market, but it will be remembered that the purpose of this exercise is not to determine how much profit could have been made in the past by selling at the bid and buying at the offer (which is the prudent method of back-testing) but to arrive at conclusions regarding market efficiency.

The Last Bid Price for BAM.PR.E in this example was $22.00, which was the same as the Last Bid Price for BAM.PR.G. Assume that given our exogenous forecast of prime for the remaining period is such that we consider it profitable to pay up $0.10 in a swap from BAM.PR.E to BAM.PR.G, but that the ask price for BAM.PR.G is $22.50 (the Last Ask Price was actually $22.22, but this is a hypothetical example). In such a case, a portfolio manager – particularly a lazy one – might throw up his hands, grumble that it was impossible to trade in the preferred share market, and get back to more usual portfolio management activities, such as parroting the latest Wall Street Journal headlines to important clients over lunch.

However, given that we are willing to pay up $0.10 to execute the swap, why wouldn't a rational investor place a bid for BAM.PR.G at $22.05, hoping to execute a sale of BAM.PR.E at its bid price to the extent (perhaps none!) by which his own bid gets hit? There may be some risk in "legging" the trade in this manner, but this is easily controllable with an very simple algorithm, that will adjust the size and level of the bids on BAM.PR.G to reflect the bid on BAM.PR.E.

Perhaps more to the point, why is somebody bidding $22.00 for BAM.PR.E when – at least according to our presumed forecast of Prime – it would be more profitable to bid $22.05 for BAM.PR.G?

It is, of course, quite easy to come up with intricate explanations regarding why either possibility is undesirable or unfeasible – but portfolio managers are experts on the topic of good reasons not to do any work. For all the excuses, the fact remains that the preferred share market is grossly – and inexcusably – inefficient and that an assumption of frictional costs of $0.10 is more than enough to account for the direct costs of trading – anything more is simply the bid-offer spread and market impact.

Net Required Prime

Once figures for Gross Required Prime, the Friction and the Actual Prime are available, we may calculate the Net Required Prime.
- If the difference between $ReqPrime_{Gross}$ and Prime is less than Friction
  - Then $ReqPrime_{Net} = Prime$

- If $ReqPrime_{Gross} > Prime$
  - Then $ReqPrime_{Net} = ReqPrime_{Gross} - Friction$

- If $ReqPrime_{Gross} < Prime$
  - Then $ReqPrime_{Net} = ReqPrime_{Gross} + Friction$

This algorithm reduces the difference between $ReqPrime_{Gross}$ and Prime.

Expected Dollar Profit

This is the expected profitability of executing the swap from the RatchetRate issue to the FixedFloater issue – thus, it will be negative if the RatchetRate issue is cheap, positive if it is expensive relative to the FixedFloater.

It is calculated as:

$$ProfitDollars = (Prime - ReqPrime_{Net}) * Par_{RR} * DivCount_{RR} / 12$$

Note that as the difference in bid prices has been accounted for in the calculation of ReqPrimeNet they do not explicitly occur in the above equation.

Expected Percentage Profit

It will often be more meaningful to examine the swap as a percentage of invested capital (or trade size), so:

$$Profit_{Percent} = Profit_{Dollars} / Bid_{RR}$$

Naturally, this sequence of calculations is highly amenable to a spreadsheet. A sample spreadsheet is available on-line at http://www.prefblog.com/xls/StrongPairTrends.xls.

Problems with the Methodology

Calculation of Dividend Entitlement

The provisions[19] for BAM.PR.E state: *The holders of the Series 8 Preferred Shares are entitled to receive monthly floating cumulative preferential cash dividends, accruing daily, as and when declared by the board of directors on the 12th day of each month in an amount per share equal to the product of C$25.00 per share and one-twelfth of the annual floating dividend rate applicable to the month being the average Prime Rate for the month multiplied by a Designated Percentage as provided in the share conditions.*

The Record Date for each month is the last day of that month and therefore the ex-Date for each month is two business days prior (payment is on the twelfth of the following month).Thus, on the day before the ex-Dividend date, almost all the data required to calculate the dividend has already been received and can no longer change, no matter what happens to prime – however, the methodology assumes that each of the $DivCount_{RR}$ dividends can change to meet the Gross Required Prime and will change uniformly. Hence, the Gross Required Prime may fluctuate less than it would if a precise calculation were to be made.

Present Value of Future Dividend Changes

No allowance is made for the time value of money in these calculations – the present value of expected dividend payments is set equal to their future value. However, the effect of this simplification is considered to be negligible.

Percentage of Prime Paid

The other problem has to do with the fact that the Designated Percentage referred to above with respect to the calculation of Prime can also change: *The Designated Percentage established for November 2001 was 85%. Thereafter, the Designated Percentage has been adjusted each month based on the average trading price of the Series 8 Preferred Shares, to a maximum of 100% and a minimum of 50%.*

The potential for variance in the Designated Percentage makes precise calculations impossible and the credibility of each calculation must be examined in light of this. In general, the calculations presented in this essay will assume that the Designated Percentage does not vary throughout the period of each calculation, but it must be understood that this is a weakness in the calculation that will affect confidence in the result. If, for instance, the RatchetRate element of a pair is preferred even when the Designated Percentage is 50%, then there are no problems – any changes will be for the better. On the other hand, if the Designated Percentage is 100% and the issue is trading well above par – indicating the potential for a decline in the Designated Percentage on the next recalculation – one should survey the calculation results with a jaundiced eye.

An Examination of the BAM.PR.E/G 2011 Conversion

In the year prior to the BAM.PR.E/G 2012 Conversion, the bid prices varied as shown in Chart FF-1. and the difference between these bid prices gave rise to the Net Required Prime shown in Chart FF-2. Note that Net Required Prime becomes increasingly volatile as the Conversion Date draws nearer, since differences in the bid prices have to be compensated for by a smaller number of dividends.

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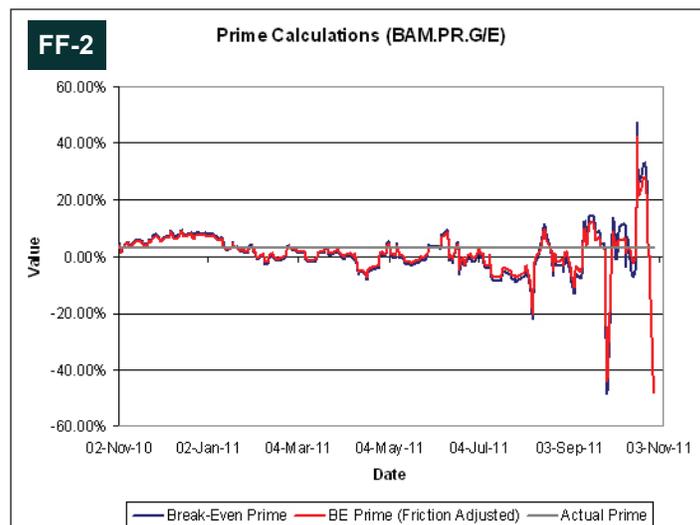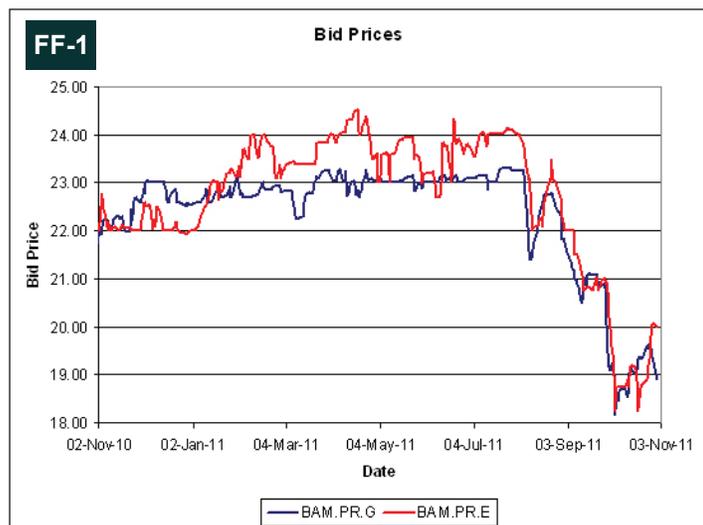
19 Brookfield, *Class A Preference Shares, Series 8 – BAM.PR.E*, available on-line at http://www.brookfield.com/_Global/42/documents/preferredshares/Provisions-ClassAPrefShare-Series8.pdf (accessed 2012-5-9)

