MANITOBA PUBLIC UTILITIES BOARD

IN THE MATTER OF the Public Utilities Board Act (Manitoba)

AND IN THE MATTER OF Centra Gas Manitoba Inc.
2013/14 General Rate Application

REBUTTAL EVIDENCE OF CENTRA GAS MANITOBA INC.

WITH RESPECT TO THE WRITTEN EVIDENCE OF
John D. McCormick on behalf of
Consumers Association of Canada (Manitoba)
(CAC)

June 17, 2013

CENTRA GAS MANITOBA INC.
2013/14 GENERAL RATE APPLICATION

REBUTTAL EVIDENCE
INDEX

1.0 Introduction 2

2.0 Evidence of Mr. John D. McCormick 2

2.1 Moral Hazard 10

2.2 Updated Changes to the Interest Rate Forecast are Immaterial for 2013/14 ... 11

2.3 Interest Rate Movements During the Past Month 12

2.4 Locking in Long Term Interest Rates 14

2.5 Summary of Centra's Recent Long Term Debt Financings 15

2.6 The Issuance of New Long Term Debt with CG9 17

2.7 The Refinancing of CG5 with CG10, CG11 and CG12 18

2.8 The Refinancing of CG4 with CG13 21

2.9 The Issuance of New Long Term Debt with CG14 21

2.10 The Refinancing of CG1 with CG15, CG16 and CG17 22

2.11 Yield Performance and Measurement (CAC/Centra 14p) 23

2.12 Refinancing Risk and Interest Rate Risk 25

2.13 Conclusions 25

1 **1.0 Introduction**
2
3 On January 25, 2013, Centra filed its General Rate Application ("GRA") requesting approval of
4 natural gas rates to be implemented August 1, 2013. On May 10, 2013 Centra updated its
5 Application to include a Cost of Gas based on the April 2, 2013 forward price strip. On May 27,
6 2013 the Consumers Association of Canada (Manitoba) ("CAC") filed the evidence of John D.
7 McCormick which dealt with Centra's interest rate forecasting and other financing related
8 matters. On June 5, 2013 the Consumers Association of Canada (Manitoba) ("CAC") filed
9 evidence of John D. McCormick in response to information requests from the Public Utilities
10 Board.
11
12 The purpose of this Rebuttal Evidence is to provide Centra's response with respect to the pre-
13 filed evidence of Mr. J. McCormick.
14
15 **2.0 Evidence of Mr. John D. McCormick**
16
17 Mr. McCormick's opinions and recommendations pertain to Centra's interest rate forecasting
18 and debt management practices. This Rebuttal Evidence will address both of these topic areas.
19 The tables on the following pages provide a summary of Mr. McCormick's stated opinions, along
20 with Centra's corresponding response.
21
22 Centra's rebuttal evidence will demonstrate that the update changes to interest rates forecasts
23 for 2013/14 and their associated impact are immaterial. Centra's interest rate forecast is
24 unbiased and Centra does not support removing forecasters in order to purposely bias the
25 forecast. Contrary to Mr. McCormick's suggestions, there is no uncorrected upward bias in
26 Centra's forecast methodology. Centra has complied with Directive 9 from Order 128/09; the
27 matter of retrospective testing has been extensively canvassed and Centra considers that
28 Directive 9 has been settled. Mr. McCormick's recommended Government of Canada 10 Year+
29 interest rate for the 2013/14 is unlikely to occur. Centra's approach of continuing to use short
30 term debt for temporary purposes is appropriate. The interest rates assigned to all of Centra's
31 existing long term advances are based on actual MHEB financings, and Centra is of the view
32 that the interest rate on its long term issues are reasonable. Centra's refinancing risk has been
33 significantly reduced through the debt management activities undertaken by the Corporation
34 during the past few years.
35
36
37

Interest Rate Forecasting	
Mr. McCormick's Opinion	**Centra's Response**
1. "I am of the opinion that the underlying data used to develop the financial forecasts for T-Bill and 10 Year + Canada rates is both outdated and materially different from current forecasts readily available in the market."[1]	**The interest rate forecasts are current and update changes for 2013/14 are immaterial.** Centra utilized current interest rate forecasts during the development of the initial Application. The updated interest rate forecasts in the 2013 Spring Economic Outlook for 2013/14 are not materially different from those in the initial Application.[2]
2. "I am of the opinion that to attempt to base the interest component of the revenue requirement on financial forecasts of T-bill and 10 year+ Canada rates which are based on superseded data is unwise, and, owing to the material difference between the original data inputs and those currently available, is prejudicial to consumers."[3]	**The revenue requirement was developed using current interest rate information and update changes for 2013/14 are immaterial.** Centra utilized current interest rate forecasts during the development of the initial Application. The Corporation has provided an update of its forecast interest rates. The changes for 2013/14 are minor and do not materially impact the revenue requirement.

[1] From the Executive Summary to the *Written Evidence of John D. McCormick on Behalf of Consumers Association of Canada (Manitoba) Ltd.*, dated May 27, 2013.

[2] For the 2013 Spring Economic Outlook and the updated interest rate forecasts, please see revised response to PUB/Centra II-141(d). For the financial impacts to finance expense associated with the updated interest rates, please see Centra's updated response to PUB/Centra I-9(b). This response demonstrates that the inclusion of the interest rates from the 2013 Spring Economic Outlook (with a 25 basis point reduction in the 3 month Canadian T-Bill rate and a 30 basis point reduction in the CDOR03 interest rate) would reduce the revenue requirement by less than one tenth of one percent. For the 2013/14 test year, the revenue requirement is not affected by the 20 basis point increase in the forecasted 10 Year+ long term interest rate as the new long term debt financing is forecasted in IFF12 to occur at the end of the fiscal year.

[3] Mr. McCormick's Written Evidence, Executive Summary.

Interest Rate Forecasting	
Mr. McCormick's Opinion	**Centra's Response**
3. "I am of the opinion that to reduce the degree of upward bias in Centra's forecasting, the Board should remove Informetrica, the source of the highest forecasts in Table 1 and Table 2, in PUB/Centra I-6, from its calculation of forecast interest rates used to derive near term interest costs." [4]	**The interest rate forecast is unbiased** as it is not developed with the intent of selecting or encouraging one outcome over others. From a risk management perspective, the externally produced source information provides beneficial insight into the expressed range and distribution of potential interest rates.[5] **Centra does not support removing forecasters from the pool** in order to purposely bias the combined forecast. Mr. McCormick's opinion that the Board should remove Informetrica in order to produce a lower forecast result demonstrates selection bias. Note that the removal of Informetrica would increase the 2013 Spring Economic Outlook interest rate forecast for 2013/14.[6] Centra believes that it is a mischaracterization to refer to **Centra's ability to successfully take advantage of the prolonged low interest rate environment**[7] as "*a chronic uncorrected upward bias in the results of the forecast methodology when compared to actual results*." [8]

[4] Mr. McCormick's Written Evidence, Executive Summary.

[5] As per Centra's response to CAC/Centra I-13 footnote 2. The forecast range is also graphically depicted on Chart 4 in the Debt Management Strategy (see Centra's response to CAC/Centra I-14).

[6] Mr. McCormick's recommendation to remove **Informetrica** also ignores the fact that Informetrica is a respected economic forecaster with a wide array of clients including the Government of Canada; Ontario Ministry of Energy; Enbridge; and the Canadian Council on Social Development. For the impact of removing Informetrica, please see Centra's revised response to PUB/Centra II-141(d).

Centra notes Mr. McCormick's inconsistent views regarding the inclusion or exclusion of **National Bank**. On June 7, 2011, Mr. McCormick stated in his oral testimony at the 2010/11 & 2011/12 Electric GRA that: **"I would vote off everybody except for National and Scotia** because of the sample that I took and played around with, back-of-the-envelope effort, I got the lowest variance from reality by choosing those two (2) forecasters." Centra observes that although Mr. McCormick subsequently cited a small data sample when he qualified this assessment under cross examination by PUB counsel, he has again revisited his analysis on page 9 lines 16-26 of his Written Evidence.

In contrast, on page 2 of his Written Evidence in this Application, Mr. McCormick states that "I would delete (National Bank) due to the manner of its discontinuous data presentation" and on page 12 he states that he is **"unsure what, if any, special value National Bank currently adds to the resulting forecast."**

As evidenced in Centra's response to CAC/Centra II-47, National Bank's perceived discontinuity is easily accommodated by either of the two methods described by Centra (one of which Mr. McCormick subsequently utilized for his computations on pages 10-11 of his Written Evidence).

[7] Wherein Centra reduced finance expense and the weighted average interest rate, and made these changes more permanent by fixing more of its debt portfolio, reducing interest rate risk and increasing the weighted average term to maturity.

[8] Mr. McCormick's Written Evidence page 7.