This gives rise to the profitability estimates shown in Charts FF-3 and FF-4.
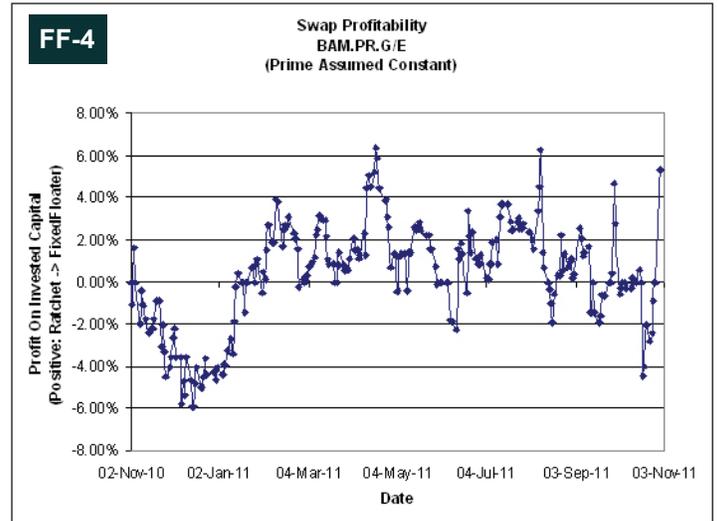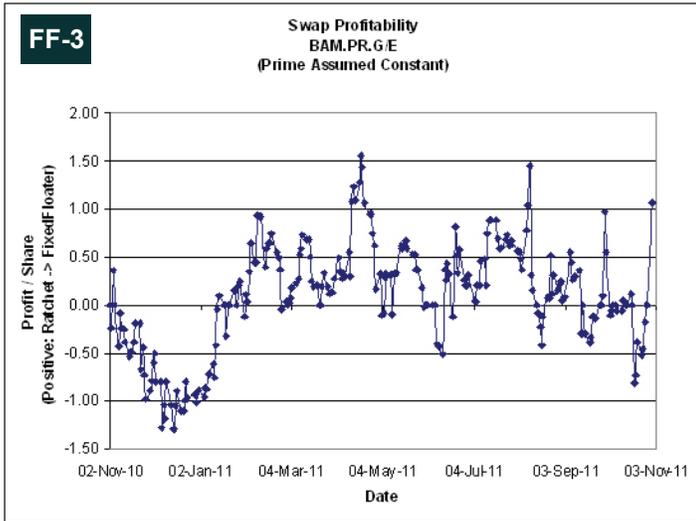
The minimum of -$1.30 was reached on December 14 and 15, 2010; note that a negative number indicates that the swap direction is FixedFloater to RatchetRate. On both of these days, the Last Bid for BAM.PR.G was 23.00; the Last Quotes for BAM.PR.E were, sequentially, 22.00-23.22 and 22.00-48.

On the first day of the minimum, one may note that the size of the bid-offer spread was enough to destroy the putative value of the spread – but why did nobody put in a bid of 22.05? On the second day, the bid-bid trade was so profitable that it would have been desirable even if the full spread of 48 cents had to be paid in order to execute the strategy.

Maximum profitability of $1.55 was reached on April 19, 2011 – this is the time when it would have been most desirable to sell the RatchetRate and purchase the FixedFloater. The Last Quotation for the former issue, BAM.PR.E, was 24.51-80, while BAM.PR.G was quoted at 22.75-30. Again, it would have been quite profitable – at least on a per-share basis – to have paid the entire bid-ask spread of $0.55 to buy BAM.PR.G and get the swap done – and in any event, why was somebody willing to bid 24.51 for BAM.PR.E when BAM.PR.G was so much cheaper?

BAM.PR.E/G 2006 Conversion
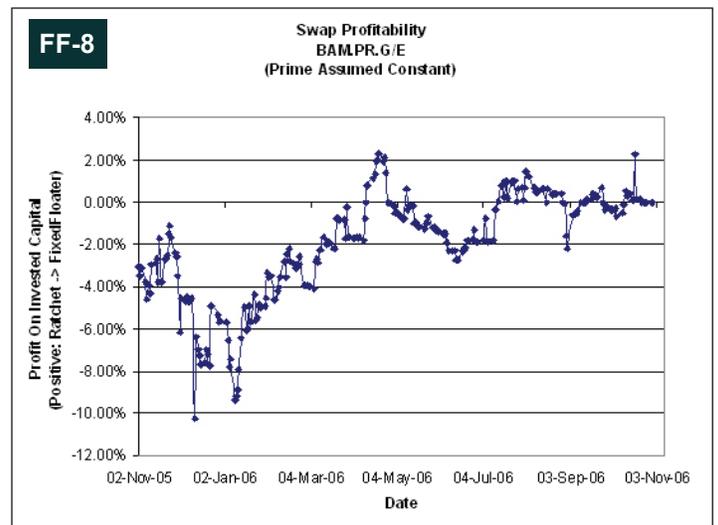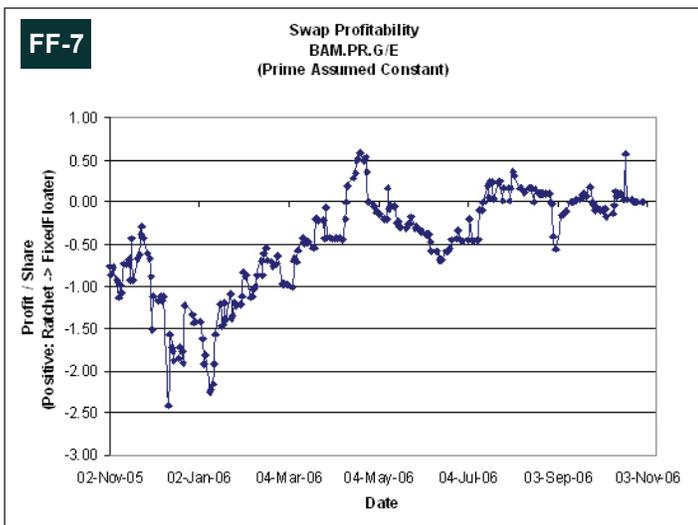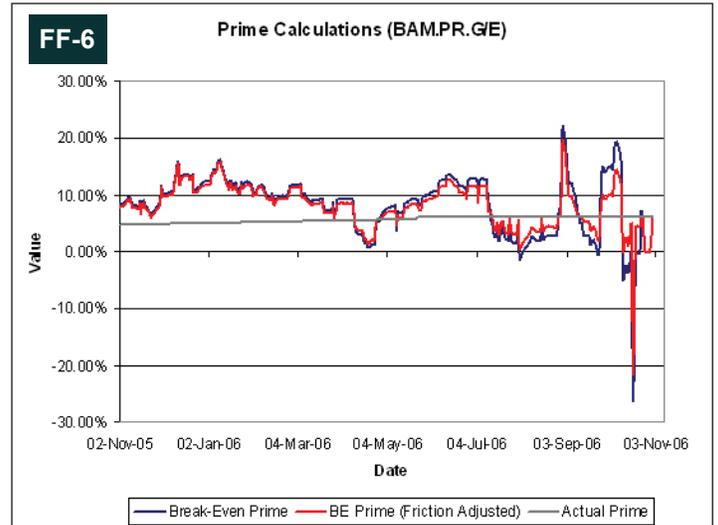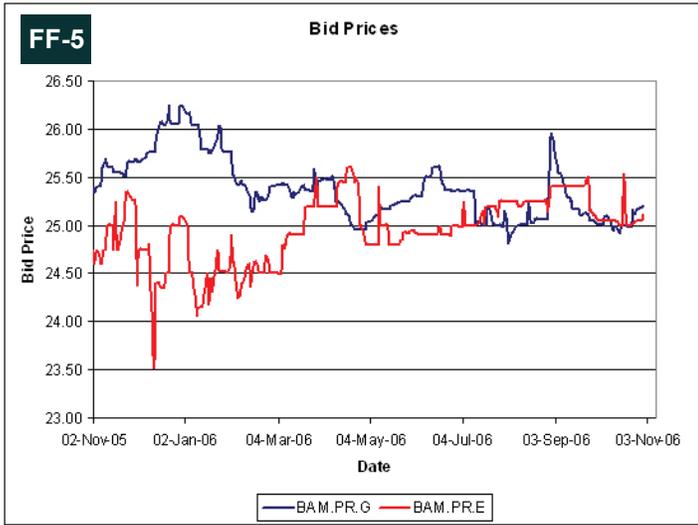
FF-5 — Bid Prices

FF-6 — Prime Calculations (BAM.PR.G/E)

FF-7 — Swap Profitability BAM.PR.G/E (Prime Assumed Constant)

FF-8 — Swap Profitability BAM.PR.G/E (Prime Assumed Constant)

Note that this is a case in which the assumption that the Percentage of Prime paid by the Ratchet Rate is constant is very dubious.

BBD.PR.D / B 2007 Conversion

FF-9 — Bid Prices

FF-10 — Prime Calculations (BAM.PR.D/B)

FF-11 — Swap Profitability BBD.PR.D / B (Prime Assumed Constant)

FF-12 — Swap Profitability BBD.PR.D / B (Prime Assumed Constant)
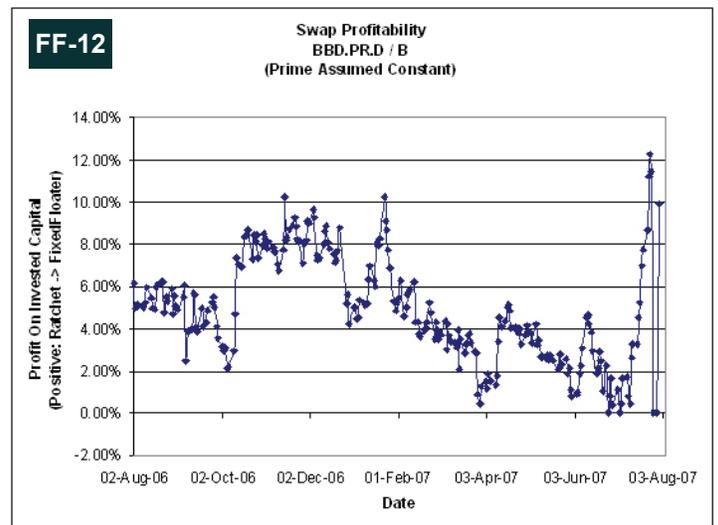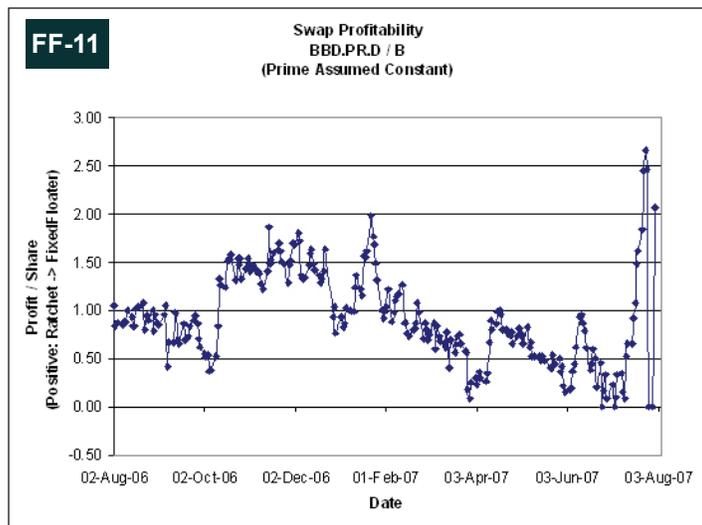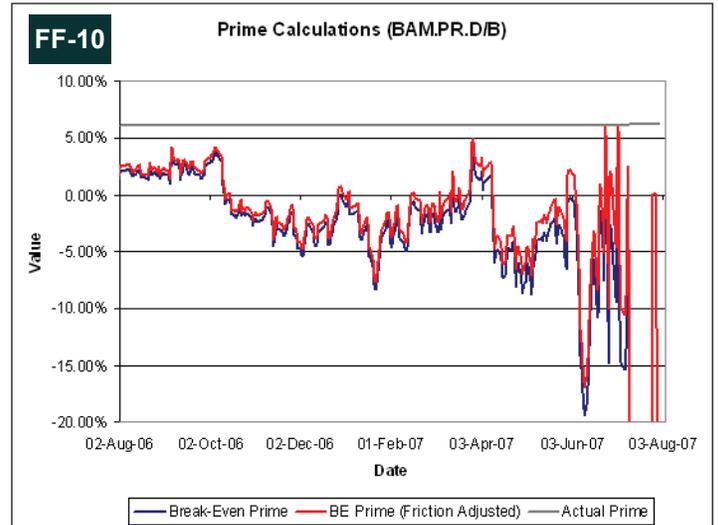
BCE.PR.T/S 2011 Conversion

FF-13 — Bid Prices

FF-14 — Prime Calculations (BCE.PR.T/S)

FF-15 — Swap Profitability BCE.PR.T / S (Prime Assumed Constant)