Interest Rate Forecasting	
Mr. McCormick's Opinion	**Centra's Response**
4. Centra is non-compliant with some components of Order 128/09 Directive No. 9 regarding interest rate forecasting methodology (as per Mr. McCormick's response to PUB/CAC I-1).	**Centra has complied with Directive No. 9 interest rate forecasting adjustments.** Directive No. 9(d) on the retrospective testing of interest rate forecasters was extensively canvassed at the 2010/11 & 2011/12 Electric GRA. Centra considers that Directive No. 9 has been settled.[9]

[9] Centra has the following comments regarding Mr. McCormick's response to PUB/CAC I-1:

Directive No. 9(a). Regarding the use of all forecasts based on comparable average period data:

(1): The data for IHS Global Insight, Conference Board and Informetrica are period averages.

(2) (i): As described in PUB/Centra II-141(a), the cited data points in PUB/CAC I-1 footnote 2 were inadvertently left off of the original presentation of Tables 1 and 2 in Centra's response to PUB/Centra I-6. None of these amendments, changed the fiscal year interest rates as originally calculated in response to PUB/Centra I-6.

(2) (ii and iii): Regarding the National Bank data points, this matter is inconsequential to the interest rate forecast and the revenue requirement. As evidenced in Centra's response to CAC/Centra II-47, the perceived discontinuity is easily accommodated by either of the two methods described by Centra.

Directive No. 9(b). The use and alignment of current date interest rate forecasts has been incorporated into the Corporation's interest rate forecasting process since the economic downturn. See PUB/Centra II-141(b) for additional details. The Centra Application was developed following the approval of IFF12 (on November 20, 2012) and utilized information from the fall review to the Economic Outlook (using source forecasts from September – October 2012). Centra has provided its refreshed interest rate forecasts in the revised response to PUB/Centra II-141(d). As demonstrated in Centra's updated response to PUB/Centra I-9(b), the financial impact for 2013/14 associated with updating finance expense with the Spring 2013 Economic Outlook interest rates is minor and does not materially impact the revenue requirement (impact is less than one tenth of one percent).

Directive No. 9(c). The IFF utilizes fiscal period forecast rates. The quarterly interest rate precision within the IFF modeling as suggested by Mr. McCormick is not attainable. Although the forecasted new Centra debt issue is scheduled for the end of 2013/14, it is uncertain if all or part of the $30 million new cash requirement for cumulative long term capital financing will occur in 2013/14 or 2014/15. In accordance with Centra's debt management practices, short term debt will be used to bridge the timing.

Directive No. 9(d). The Corporation considers the matter of retrospective testing of interest rate forecasters to be settled. For a discussion on the topic of retrospective testing of interest rate forecasters, please see Centra's response to CAC/Centra I-10(a) and PUB/Centra II-141(b).

Directive No. 9(e). This matter has been settled.

Directive No. 9(f). The Corporation considers the matter of providing forecast updates in advance of the hearing to have been settled. The Corporation already provides base case interest rate forecasts and updates at each GRA proceeding. The Corporation has filed its Economic Outlook and provided requested updates to its base case forecasted interest rates at each of the two electric and gas GRAs and will continue to do so in future GRA filings.

Interest Rate Forecasting	
Mr. McCormick's Opinion	**Centra's Response**
5. "Mr. McCormick's recommended forecast long-term interest rate for the 2013/14 test year is 2.36%" [10]	**Mr. McCormick's rate for 2013/14 is below current market rates**. Mr. McCormick's recommended forecast Government of Canada 10 Year+ interest rate for the 2013/14 test year of **2.36%** is already 17 basis points below the actual market rate of **2.53%** as at June 11, 2013, and 21 basis points below the Bloomberg forward Canada 10 Year+ interest rate for March 31, 2014 of **2.57%**.[11] Note that the rate described by Mr. McCormick does not include transaction costs and credit spreads. The Spring Economic Outlook interest rate has a benchmark Government of Canada 10 Year+ rate of **2.50%** and after including spread and transaction costs, forecasts an all-in interest rate of 3.50% for 2013/14.
6. Mr. McCormick also calculates a Canadian T-Bill rate of 0.98%[12].	The 2013 Spring Economic Outlook T-Bill rate for 2013/14 is **1.05%**, and as of June 11, 2013 using Bloomberg data the actual 3 month Canadian T-Bill rate was **1.01%**, and the forward rate at March 31, 2014 which prices in market expectations was **1.22%** (Bloomberg FWCV, Canada Sovereign Curve).

[10] PUB/CAC I-8.

[11] As at June 11, 2013 (using Bloomberg data at 9:22 am), the Government of Canada 10 Year+ rate and curve was **2.53%**, and the BMO indicative all-in 10 Year+ rate including spread to Manitoba and transactions costs was 3.48%. The forward rate for the Government of Canada 10 Year+ rate at March 31, 2014 was **2.57**% (Bloomberg FWCV, Canada Sovereign Curve).

[12] PUB/CAC I-8.

Debt Management	
Mr. McCormick's Opinion	**Centra's Response**
7. "Mr. McCormick does not see an urgency to lock in long term rates. … As attractive as recent rates have been, maintaining a short term debt balance while awaiting a market opportunity may save the consumers some interest costs, both in the near term while the short term facility and in the longer term, as and when, a market window provides a more beneficial long term rate." [13] Regarding "the question of the price to be paid for the interest rate stability of issuing longer term debt, as opposed to issuing debt with a shorter term and facing, with some degree of concern or dread, the risk of higher interest rates at the point of refinancing. Our degree of concern or dread should be in decline." [14]	**The Corporation is of the view that it is inadvisable to wait on the sidelines while long term interest rates rise.** Mr. McCormick's proposed strategy to seek near term cost savings by maintaining a higher weighting of short term debt in the capital structure, is both risky and ill-timed given the expectation of rising interest rates. Excessive reliance on short term debt, floating rate long term debt or shorter dated fixed rate financings leaves Centra vulnerable to volatile and increasing debt service costs if rates increase; every refinancing brings with it the risk of rising financing costs. Portfolios with a large component of short term financing are subject to a higher risk of increased financing costs than those that make greater use of longer term financing.
8. "With respect to short term debt, Mr. McCormick would consider it reasonable to see a higher weighting of short term debt in the capital structure." [15]	**The Corporation will continue to utilize short term debt to borrow money for "temporary purposes"** under *The Manitoba Hydro Act*.[16] This includes supporting Centra's seasonal working capital requirements and to bridge the timing between long term debt issues. Short term debt will not be used to permanently fund capital construction.

[13] PUB/CAC I-6 lines 11-12 and lines 32-35. Also for his response to PUB/CAC I-6 lines 17-20, he states "As opposed to prefunding debt requirements, and having no balance outstanding in short term debt, Mr. McCormick would suggest it may be possible, and even one of the purposes of the short term debt facility, to use short term debt to provide cash while awaiting an opportune market window."

[14] In Mr. McCormick's response to PUB/Centra I-9 page 27 lines 18-21. After reviewing some historical interest rate data, in his response to PUB/CAC I-9, on page 28 lines 12-13 Mr. McCormick also suggests that there is a continued trend for "lower rather than higher rates." Centra observes that the forecasted interest rate Chart 4 in the Debt Management Strategy shows higher short and long interest rate forecasts in the future.

[15] PUB/CAC I-9 page 31 lines 18-19.

[16] Please see Centra's response to CAC/Centra I-19.

Debt Management	
Mr. McCormick's Opinion	**Centra's Response**
9. Mr. McCormick compared Centra advances to the originating Manitoba Hydro debt issues and stated that "while the interest rates that are ascribed to these advances may be the same, the dates of the advances may vary." [17] Mr. McCormick also noted that Centra had utilized the front end of ultra-long issues that had been secured by Manitoba Hydro. It was Mr. McCormick's opinion that the interest rates on CG10 and CG15 were unreasonable.[18]	**The interest rates assigned to all of Centra's existing long term advances are based on actual MHEB financings, including CG10 and CG15**, as indicated in the long term debt term sheets provided in the response to PUB/Centra I-43. Treasury operations are performed on a consolidated basis for the Corporation, including Centra. The Corporation does not execute financings specifically for Centra. Centra is able to take advantage of the opportunities which Manitoba Hydro has in the marketplace. Basing Centra's long term advances on actual Manitoba Hydro long term debt issues ensures fair and equitable treatment for both gas and electric ratepayers through a cost recovery mechanism. CG10 and CG15 were part of portfolio refinancing. **Centra was able to outperform indicative market conditions in effect on the assignment date for the weighted average interest rates and weighted average term to maturities**. These portfolio refinancings also reduced the interest rate refinancing risk by sub-dividing the larger lump sum amounts into smaller segments with different maturity dates.
10. "Mr. McCormick is of the view that Manitoba would enter the capital markets for floating rate debt for a term materially shorter and at spreads materially lower than the 20 year term and 45 basis point spread or margin over benchmark indicated in CAC/Centra I-14(p)." [19]	**The rates provided by Centra represent indicative market conditions.** The indicative rates provided by Centra were based on actual market expectations on May 9, 2013. As noted in Centra's response to CAC/Centra I-14 footnote 6, "the indicative asset swap pricing for 5, 10 and 30 year floating rate long term debt is approximately CDOR03 + 23 basis points; CDOR03 + 45 basis points; and CDOR03 + 76 basis points respectively." The Corporation has undertaken longer dated floating rate debt issues in the past and may do so again in the future.