FF-16 — Swap Profitability BCE.PR.T / S (Prime Assumed Constant)
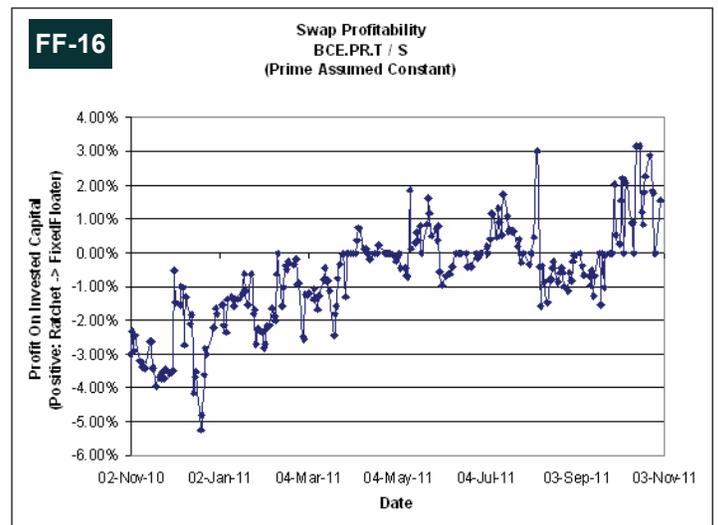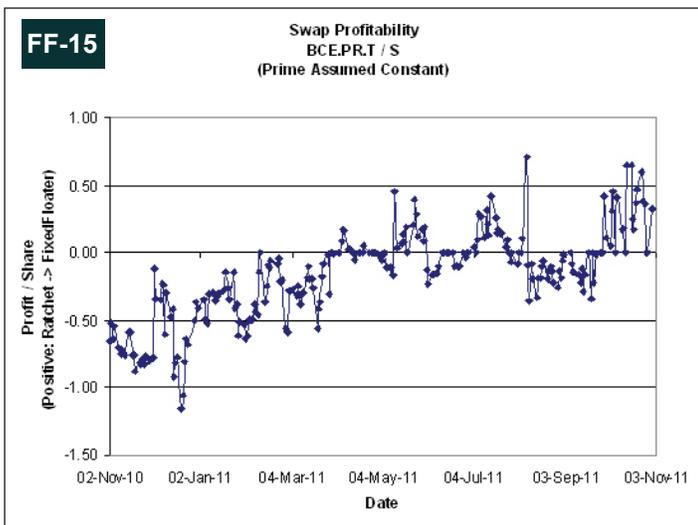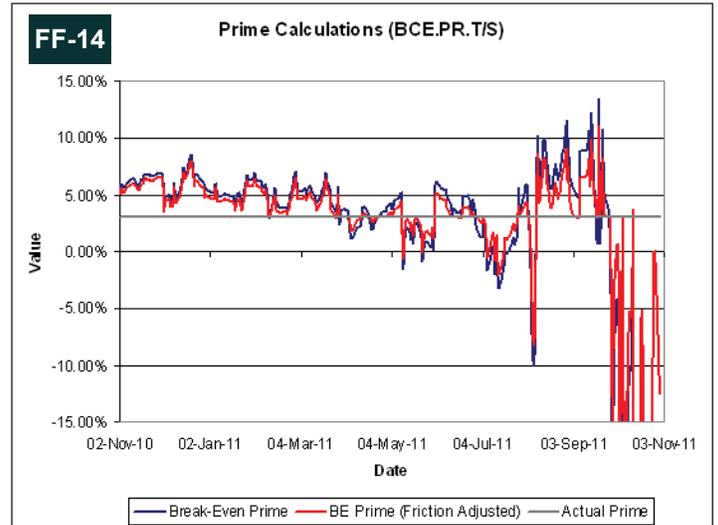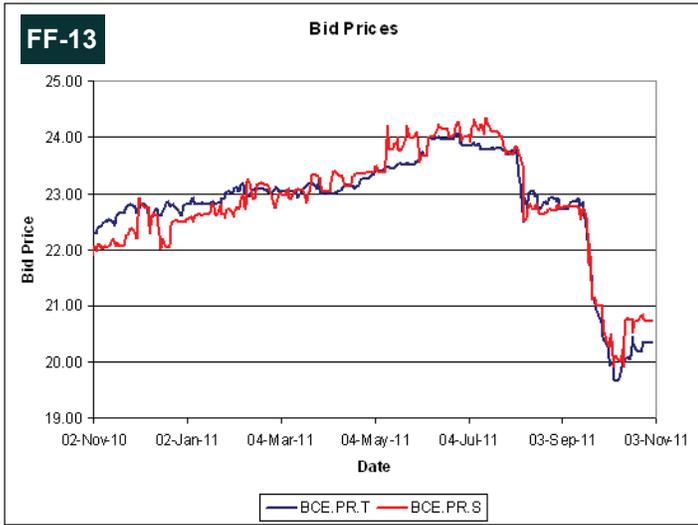
BCE.PR.Z/Y 2007 Conversion
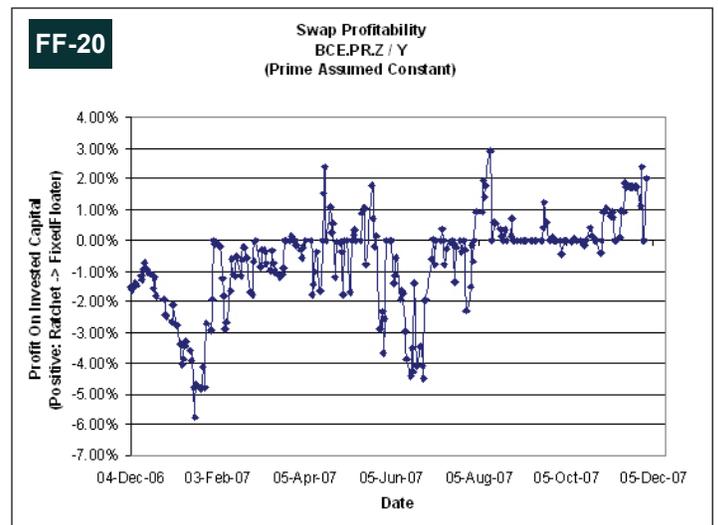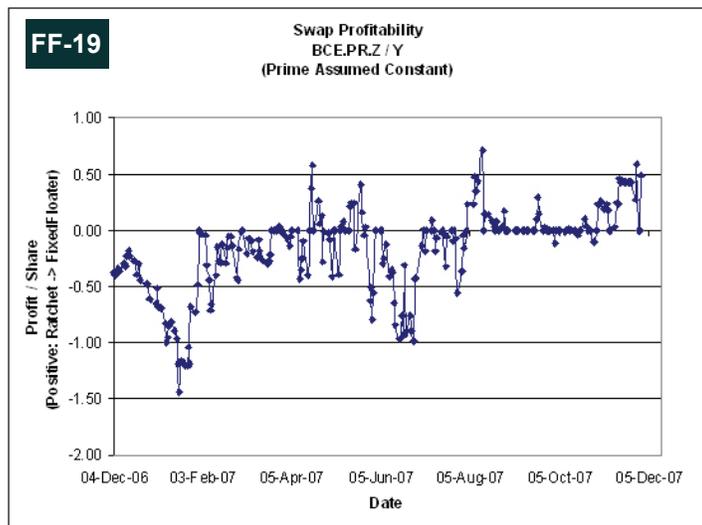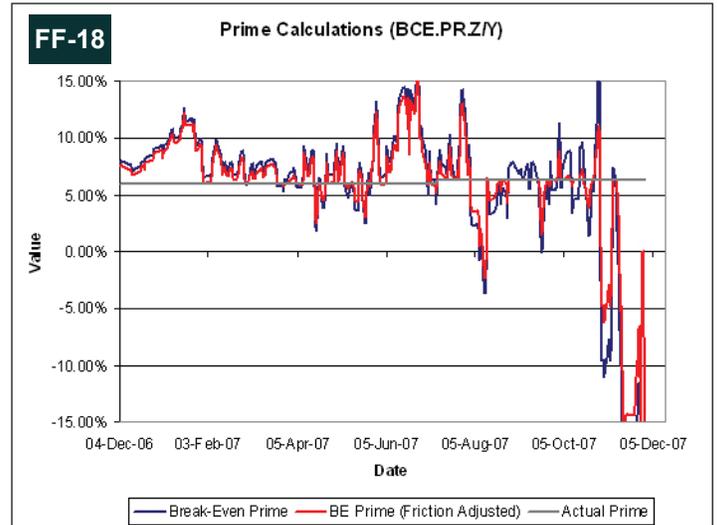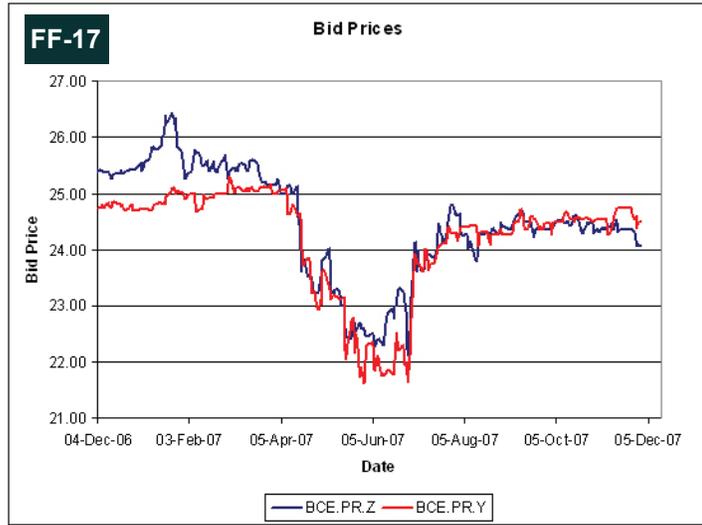
FF-17 — Bid Prices (BCE.PR.Z, BCE.PR.Y)

FF-18 — Prime Calculations (BCE.PR.Z/Y) (Break-Even Prime, BE Prime (Friction Adjusted), Actual Prime)

FF-19 — Swap Profitability BCE.PR.Z / Y (Prime Assumed Constant)

FF-20 — Swap Profitability BCE.PR.Z / Y (Prime Assumed Constant)

Note that this is a case in which the assumption that the Percentage of Prime paid by the Ratchet Rate is constant is very dubious – at least until the end of April 2007!

BCE.PR.G/H 2011 Conversion

FF-21 — Bid Prices

FF-22 — Prime Calculations (BCE.PR.G/H)

FF-23 — Swap Profitability BCE.PR.G / H (Prime Assumed Constant)

FF-24 — Swap Profitability BCE.PR.G / H (Prime Assumed Constant)
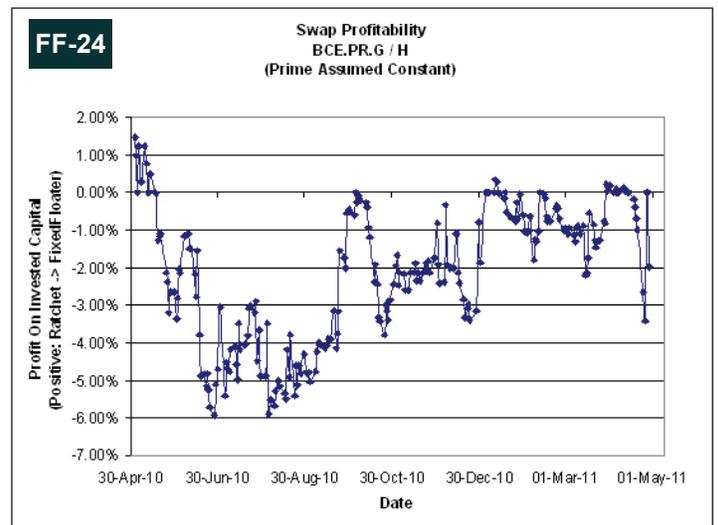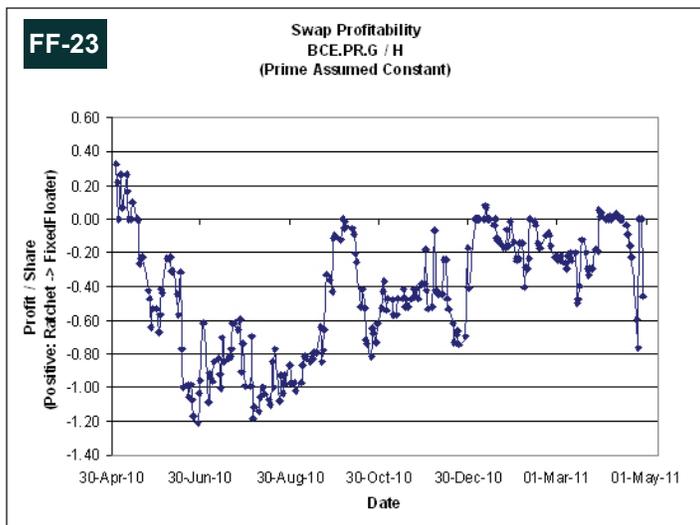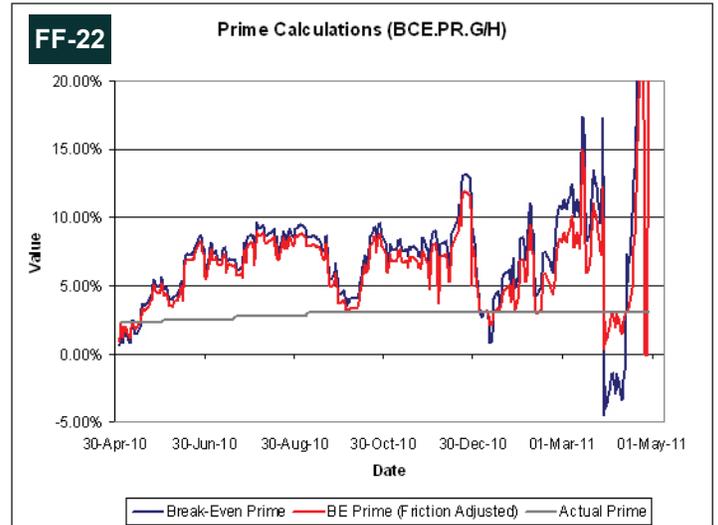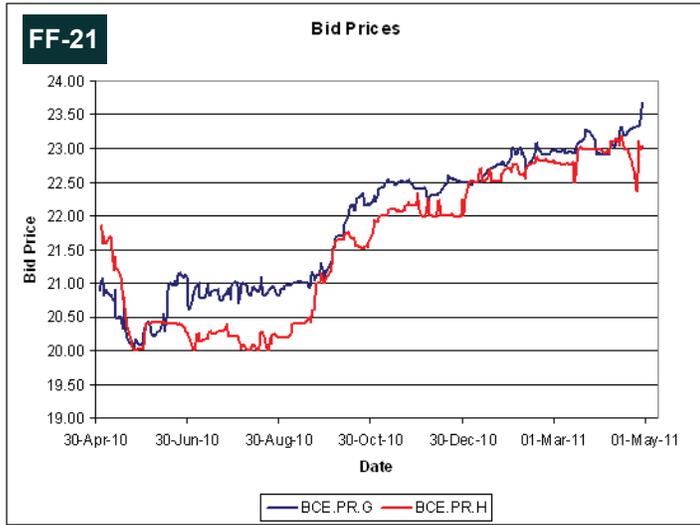
BCE.PR.F / E 2010 Conversion

FF-25 — Bid Prices

FF-26 — Prime Calculations (BCE.PR.F / E)

FF-27 — Swap Profitability BCE.PR.F / E (Prime Assumed Constant)