[17] PUB/CAC I-7. Mr. McCormick also observed in his response to this information request that "market conditions can change in over 4 months. With the passing of time the rate at which the transaction was initially funded may no longer be representative of the market conditions when Centra was funded" (page 19 lines 3-5).

[18] PUB/CAC I-7 lines 30-31. Also PUB/CAC I-4 lines 6-8: "Mr. McCormick would view the spread or margin of 48.4 basis points from the benchmark rate as unreasonable for a 5 year floating rate Manitoba credit instrument issued in spring 2010." Also in his response to PUB/CAC I-7 lines 7-11: "Mr. McCormick is of the view that a straight pass through of a rate derived from a Manitoba BA based floating rate is more appropriate. Mr. McCormick is of the view that a reasonable spread or margin over benchmark for an issue in the market similar to series 10 would have been in the range of 18 to 23 basis points."

[19] PUB/CAC I-4 lines 13-16.

Debt Management	
Mr. McCormick's Opinion	**Centra's Response**
11. "Mr. McCormick would prefer a policy which, in addition to setting a limit on maturities in a 12 month period, also placed a concentration limit on some longer period, perhaps between 4 or 6 years."[20]	**Centra's refinancing risk has been significantly reduced** through the debt management activities undertaken by the Corporation during the past few years as Centra's legacy debt has been refinanced. See Centra's response to CAC/Centra I-19. The Corporation follows fiscal year financial reporting, with the current portion of long term debt being the long term debt that is maturing in the 12 months from the balance sheet date. The Corporation has previously identified the measurement of its interest rate risk profile on this 12 month forward basis (see the Debt Management Strategy documents provided in Centra's response to CAC/Centra I-14). Given the level and frequency of present and future financings, a 4 or 6 year guideline is not practical.

[20] PUB/CAC I-5 lines 14-16.

1 **2.1 Moral Hazard**

2 Mr. McCormick has suggested that a "moral hazard" exists such that consumers bear additional
3 costs[21] and that "Centra has no employees" to protect it from Manitoba Hydro.[22]
4
5 Mr. McCormick's inference that there exists a "moral hazard" or that the Corporation is careless
6 or motivated to harm consumers is baseless. The claim that Centra has no employees and
7 therefore needs protection from Manitoba Hydro is frivolous.
8
9 The reference to a financial advantage "enjoyed by Centra" implies that management and/or
10 shareholders are enriched by purposely over-estimating financing costs. This is fundamentally
11 wrong.
12
13 Mr. McCormick fails to acknowledge that the retained earnings and net income of Centra are
14 held for the benefit of ratepayers. To the extent that interest costs are higher or lower than
15 forecast, the difference, along with all other differences, flows to retained earnings. Retained
16 earnings are not distributed as dividends to private shareholders (as may be the case in
17 jurisdictions with a rate-base rate of return methodology) or used for any purpose other than
18 managing the risks and revenue requirements on behalf of Centra's customers. To the extent
19 that there are higher contributions to retained earnings as a result of this difference, there will be
20 lower future rate increase requirements. Centra views this no differently than the impact on
21 earnings of weather or any other revenue and expense variable.

[21] In footnote 24 of his Written Evidence, Mr. McCormick cites a definition of **moral hazard** as "a concept in economic theory which 'arises because an individual or institution does not take the full consequences and responsibilities of its actions, and therefore has a tendency to act less careful than it would otherwise would, leaving another party to hold some responsibility for the consequence of those actions.'" Having defined moral hazard, Mr. McCormick then suggests on page 9 of his Written Evidence that:

> "the moral hazard is that Centra is not disadvantaged in adopting an interest rate forecast methodology based on a particular sample of forecasters that consistently produces forecasts of interest rates that exceed actual experience."

On page 22 of his Written Evidence, Mr. McCormick stated:

> "I also wonder when, if ever, the conditions will exist which would make retrospective testing 'beneficial' to Centra. The moral hazard here, relates to the cost being borne by the consumer while the benefit is enjoyed by Centra."

In response to PUB/CAC I-1 page 3, Mr. McCormick's states:

> "Considering Centra's financial advantage in the just last 4 years of over $10 million, which was quantified in PUB/Centra I-42 (b), it seems perfectly reasonable from Centra's viewpoint, as indicated in PUB/Centra II-141 (b), that 'a process to retrospectively test the accuracy of forecasters to assess their inclusion in future forecasts is not beneficial at this time.'"

[22] As cited by CAC in the preamble to CAC/Centra I-18: "CAC wishes to better understand the practices related to financing Centra, and whether there are any policies in place, in the absence of employees to protect its interests, to avoid it being financially disadvantaged or exposed to higher levels of risk relative to those experienced by Hydro."

The reduction in actual finance costs through the past few years has been to the benefit of all of Centra's ratepayers, for in the absence of these advantageous results, Centra may have had to seek more frequent and/or higher rate increases.

2.2 Updated Changes to the Interest Rate Forecast are Immaterial for 2013/14

Mr. McCormick's opinion that the underlying data used to develop the financial forecasts is "materially different from current forecasts readily available in the market" is unsubstantiated.

The following table provides a summary of the comparative interest rates for 2013/14 (excluding the 1.0% provincial debt guarantee fee):

	IFF12	2013 Spring EO	Change
3 Month Canadian T-Bill	1.30 %	1.05 %	(0.25)%
CDOR03	1.65 %	1.35 %	(0.30)%
Government of Canada 10 Year+ (fixed)	2.55 %	2.50 %	(0.05)%
All-in Manitoba 10 Year+ (fixed)	3.30 %	3.50 %	0.20 %

While the 2013 Spring Economic Outlook 3 month Canadian T-Bill rate shows a 25 basis point reduction over IFF12 for 2013/14, the all-in 10 Year+ interest rate forecast has risen 20 basis points from 3.30% to 3.50%. For the 2013/14 test year, the revenue requirement is not affected by the 20 basis point increase in the forecasted 10 Year+ long term interest rate as the new long term debt financing is forecasted in IFF12 to occur at the end of the fiscal year.

As evidenced in Centra's updated response to PUB/Centra I-9(b), the inclusion of the interest rates from the 2013 Spring Economic Outlook would reduce the revenue requirement by less than one tenth of one percent. Centra views this change to be immaterial to the revenue requirement.

It is important to recognize that the 25-30 basis point change in the short term interest rate forecast between the fall 2012 and spring 2013 stands in sharp contrast to the circumstances at the previous Centra GRA. Then, in the midst of the financial crisis, the change between IFF08 and the 2009 Economic Outlook for 2009/10 was over 300 basis points.

	IFF08	2009 Spring EO	Change
3 Month Canadian T-Bill	3.95 %	0.80 %	(3.05) %
CDOR03	4.05 %	0.90 %	(3.15) %
Government of Canada 10 Year+ (fixed)	4.70 %	3.15 %	(1.65) %
Manitoba Hydro/ Centra 10 Year+ (fixed)	5.30 %	4.75 %	(0.55) %

Centra acknowledged that the interest rate change was material at the previous Centra hearing and accordingly amended its Application at that time.

2.3 Interest Rate Movements During the Past Month

Forecasts do change through time in response to changing market conditions. In his response to PUB/CAC I-8, Mr. McCormick cited May 2013 interest rate forecasts, including the May 8, 2013 forecast from CIBC. The *CIBC Economic Insights* (Appendix 1 of this Rebuttal Evidence) document accompanying this forecast is noteworthy as it not only indicates the ongoing changes occurring within forecaster modeling algorithms, but also provides an estimate of the impact associated with ongoing central bank monetary policy interventions (emphasis added):

> "If you've been caught off guard by today's ultra-low bond yields, join the club. Only those who had wrongly bet on a double-dip recession were calling for a return to 10-year rates at 1.7% or less, yet that's what happened, in both the US and Canada. The reason for the forecast miss is that this bond market rally has been like no other, so models and historical analogies had to be thrown out the window." … "That points to quantitative easing's deliberately distorting effect on the yield curve as a key factor behind today's bond market levels. Estimates on how much supply has been taken off the market's shelves through QE suggest that 10-year yields in the US are at least 100 basis points lower than they would be otherwise, and since Canada's market has moved in lockstep, we've been dragged down to a similar degree." … "We see the Fed raising rates a half-year ahead of current market projections."

The Corporation monitors financial markets on an ongoing basis. As one approaches an actual financing decision, the focus transitions from forecasts to a review of real time financial market conditions. The following table summarizes some of the applicable interest rate movements that have occurred during the past month:

	May 11, 2013	June 11, 2013	Change
3 Month Canadian T-Bill	1.00 %	1.01 %	0.01 %
CDOR03	1.28 %	1.27 %	(0.01)%
Government of Canada 10 Year+ (fixed)	2.21 %	2.53 %	0.32 %
Manitoba Hydro/ Centra 10 Year+ (fixed)	3.17 %	3.48 %	0.31 %

Short term rates have remained anchored to their low interest levels due to continued monetary policy intervention by central banks (although the 3 month Canadian T-Bill rate has inched up to 1.01%). However, the yields for long bonds have begun to trend upward. The following table shows the comparison between the average interest rates for 2013/14 in the 2013 Spring Economic Outlook and the real time indicative rates as at June 11, 2013:

	2013 Spring EO	June 11, 2013	Difference
3 Month Canadian T-Bill	1.05 %	1.01 %	(0.04)%
CDOR03	1.35 %	1.27 %	(0.08)%
Government of Canada 10 Year+ (fixed)	2.50 %	2.53 %	0.03 %
Manitoba Hydro/ Centra 10 Year+ (fixed)	3.50 %	3.48 %	(0.02)%

Note that the actual indicative rates as at June 11, 2013 are already similar to the average 2013/14 forecasted rates, with long term interest rates already approaching or surpassing the forecast due to the recent escalation in the benchmark Government of Canada interest rates. It remains uncertain if the current rise in actual long term interest rates will continue and subsequently overshoot the average long term interest rates forecasted in the 2013 Spring Economic Outlook for 2013/14. Based on Bloomberg data sourced on June 11, 2013 the market expectation forward rate for the Government of Canada 10 Year+ rate for March 31, 2014 is 2.57% (and the forward rate for the 3 month Canadian T-Bill is 1.22%).

In this context, Mr. McCormick's recommended forecast Government of Canada 10 Year+ interest rate for the 2013/14 test year of 2.36%[23] (already 17 basis points below the actual market rate of 2.53% at June 11, 2013) seems unlikely to occur. The Corporation will continue to monitor real time financial market movements, as well as external interest rate forecasts as they refresh their forecasts in light of recent upward interest rate movements.

[23] PUB/CAC I-8.

2.4 Locking in Long Term Interest Rates

Mr. McCormick stated that he "does not see an urgency to lock in long term rates."[24] He also stated that as "attractive as recent rates have been, maintaining a short term debt balance while awaiting a market opportunity may save the consumers some interest costs, both in the near term while the short term facility and in the longer term, as and when, a market window provides a more beneficial long term rate."[25] In Mr. McCormick's response to PUB/Centra I-9 page 27 lines 18-21 he "raises the question of the price to be paid for the interest rate stability of issuing longer term debt, as opposed to issuing debt with a shorter term and facing, with some degree of concern or dread, the risk of higher interest rates at the point of refinancing." He then concludes by stating that "Our degree of concern or dread should be in decline."

The Corporation is of the view that it is inadvisable to wait on the sidelines while long term interest rates rise. The Corporation adjusts its financing activities in response to the interest rate environment. Given today's historically low, long term fixed interest rates, the recent trend upwards in long term interest rates and the market expectations of a rise currently being priced into the forward long term interest rates, the Corporation believes that it is important to reduce the long term average cost of debt by issuing long term debt before the yield curve steepens further.

As noted by CIBC in their May 8, 2013 *Economic Insights*, the impact of quantitative easing has been to keep interest rates artificially low. With the expectation that stimulus may be removed at some point in the near future, interest rates will begin to rise at a pace likely positively correlated with the pace of the removal of the stimulus. Given that short term rates have not increased in the last month, yet long term rates have seen a marked increase, it would seem that the expectation of stimulus removal is being priced into the long end of the yield curve.

Excessive reliance on short term debt, floating rate long term debt or shorter dated fixed rate financings leaves Centra vulnerable to volatile and increasing debt service costs if rates increase; every refinancing brings with it the risk of rising financing costs. Portfolios with a large component of short term financing are subject to a higher risk of increased financing costs than those that make greater use of longer term financing.

The importance of stability was underscored by Moody's Investors Service when they observed in their special commentary on provincial financings that "debt affordability has remained

[24] PUB/CAC I-6 lines 11-12. After reviewing some historical interest rate data, on page 28 lines 12-13 Mr. McCormick suggests that there is a continued trend for "lower rather than higher rates." Note the forecasted interest rates Chart 4 in the Debt Management Strategy show higher short and long interest rates in the future.

[25] PUB/CAC I-6 lines 32-35.

manageable, owing to the persistently low interest rate environment and the demand for Canadian government debt. … As the global economy recovers, we expect interest rates and government funding costs will rise. … Those provinces with higher debt burdens and greater reliance on short-term or variable rate debt financing will be particularly vulnerable."[26]

Stability is enhanced as the weighted average term of the portfolio lengthens.[27] To gain interest cost stability, the Corporation views Centra's debt on a portfolio basis. By breaking down Centra's financing requirements into a few smaller tranches, based on actual Manitoba Hydro issues, Centra is able to take advantage of the opportunities which Manitoba Hydro has in the marketplace. Basing Centra's long term advances on actual Manitoba Hydro long term debt issues is optimal on a consolidated basis as it ensures fair and equitable treatment for both gas and electric ratepayers through a cost recovery mechanism.

The Corporation will continue to utilize short term debt to borrow money from time to time for temporary purposes. This includes supporting Centra's seasonal working capital requirements and to bridge the timing between long term debt issues. Short term debt will not be used to permanently fund capital construction.

2.5 Summary of Centra's Recent Long Term Debt Financings

Treasury operations are performed on a consolidated basis for the Corporation, including Centra. The Corporation does not execute financings specifically for Centra. As indicated in the long term debt term sheets provided in the response to PUB/Centra I-43(b), the interest rates assigned to all of Centra's existing long term advances are based on actual MHEB financings. Since April 1, 2009 Centra has undertaken the following long term debt transactions:

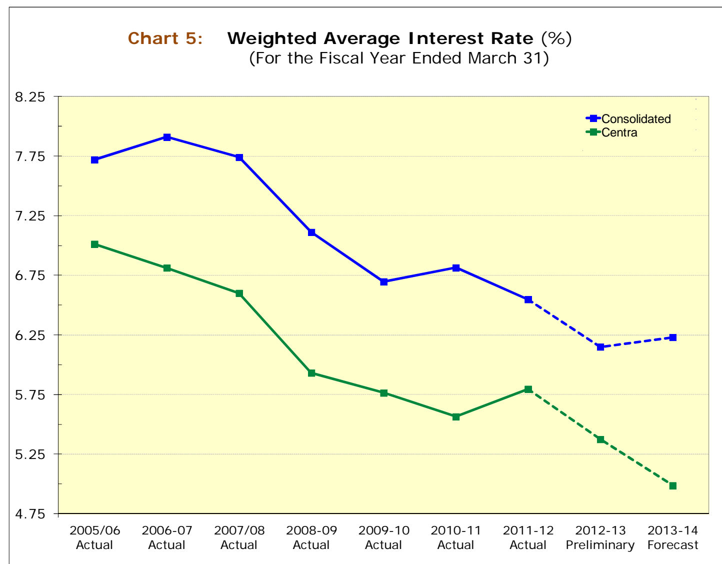
[26] Moody's Investors Service, *Special Comment: Canadian Provinces Consolidating Finances in 2012*, March 8, 2012, page 5.

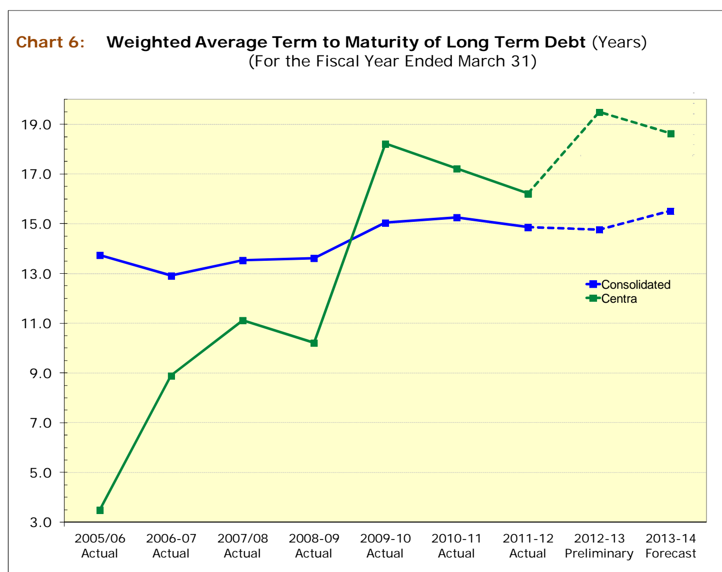
[27] The Manitoba Hydro weighted average term to maturities shown in the Debt Management Strategy document in Chart 6 align with the actual weighted average terms to maturities shown in Manitoba Hydro's response to PUB/MH I-35(h). Both presentations were prepared using the most outward obligation dates on any debt series (the latter of physical debt or forward rate swap maturity dates). In CAC/MSOS/MH II-148(b), the CAC/MSOS asked for "a similar schedule to that in PUB/MH I-35(h), prepared on the alternative basis, so that we may better understand the implication of the swap arrangements." Note that Centra's debt series are advanced from Manitoba Hydro to Centra without interest rate swaps.

1) **Issued new long term debt** for $30,000,000 of capital financing that had accumulated at September 1, 2009.
2) **Refinanced Debt Series CG5** that had a February 22, 2010 maturity of $75,000,000 and a 6.269% yield rate.
3) **Refinanced Debt Series CG4** that had a March 31, 2010 maturity of $18,077,200 and a 5.530% yield rate.
4) **Issued new long term debt** for $30,000,000 of capital financing that had accumulated at March 31, 2010.
5) **Refinanced Debt Series CG1** that had a September 18, 2012 maturity of $62,670,600 and a 5.980% yield rate.