FF-28 — Swap Profitability BCE.PR.F / E (Prime Assumed Constant)
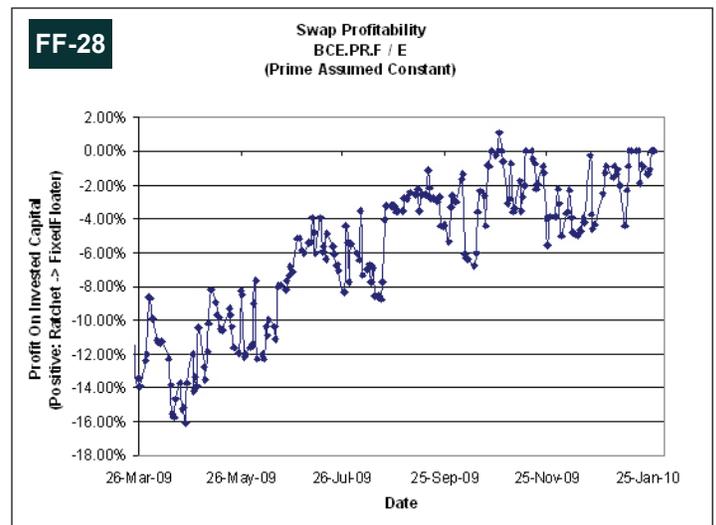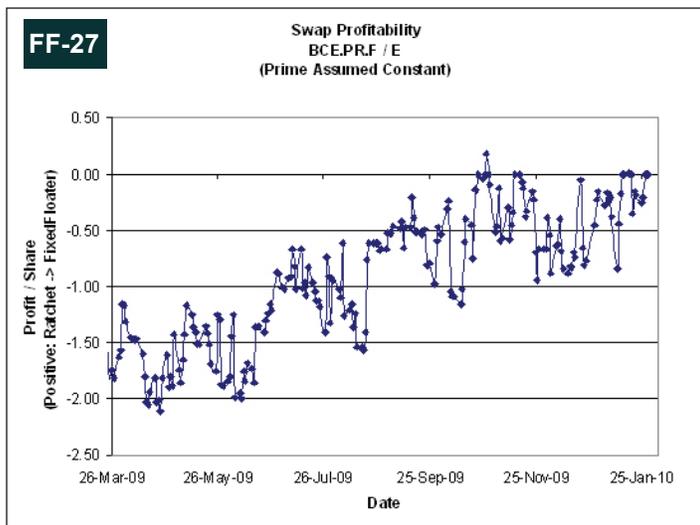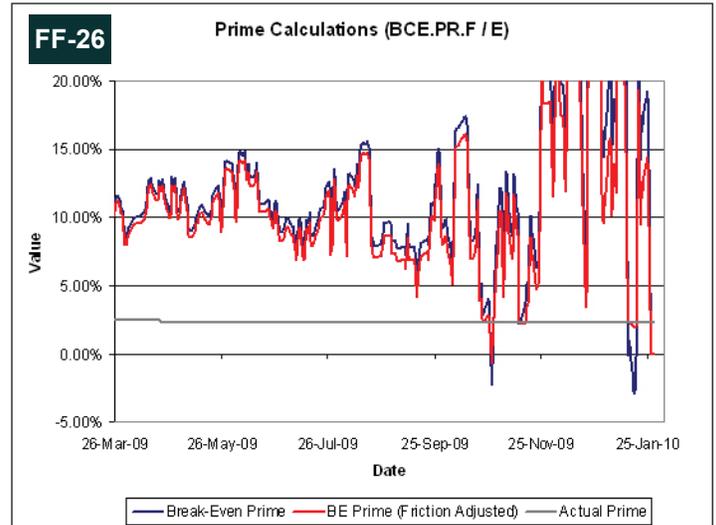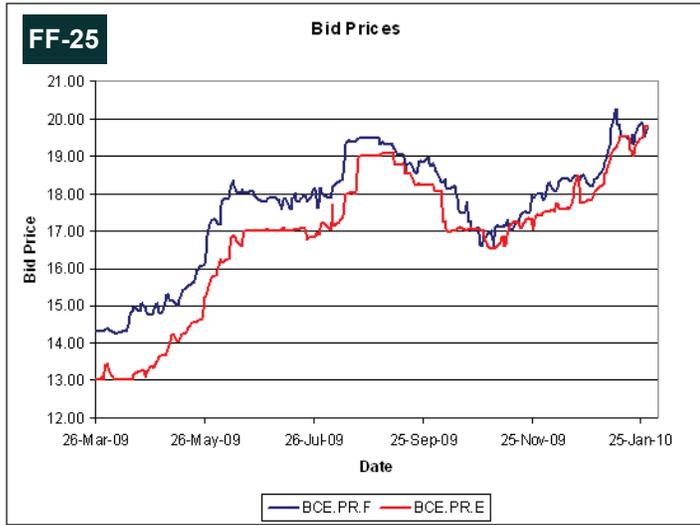
Summary of Prior Conversions

Table FF-4: Summary of Past Conversions						
Fixed-Floater	Ratchet-Rate	Conversion Date	Fixed Rate Before Conversion (rounded)	Fixed Rate After Conversion (rounded)	Mean Profit$_{Percent}$	Std. Dev. Profit$_{Percent}$
BAM.PR.G	BAM.PR.E	2011-11-1	4.35%	3.80%	+0.34%	2.45%
BAM.PR.G	BAM.PR.E	2006-11-1	5.63%	4.35%	-1.96%	2.47%
BBD.PR.D	BBD.PR.B	2007-8-1	5.48%	5.27%	+4.94%	2.48%
BCE.PR.T	BCE.PR.S	2011-11-1	4.50%	3.39%	-0.73%	1.47%
BCE.PR.Z	BCE.PR.Y	2007-12-1	5.32%	4.33%	-0.67%	1.53%
BCE.PR.G	BCE.PR.H	2011-5-1	4.35%	4.50%	-2.10%	1.75%
BCE.PR.F	BCE.PR.E	2010-2-1	4.40%	4.54%	-6.33%	4.22%

BBD.PR.D/B 2012 Pending Conversion

FF-32 — Bid Prices (BBD.PR.D, BBD.PR.B)

FF-33 — Prime Calculations (BBD.PR.D / B) (Break-Even Prime, BE Prime (Friction Adjusted), Actual Prime)

FF-34 — Swap Profitability BBD.PR.D / B (Prime Assumed Constant)