These financing provided Centra with an opportunity:

a) to reduce the weighted average interest rate as shown in Chart 5;
b) to extend the weighted average term to maturity as shown in Chart 6;
c) to minimize the concentration of interest rate refinancing risk by sub-dividing the $75 million and $60 million lump sum amounts into smaller tranches in different maturity segments; and
d) to rebalance its debt portfolio by introducing floating rate long term debt.





In his response to PUB/CAC I-7, Mr. McCormick compared Centra advances to the originating Manitoba Hydro debt issues and stated that "while the interest rates that are ascribed to these advances may be the same, the dates of the advances

may vary."[28] He then observed that "market conditions can change in over 4 months. With the passing of time the rate at which the transaction was initially funded may no longer be representative of the market conditions when Centra was funded." Mr. McCormick also noted that Centra had utilized the front end of ultra-long issues that had been secured by the Corporation. Upon a review of some of the terms, it was Mr. McCormick's opinion that the interest rates on CG10 and CG15 were unreasonable.[29] In order to address these observations and opinions, the following sections will provide an overview of the Centra financing since April 1, 2009.

2.6 The Issuance of New Long Term Debt with CG9

Given the level of capital financing that had accumulated in short term debt through 2009/10, at September 1, 2009 short term debt of $30 million that had been used for capital bridge financing was converted to long term fixed rate debt with CG9. The remaining balance of short term debt at September 30, 2009 was $97 million. The forecasted financing had a term to maturity of 20 years.[30] At September 1, 2009, the most recent new Manitoba Hydro long term debt issues that were issued for new cash requirements and available for assignment were as follows:

Series	Principal	Issue Date	Maturity Date	Yield[31]	Years
C107	$100 million	June 2, 2009	Sept 4, 2012	CDOR03 + 0.420%	3.3
FK-2	$300 million	June 5, 2009	March 5, 2040	5.175%	30.8
FM-4	$100 million	Sept 1, 2009	Sept 1, 2014	CDOR03 + 0.484%	5.0

As FK-2 was the most recent fixed long term debt issue available for assignment to Centra, on September 1, 2009, Centra converted $30 million of cumulative capital financing in the following manner:

[28] For example as was noted by Centra in its response to CAC/Centra I-19 footnote 5: "intercompany long term debt CG10 in the amount of $35 million was issued February 22, 2010 for a five year term maturing February 22, 2015 with a coupon and yield rate of CDOR03 + 0.484%. This issue originated as Manitoba Hydro FM-4 ($100 million principal, issued September 1, 2009 with a September 1, 2014 maturity)."

[29] PUB/CAC I-7 lines 30-31. Also PUB/CAC I-4 lines 6-8: "Mr. McCormick would view the spread or margin of 48.4 basis points from the benchmark rate as unreasonable for a 5 year floating rate Manitoba credit instrument issued in spring 2010." Also in his response to PUB/CAC I-7 lines 7-11: "Mr. McCormick is of the view that a straight pass through of a rate derived from a Manitoba BA based floating rate is more appropriate. Mr. McCormick is of the view that a reasonable spread or margin over benchmark for an issue in the market similar to series 10 would have been in the range of 18 to 23 basis points."

[30] Centra's forecasted new long term debt financings have a 20 year term to maturity. This forecasted 20 year term to maturity is aligned with the 10 year+ Canadian interest rate forecast which utilizes the average of 10 and 30 year information. Actual financings will vary from forecast. During the past number of years, the Corporation's actual long term financing has included issuance in various terms throughout the yield curve and it is the Corporation's intention to continue with this flexible practice.

[31] The yields shown in this table show Manitoba Hydro's actual all-in contract prices for the specified debt series and include any associated credit spreads and transactions costs.

Series Name	Amount	Yield Rate	Term	MHEB Series
CG9	$30 million	5.175%	30 years	FK-2

At September 1, 2009 the indicative market conditions in effect for a 30 year financing was 4.776%[32] reflective of the fact that long term yields were dropping during this time. Nonetheless, with this financing, using assigned interest rates and terms to maturity, Centra lowered the overall weighted average of the long term debt portfolio while extending the weighted average term to maturity.

2.7 The Refinancing of CG5 with CG10, CG11 and CG12

Due to an inversion in the yield curve for fixed rate financing in the long end of the yield curve, it was more cost effective for the Corporation to issue 40 year, 50 year and 53 year ultra-longs than to issue debt in the 20-30 year space. These ultra-long debt issues were in keeping with the extended asset service lives for Manitoba Hydro's long-lived assets. As Centra's new long term debt was forecast to be for a 20 year term, the assignment to Centra utilized the front end of the originating fixed rate debt issues.

Centra Debt Series CG5 had a February 22, 2010 maturity of $75 million and a 6.269% yield rate. The forecasted refinancing of CG5 had a term to maturity of 20 years and an interest rate for rate setting purposes of 4.00%.[33] At February 22, 2010 the most recent new Manitoba Hydro long term debt issues that were issued for new cash requirements and available for assignment were as follows:

Series	Principal	Issue Date	Maturity Date	Yield[34]	Years
FM-4	$100 million	Sept 1, 2009	Sept 1, 2014	CDOR03 + 0.484%	5.0
FN	$200 million	Oct 27, 2009	March 5, 2050	4.726%	40.0
C109	$50 million	Nov 13, 2009	March 5, 2063	4.638%	53.3
C110	$125 million	Nov 23, 2009	March 5, 2060	4.629%	50.3

Accordingly, on February 22, 2010 Centra refinanced CG5 in the following manner:

[32] The Bloomberg C30230y rate for Province of Manitoba on September 1, 2009 was 4.716% + 0.060% transaction costs = 4.776% all-in yield.

[33] The interest rate for this forecasted refinancing was 5.30% in the original filing for the 2009/10 & 2010/11 Centra GRA (all interest rates shown are excluding the provincial debt guarantee fee). Centra's May 2009 update had a forecasted long term interest rate of 4.75%. As per Board Order 128/09, the long term interest rate forecasts for 2009/10 and 2010/11 were 4.00%.

[34] The yields shown in this table show Manitoba Hydro's actual all-in contract prices for the specified debt series and include any associated credit spreads and transactions costs.

Series Name	Amount	Yield Rate	Term	MHEB Series
CG10	$35 million	CDOR03 + 0.484%[35]	5 years	FM-4
CG11	$30 million	4.726%	20 years	FN
CG12	$10 million	4.638%	27.5 years	C109
Weighted Average		**4.439%**	**14 years**	

With this portfolio refinancing, the weighted average term to maturity was 14 years with an initial weighted average interest rate of 3.974%. Using the fixed equivalency of 3.14% for CG10, on a cash flow basis over the entire debt streams of the portfolio refinancing, the effective yield rate was 4.439%. At February 22, 2010 the indicative market conditions in effect for a 15 year financing was 4.890%.[36] With this portfolio refinancing, using assigned interest rates and terms to maturity, Centra reduced the concentration of interest rate refinancing risk by sub-dividing the $75 million lump sum amount into smaller maturity segments with different maturity dates and lowered its relative cost of financing by approximately 45 basis points (4.890% - 4.439% = 0.451%). In addition to extending the term to maturity of the Centra debt portfolio, this portfolio refinancing also reduced Centra's overall weighted average interest rate as the 6.269% yield rate for CG5 was refinanced at February 22, 2010 with an effective yield rate of 4.439%. This refinancing also introduced long term floating rate debt into the Centra debt portfolio.

Mr. McCormick's suggestion (on page 36 of his Written Evidence on line 12-15) [37] that Centra debt series CG10 was not based on an actual transaction in incorrect.

As Centra indicated in its response to CAC/Centra I-19 footnote 5:

> "intercompany long term debt CG10 in the amount of $35,000,000 was issued February 22, 2010 for a five year term maturing February 22, 2015 with a coupon and yield rate of CDOR03 + 0.484%. This issue originated as Manitoba Hydro

[35] At the time of debt issuance, the Corporation is economically indifferent between fixed or floating long term debt of the same term to maturity. For example, intercompany long term debt CG10 in the amount of $35 million was issued February 22, 2010 for a five year term maturing February 22, 2015 with a coupon and yield rate of CDOR03 + 0.484%. This issue originated as Manitoba Hydro FM-4 ($100 million principal, issued September 1, 2009 with a September 1, 2014 maturity). At the original issue date, using implied forward interest rates within the capital markets, the floating rate long term debt price of CDOR03 + 0.484% had an equivalent all-in yield rate of 3.14%. The resultant initial weighted average yield rate for the combined CG5 refinancing was **3.974%.**

[36] The Bloomberg C30215y rate for Province of Manitoba on February 22, 2010 was 4.830% + 0.060% transaction costs = 4.890% all-in yield.

[37] On page 36, lines 12-15 of Mr. McCormick's Evidence, he states: "From the recently received description contained in note 5 of CAC/Centra I-19, the 48.4 basis point spread was mathematically derived based on the assumption therein set out to achieve a theoretical point of indifference related to the interest costs of the debt series described therein." On page 34 of his written evidence in footnote 86, Mr. McCormick also states that the "response to CAC/Centra I-14(p) and note 5 in CAC/Centra I-19, seems to suggest that the 48.4 basis point spread is a manufactured rate calculated to create an economic equivalence in a swap transaction, rather than a rate reflecting the new issue market at the date of transaction."

1 FM-4 ($100 million principal, issued September 1, 2009 with a September 1,
2 2014 maturity)."[38]
3
4 Mr. McCormick stated in response to PUB/CAC I-7 that he relied upon Appendix 48 from the
5 2010/11 & 2011/12 Electric GRA in researching Manitoba Hydro debt issues and that he had
6 located the term sheets for FM and FM-4. Having seen these terms sheets and FM4's explicitly
7 stated floating contract rate of CDOR03 + 0.484%, Mr. McCormick's conclusion in response to
8 PUB/Centra I-4 that FM-4/ CG10 was "lacking a specific precedent of identical term and
9 identical issue date to validate his opinion" is unfounded.
10
11 Instead of relying on the actual Manitoba Hydro term sheets for the transacted financing and the
12 assigned rates, Mr. McCormick instead provided a limited sample of Province of Manitoba
13 floating rate debt issues[39] and then came to "the view that a reasonable spread or margin over
14 benchmark for an issue in the market similar to series 10 would have been in the range of 18 to
15 23 basis points."
16
17 Unfortunately, this analysis eliminated key information regarding the financial market conditions
18 in the early stages of the financial crisis. For example, in response to sharply escalating margins
19 and investor appetite, the use of floating rate notes with shorter dated maturities became more
20 prevalent. During that time, these matured floating rate issues had elevated margins which
21 provided a more fulsome context to the discussion of the FM-4 margin. For example, C102
22 issued by Manitoba Hydro on January 15, 2009 with a 1.5 year term to maturity, had a contract
23 price of CDOR03 + 42 basis points. C107 issued June 2, 2009 with a 3.3 year term to maturity
24 had a contract price of CDOR03 + 42 basis points. Within the context of these financial market
25 conditions, the FM-4 financing which was executed in September 2009 with a 5 year term to
26 maturity had a relatively attractive rate of CDOR03 + 48.4 basis points. The financial market
27 conditions continue to be volatile and margins on longer dated floating rate long term debt
28 remain elevated.[40]
29

[38] The CG10 term sheet supplied by Centra in response to PUB/Centra I-43(b) on page 5 also states: "Long term inter-company advance Series CG10 was issued to Centra Gas Manitoba by the MHEB in order to partially refinance long term inter-company advance Series CG5 that had a February 22, 2010 maturity of $75,000,000. The interest rate was assigned based on MHEB Series FM-4."

[39] Mr. McCormick did not identify all of the provincial debt issues in his analysis. As stated in his response to PUB/Centra I-4 (lines 12-16), "Mr. McCormick observes that there also were other Manitoba floating rate debt instruments issued in 2010 and 2011, but for shorter maturities, ranging from 1.2 to 3.1 years, and which have since matured. Believing that the difference in term would arguably make them less comparable, he has not collected their spread or margin information."

[40] As noted in Centra's response to CAC/Centra I-14 footnote 6, "As at May 9, 2013 the indicative asset swap pricing for 5, 10 and 30 year floating rate long term debt is approximately CDOR03 + 23 basis points; CDOR03 + 45 basis points; and CDOR03 + 76 basis points respectively."

2.8 The Refinancing of CG4 with CG13

Centra Debt Series CG4 had a March 31, 2010 maturity of $18 million and a 5.530% yield rate. The forecasted refinancing of CG4 had a term to maturity of 20 years. Accordingly, on March 31, 2010 Centra refinanced CG4 in the following manner:

Series Name	Amount	Yield Rate	Term	MHEB Series
CG13	$20 million	4.638%	27.5 years	C109

At March 31, 2010 the indicative market conditions in effect for a 30 year financing was 4.799%.[41] With this refinancing, using assigned interest rates and terms to maturity, Centra lowered its relative cost of financing by approximately 16 basis points (4.799% - 4.638% = 0.161%). In addition to extending the term to maturity of the Centra debt portfolio, this portfolio refinancing also reduced Centra's overall weighted average interest rate as the 5.530% yield rate for CG4 was refinanced at March 31, 2010 with a yield rate of 4.638%.

2.9 The Issuance of New Long Term Debt with CG14

Centra's short term debt requirements are typically at or near their lowest point within the fiscal year at year end, with the floating rate percentage increasing to the upper target and policy boundaries during Q2 and Q3 as natural gas inventories increase in preparation for the winter heating season. At March 31, 2010 the short term debt balance prior to conversion to long term debt was $46.5 million. With the debt portfolio rebalancing that occurred in February – March 2010, short term debt of $30 million that had been used for capital bridge financing was converted to long term fixed rate debt with CG14. The remaining balance of short term debt at March 31, 2010 was $16.5 million. The forecasted financing had a term to maturity of 20 years. Accordingly, on March 31, 2010 Centra converted $30 million of cumulative capital financing in the following manner:

Series Name	Amount	Interest Rate	Term	MHEB Series
CG14	$30 million	4.629%	25 years	C110

At March 31, 2010 the indicative market conditions in effect for a 30 year financing was 4.799%.[42] With this refinancing, using assigned interest rates and terms to maturity, Centra lowered its relative cost of financing by approximately 17 basis points (4.799% - 4.629% = 0.170%). In addition, this financing extended the term to maturity of the Centra debt portfolio. Combined with the remaining $16.5 million short term debt balance and after the introduction of

[41] The Bloomberg C30230y rate for Province of Manitoba on March 31, 2010 was 4.739% + 0.060% transaction costs = 4.799% all-in yield.

1 $35 million of floating rate long term debt with CG10, the aggregate percentage of short and
2 floating rate debt at March 31, 2010 was 16.4%.[43]
3
4 **2.10 The Refinancing of CG1 with CG15, CG16 and CG17**

5 Centra Debt Series CG1 had a September 18, 2012 maturity of $62.7 million and a 5.980%
6 interest rate. The forecasted refinancing of CG1 had a term to maturity of 20 years. At that time,
7 the most recent new Manitoba Hydro long term debt issues for that were issued for new cash
8 requirements and available for assignment were as follows:
9

10 Series	Principal	Issue Date	Maturity Date	Yield[44]	Years
11 FN-2	$75 million	March 28, 2012	March 5, 2050	3.629%	38.0
12 GA	$300 million	June 5, 2012	March 5, 2043	3.413%	30.8
13 FN-3	$50 million	July 12, 2012	March 5, 2050	3.281%	37.7
14 C129	$50 million	July 31, 2012	Sept 5, 2052	3.178%	40.1
15 GC	$296 million	Sept 6, 2012	Sept 6, 2022	CDOR03 + 0.4985%	10.0

16
17 As Centra had sufficient long term floating rate debt within its debt portfolio, fixed rate long term
18 debt was selected for assignment. Accordingly, on September 18, 2012 Centra refinanced CG1
19 in the following manner:
20

21 Series Name	Amount	Interest Rate	Term	MHEB Series
22 CG15	$20 million	3.178%	10 years	C129
23 CG16	$20 million	3.281%	21 years	FN-3
24 CG17	$20 million	3.413%	30 years	GA
25 **Weighted Average**		**3.329%**	**20.3 years**	

26
27 With this portfolio refinancing, the weighted average term to maturity was 20.3 years with an
28 initial weighted average interest rate of 3.291%. On a cash flow basis, over the entire debt
29 streams of this portfolio refinancing, the effective yield rate was 3.329%. At September 18, 2012
30 the indicative market conditions in effect for a 20 year financing was 3.529%.[45] With this
31 portfolio refinancing, using assigned interest rates and terms to maturity, Centra reduced the
32 concentration of interest rate refinancing risk by sub-dividing the $60 million lump sum amount
33 into smaller maturity segments with different maturity dates and lowered its relative cost of

---

[42] The Bloomberg C30230y rate for Province of Manitoba on March 31, 2010 was 4.739% + 0.060% transaction costs = 4.799% all-in yield.