FF-35 — Swap Profitability BBD.PR.D / B (Prime Assumed Constant)
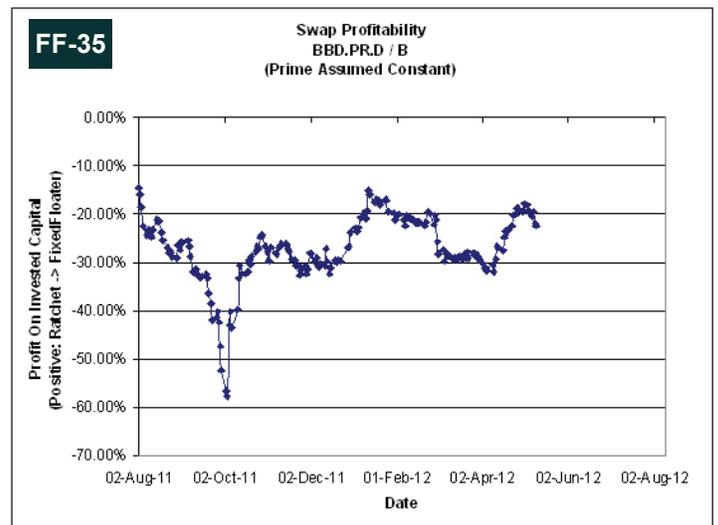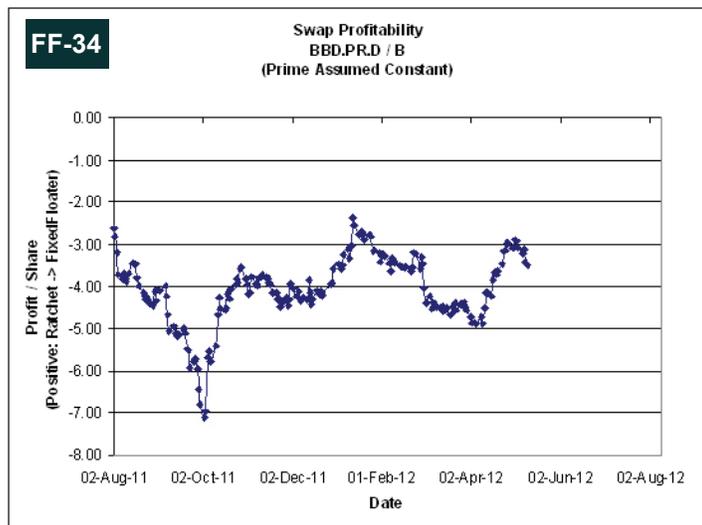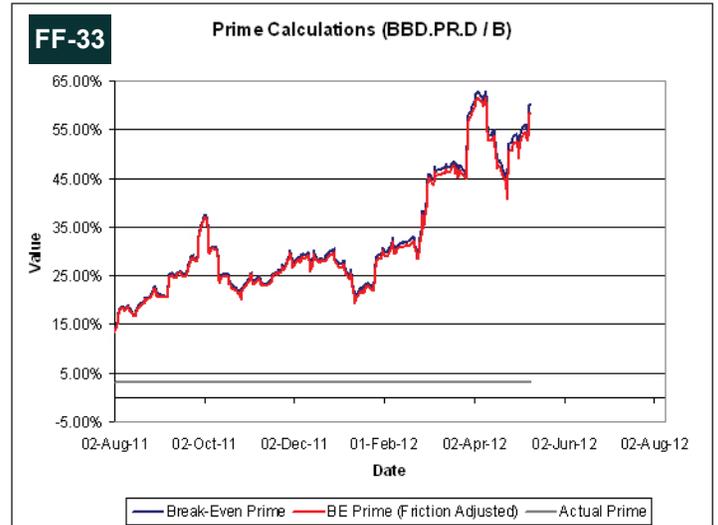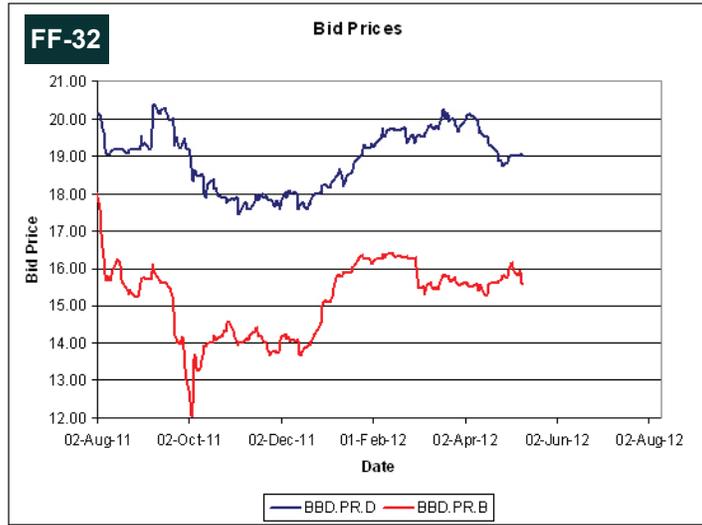
As has been previously emphasized, this swap is ludicrously out of balance. A holder of BBD.PR.D can sell in the market, buy BBD.PR.C, and take out about $3.00. If he prefers a fixed rate issue, he can convert back to BBD.PR.D effective August 1, giving notice in July after the rate for the next five years has been announced.

BCE.PR.A/B 2012 Pending Conversion

FF-36 — Bid Prices

FF-37 — Prime Calculations (BCE.PR.A / B)

FF-38 — Swap Profitability BCE.PR.A / B (Prime Assumed Constant)

FF-39 — Swap Profitability BCE.PR.A / B (Prime Assumed Constant)
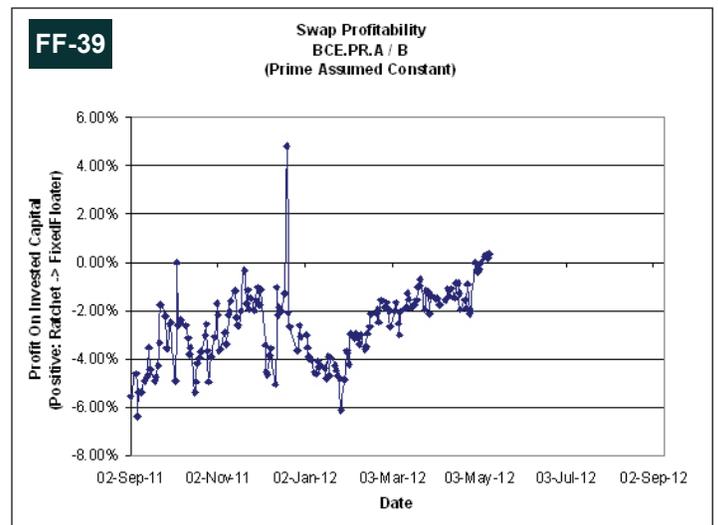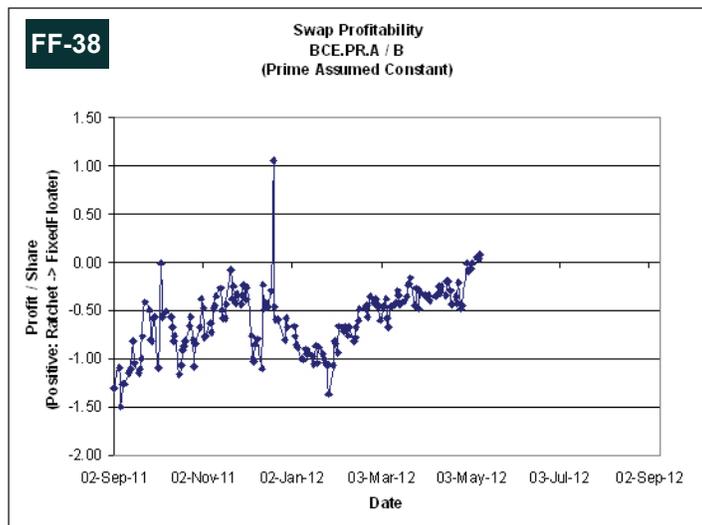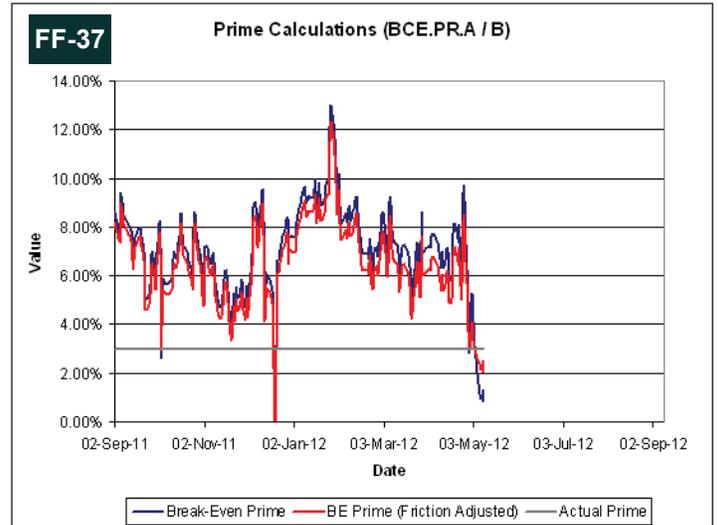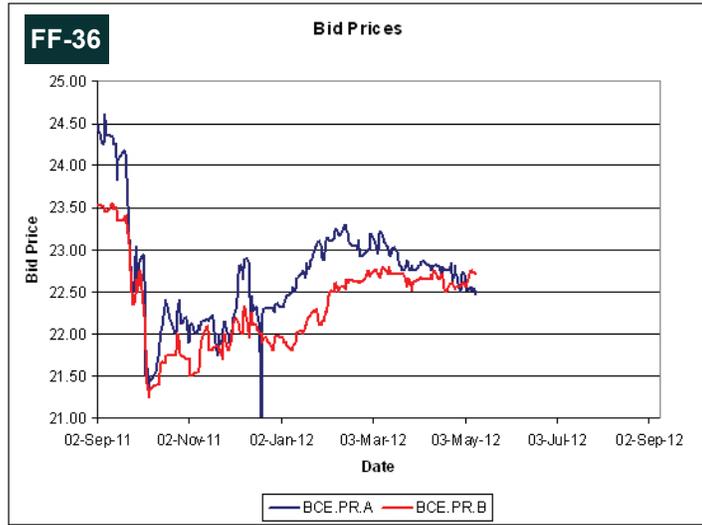
BCE.PR.Z/Y 2012 Pending Conversion