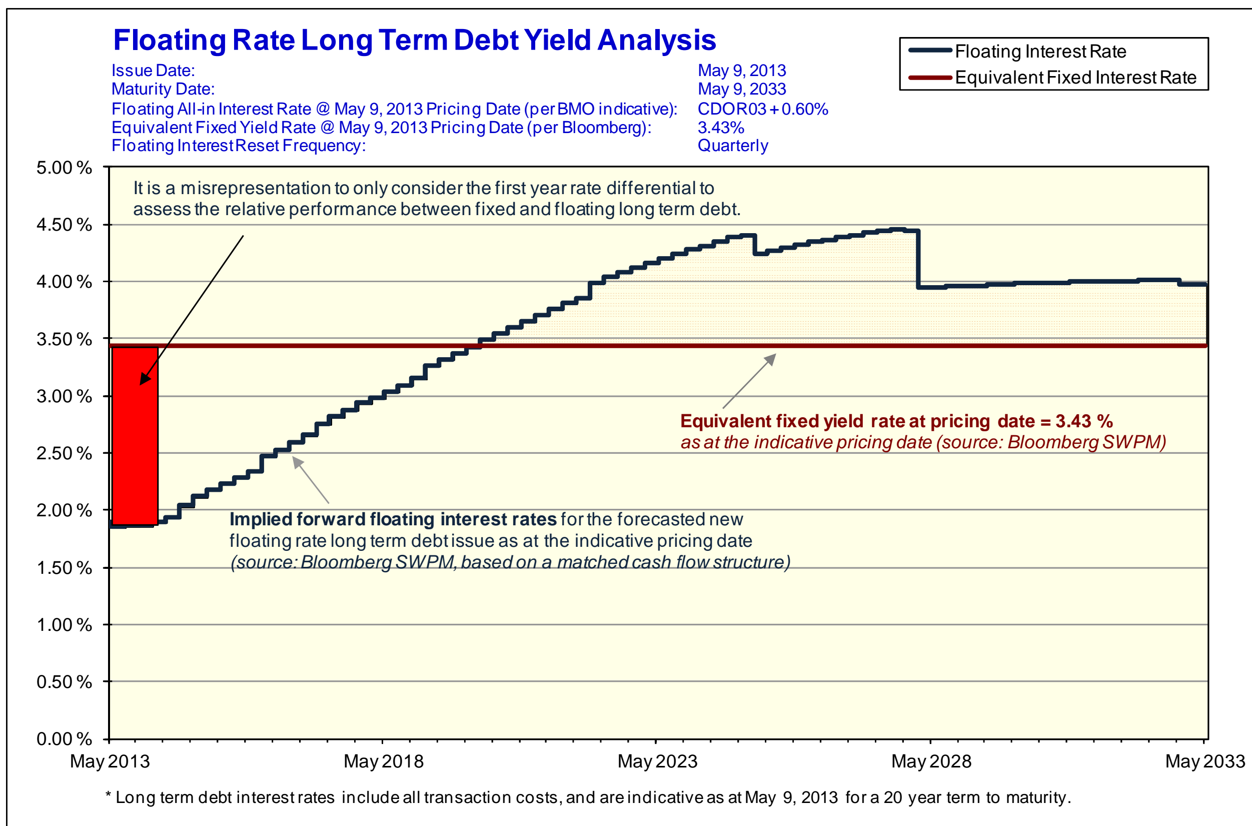
[43] For numerical information regarding Centra's debt structure by quarter, please see Centra's response to CAC/Centra I-18 Attachment 1, and for a graphical depiction please see Charts 1 and 2 in Centra's response to CAC/Centra I-19.

[44] The yields shown in this table show Manitoba Hydro's actual all-in contract prices for the specified debt series and include any associated credit spreads and transactions costs.

1 financing by approximately 20 basis points (3.529% - 3.329% = 0.200%). In addition to
2 extending the term to maturity of the Centra debt portfolio, this portfolio refinancing also reduced
3 Centra's overall weighted average interest rate as the 5.980% yield rate for CG1 was refinanced
4 at September 18, 2012 with an effective yield rate of 3.329%.
5

6 **2.11 Yield Performance and Measurement (CAC/Centra 14p)**

7 As described in Centra's response to CAC/Centra I-14(p), at the date of debt origination, the
8 Corporation is economically indifferent between fixed or floating rate long term debt for the
9 same term to maturity. It is incorrect to represent floating rate long term debt as having less cost
10 to the consumer than fixed rate long term debt and it is a misrepresentation to only consider the
11 first year rate differential (shown in red) to assess the relative performance between fixed and
12 floating rate long term debt.

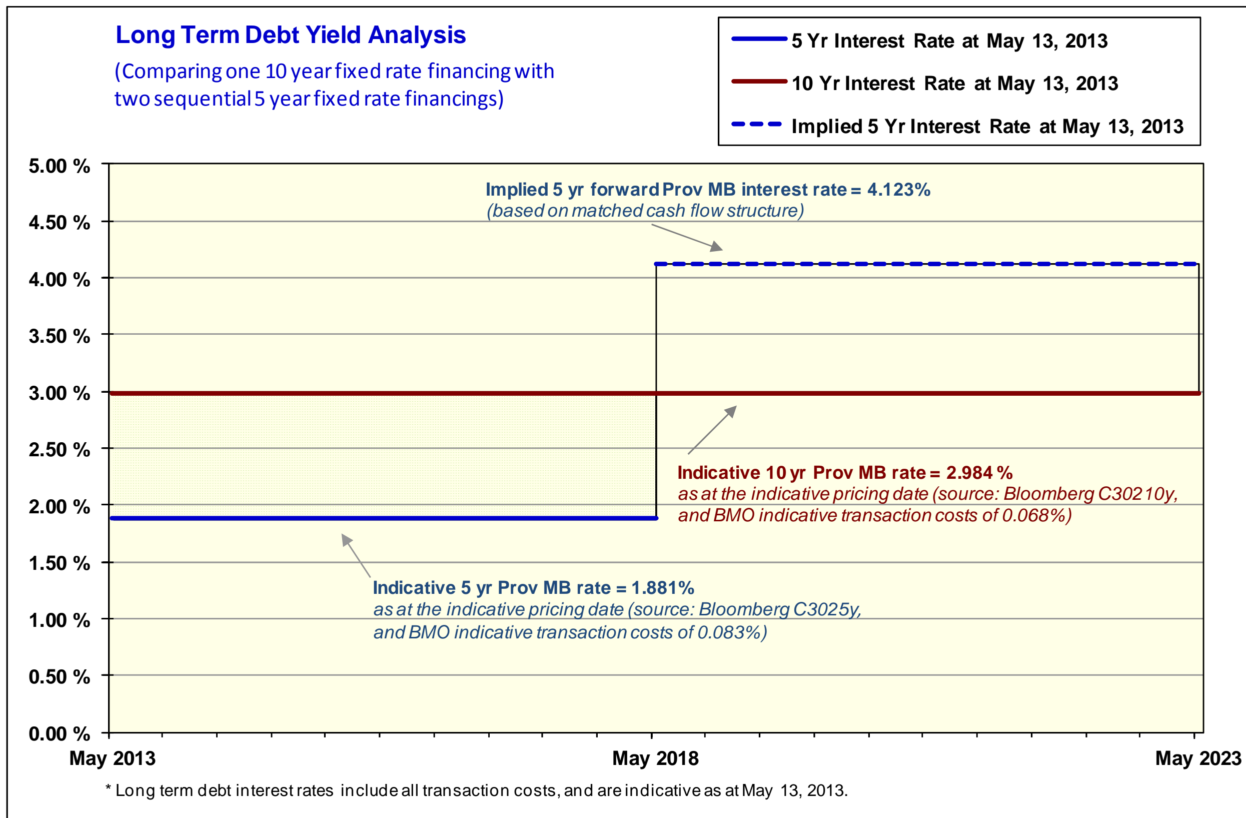


13

14 On page 41 of his Written Evidence, Mr. McCormick stated that "Centra explains this calculated

[45] The Bloomberg C30220y rate for Province of Manitoba on September 18, 2012 was 3.469% + 0.060% transaction costs = 3.529% all-in yield.

1 indifference point with an example that focuses on its interest rate forecast as the driver." To
2 the contrary, Centra explicitly stated on the chart that the information was sourced from
3 Bloomberg SWPM screens. This real time traded and executable Bloomberg information is
4 drawn from the participants within the capital markets and is not driven by Centra's interest rate
5 forecast.
6
7 Floating rate debt has higher interest rate risk than fixed rate debt due to its inherent exposure
8 to interest rate fluctuations at the quarterly interest rate reset dates. Depending upon
9 subsequent financial market movements, actual interest reset rates for floating rate debt may be
10 higher or lower than the original implied forward interest rates.
11
12 The same concept also applies to the refinancing considerations when deciding between
13 varying debt terms to maturity along a defined debt stream. Mr. McCormick discusses this
14 matter in his response to PUB/Centra I-5, wherein he discussed the concept of having two serial
15 or sequential 5 year financings as an alternative to a single 10 year financing. In this context,
16 the choice is essentially between a 10 year fixed rate financing versus a 10 year floating rate
17 financing that has a single interest rate reset date at 5 years. In order to assist further with this
18 topic area, Centra has produced the following chart depicting the long term debt yield analysis



1 for his May 13, 2013 date, complete with indicative pricing, estimated transaction costs and the
2 implied 5 year forward Province of Manitoba interest rate. In order to complement the
3 Bloomberg information sourced by Mr. McCormick for the 5 and 10 year terms as at May 13,
4 2013 Centra also added BMO's indicative transaction costs to the estimated interest rates. In so
5 doing, the estimated rates more comparable to the all-in yield rates. Centra has also calculated
6 the all-in implied 5 year forward Province of Manitoba yield rate based on a matched cash flow
7 structure.
8
9 **2.12 Refinancing Risk and Interest Rate Risk**