FF-40 — Bid Prices

FF-41 — Prime Calculations (BCE.PR.Z / Y)

FF-42 — Swap Profitability BCE.PR.Z / Y (Prime Assumed Constant)

FF-43 — Swap Profitability BCE.PR.Z / Y (Prime Assumed Constant)
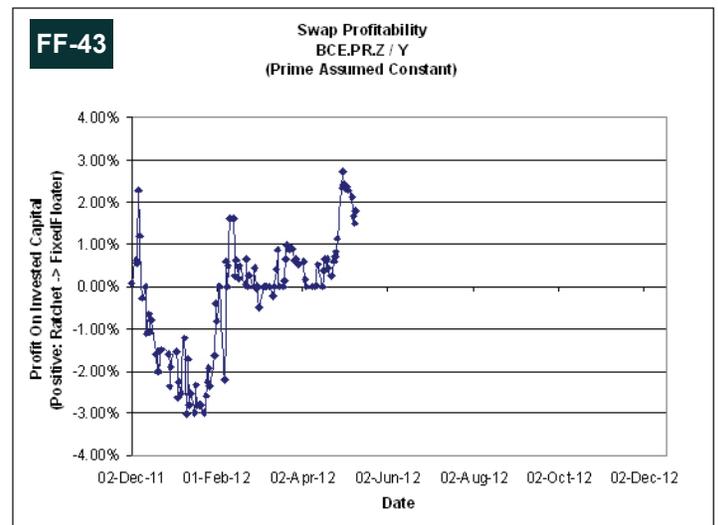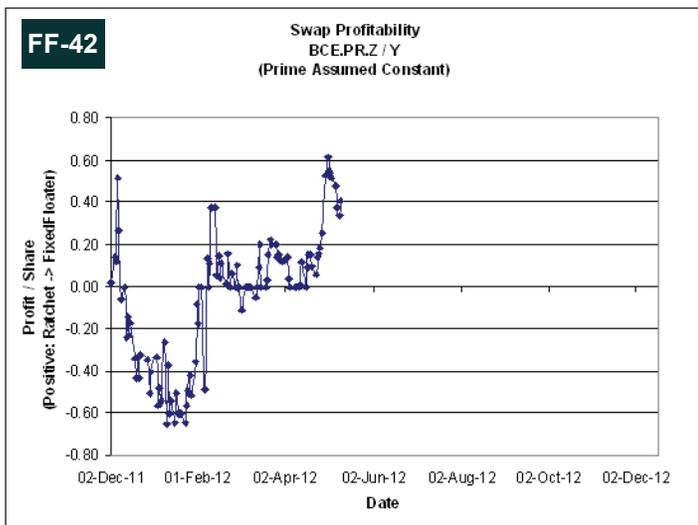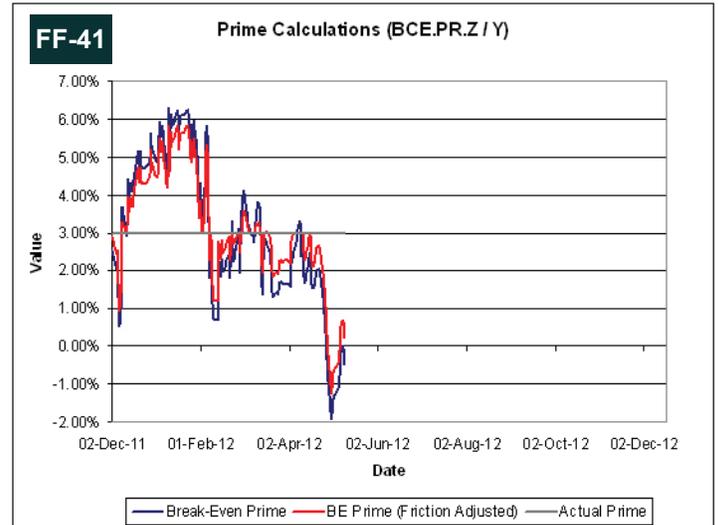
Taxation

It should be very clear from the above that the preferred share market does not efficiently account for the potential for interconversion between elements of Strong Pairs.

However, arbitrage is difficult. In addition to problems with borrowing preferred shares, there is also some concern regarding the Income Tax Act, specifically[20]:

Section 260. (6) In computing a taxpayer's income under Part I from a business or property
- (a) *where the taxpayer is not a registered securities dealer, no deduction shall be made in respect of an amount that, if paid, would be deemed by subsection 260(5) to have been received by another person as a taxable dividend; and*
- (b) *where the taxpayer is a registered securities dealer, no deduction shall be made in respect of more than 2/3 of that amount.*

In other words, an investor who is not a registered securities dealer must declare the dividends received on long positions as dividend income, but is not allowed to deduct the dividends paid on the short position – which makes a market neutral long/short strategy a lot less fun!

However, there is a claim[21] (by a non-authoritive source) that a decision of the Federal Court of Appeal[22] allows the netting of long and short dividends provided – so it seems to me – that the short dividends are due on a position that is part of a clearly identifiable, fully hedged position.

I do not take a view one way or the other. Those who wish to take a short position in preferred shares – in which the dividend is the critical factor in determining total return – are strongly urged to seek independent professional tax advice.

Investment Conclusions

Interconvertability is an arcane nuance to preferred share investing, but can be used to boost returns on occasion. I expect the field to become more important as FixedResets become a more seasoned element of the preferred share investment universe and Strong Pairs, created at the first exchange date, become interconvertible at the second and successive exchange dates.

At the very least, when one has made a decision to invest in one element of a strong pair, the impact of interconversion should be examined, as it may be possible to buy the type of share that is not desired and convert to the desired element at a lower overall price.

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[20] See http://laws-lois.justice.gc.ca/eng/acts/I-3.3/FullText.html

[21] See http://www.financialwebring.org/forum/viewtopic.php?f=33&t=114772#p464678

[22] See http://decisions.fca-caf.gc.ca/en/2005/2005fca227/2005fca227.html