10 Centra's refinancing risk has been significantly reduced through the debt management activities
11 undertaken by the Corporation during the past few years as Centra's legacy debt has been
12 refinanced. See Centra's response to CAC/Centra I-19.
13
14 "Mr. McCormick would prefer a policy which, in addition to setting a limit on maturities in a 12
15 month period, also placed a concentration limit on some longer period, perhaps between 4 or 6
16 years." [46] He also provided debt maturity charts depicting calendar year information. The
17 Corporation follows fiscal year financial reporting, with the current portion of long term debt
18 being the long term debt that is maturing in the 12 months from the balance sheet date. The
19 Corporation has previously identified the measurement of its interest rate risk profile on this 12
20 month forward basis (see the Debt Management Strategy documents provided in Centra's
21 response to CAC/Centra I-14).
22
23 Given the level and frequency of present and future financings, a 4 or 6 year guideline is not
24 practical.
25
26 **2.13 Conclusions**

27 The following is a summary of Centra's positions regarding its interest rate forecasting and debt
28 management practices:
29
30 - Centra utilized current interest rate forecasts during the development of the initial
31 Application. The Corporation has provided an update of its forecast interest rates. The
32 changes for 2013/14 are minor and do not materially impact the revenue requirement.
33 Mr. McCormick's opinion regarding the materiality of the difference is unfounded.
34
35 - The interest rate forecast is unbiased as it is not developed with the intent of selecting or
36 encouraging one outcome over others. From a risk management perspective, the

[46] PUB/CAC I-5 lines 14-16.

externally produced source information provides beneficial insight into the expressed range and distribution of potential interest rates. Centra does not support removing forecasters from the pool in order to purposely bias the combined forecast. Mr. McCormick's opinion that the Board should remove Informetrica in order to produce a lower forecast result demonstrates selection bias.

- Centra believes that it is a mischaracterization to refer to Centra's ability to take advantage of the prolonged low interest rate environment as "a chronic uncorrected upward bias in the results of the forecast methodology when compared to actual results."

- Centra has complied with Directive No. 9 interest rate forecasting adjustments. Directive No. 9(d) on the retrospective testing of interest rate forecasters was extensively canvassed at the 2010/11 & 2011/12 Electric GRA. Centra considers that Directive No. 9 has been settled.

- Mr. McCormick's recommended forecast Government of Canada 10 Year+ interest rate for the 2013/14 test year of 2.36% (already 17 basis points below the actual market rate of 2.53% as at June 11, 2013 and 21 basis points below the Bloomberg forward Canada 10 Year+ interest rate for March 31, 2014 of 2.57%) is unlikely to occur. Note that the rate described by Mr. McCormick does not include transaction costs and credit spreads.

- Mr. McCormick's proposed strategy to seek near term cost savings by maintaining a higher weighting of short term debt in the capital structure, is both risky and ill-timed given the expectation of rising interest rates. The Corporation is of the view that it is inadvisable to wait on the sidelines while long term interest rates rise. The Corporation will continue to utilize short term debt to borrow money for temporary purposes. This includes supporting Centra's seasonal working capital requirements and to bridge the timing between long term debt issues.

- The interest rates assigned to all of Centra's existing long term advances are based on actual MHEB financings. CG10 and CG15 were part of portfolio refinancing and Centra was able to outperform indicative market conditions in effect on the assignment date for the weighted average interest rates and weighted average term to maturities.

- Centra's refinancing risk has been significantly reduced through the debt management activities undertaken by the Corporation during the past few years.

ECONOMIC INSIGHTS
May 8, 2013

The Safe Asset That Isn't

by Avery Shenfeld

Economics

Avery Shenfeld
(416) 594-7356
avery.shenfeld@cibc.ca

Benjamin Tal
(416) 956-3698
benjamin.tal@cibc.ca

Peter Buchanan
(416) 594-7354
peter.buchanan@cibc.ca

Warren Lovely
(416) 594-8041
warren.lovely@cibc.ca

Emanuella Enenajor
(416) 956-6527
emanuella.enenajor@cibc.ca

Andrew Grantham
(416) 956-3219
andrew.grantham@cibc.ca

"We see the Fed raising rates a half-year ahead of current market projections..."

If you've been caught off guard by today's ultra-low bond yields, join the club. Only those who had wrongly bet on a double-dip recession were calling for a return to 10-year rates at 1.7% or less, yet that's what happened, in both the US and Canada. The reason for the forecast miss is that this bond market rally has been like no other, so models and historical analogies had to be thrown out the window.

Looking at other asset classes gives a clue to what's behind this past year's rally. Typically, government bonds love weak economic news, since sluggish growth means low short term rates for longer, and little inflation pressure. Japan's protracted period of 1% ten-year rates was the poster child for that sort of bull market for bonds. It came alongside other asset market performance that was consistent with economic malaise, including equity and real estate markets that never recovered their former glory.

Yet these other signposts of economic worry are simply not present this time. US equities are setting new highs, hardly a signal of trouble ahead, and its housing prices are on the rise. Corporate spreads, including those on high-yield (now not-so-high yield) bonds have narrowed. Demand for Apple's massive issue was equally massive, but even the frontier market Rwanda borrowed at a rate less than Italy would have not so long ago. All of those phenomena typically are associated with economic optimism.

That points to quantitative easing's deliberately distorting effect on the yield curve as a key factor behind today's bond market levels. Estimates based on how much supply has been taken off the market's shelves through QE suggest that 10-year yields in the US are at least 100 basis points lower than they would be otherwise, and since Canada's market has moved in lockstep, we've been dragged down to a similar degree.

The other clue lies in looking at yields in Germany—lower still than those in North America. There's been no ECB version of QE, at least not yet. But there has been a fear factor plaguing the sovereign and bank debt of Eurozone countries. The rush to the safety of German issues has so depressed yields that it's created demand for not-so-abysmally low yields elsewhere, including Canada.

While government bonds are considered a safe asset, buying long-dated Government of Canada or US Treasury bonds at these ultra-low rates could prove to be anything but safe. It's been painful to be short, but locking in money for a decade at what will likely be a negative real yield will be equally painful.

We see the Fed raising rates a half-year ahead of current market projections (see pages 7-8), and the market will fear that instead of just raising overnight rates aggressively, the central bank will either shorten term or pare its holdings in order to balance the impact of rising rates across the curve.

Even a snap back to a historically low 2½% 10-year yield will bring significant capital losses. The bottom line: government bonds make a nice dating partner now, but don't get married to those positions.

http://research.cibcwm.com/res/Eco/EcoResearch.html

MARKET CALL

- The market, and economists, got too gloomy about Canada's prospects, and upside surprises in Q1 reports have seen the loonie regain most of its earlier lost ground. But we see the tone of economic reports turning softer again over the summer, prompting a new and perhaps slightly larger depreciation. We expect a return to stronger C$ levels come 2014 as resource prices gather succour from improved global growth.

- We've also left intact our forecast of a Q1 2015 timing for the first rate by the Bank of Canada, although the odds of a hike in late 2014 have admittedly improved given an upgraded picture for Q1 2013 economic growth. We will wait for the first pronouncements from incoming Governor Poloz and evidence on Q2 growth before making any formal adjustments to that projection. But we moved up our forecast for the first Fed hike from mid-2015 to very early that year, as our analysis of demographic trends points to an earlier achievement of a 6.5% jobless rate (see pages 7-8).

- Bond yields came off recent lows in the wake of a stronger than expected payrolls report stateside. While the climb in yields will be choppy, given our call for softer GDP reports in Q2/Q3, bonds are vulnerable once eyes focus on prospects for faster growth when US fiscal tightening lightens up in 2014.

INTEREST & FOREIGN EXCHANGE RATES

		2013			2014				2015
END OF PERIOD:		**7-May**	**Sep**	**Dec**	**Mar**	**Jun**	**Sep**	**Dec**	**Mar**
CDA	Overnight target rate	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.25
	98-Day Treasury Bills	0.97	0.95	0.95	0.95	0.95	0.95	1.05	1.25
	2-Year Gov't Bond	0.98	1.00	1.00	1.20	1.40	1.45	1.50	1.85
	10-Year Gov't Bond	1.82	2.00	2.40	2.55	2.70	2.80	2.85	2.95
	30-Year Gov't Bond	2.48	2.50	2.90	3.00	3.05	3.10	3.15	3.25
U.S.	Federal Funds Rate	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.25
	91-Day Treasury Bills	0.03	0.15	0.15	0.15	0.15	0.15	0.15	0.20
	2-Year Gov't Note	0.22	0.30	0.40	0.45	0.60	0.80	1.10	1.30
	10-Year Gov't Note	1.78	2.00	2.45	2.60	2.70	2.75	2.80	2.95
	30-Year Gov't Bond	3.00	3.05	3.60	3.70	3.75	3.80	3.90	4.00
Canada - US T-Bill Spread		0.94	0.80	0.80	0.80	0.80	0.80	0.90	1.05
Canada - US 10-Year Bond Spread		0.04	0.00	-0.05	-0.05	0.00	0.05	0.05	0.00
Canada Yield Curve (30-Year — 2-Year)		1.51	1.50	1.90	1.80	1.65	1.65	1.65	1.40
US Yield Curve (30-Year — 2-Year)		2.78	2.75	3.20	3.25	3.15	3.00	2.80	2.70
EXCHANGE RATES	CADUSD	1.00	0.95	0.97	0.98	0.99	1.00	1.02	1.01
	USDCAD	1.00	1.05	1.03	1.02	1.01	1.00	0.98	0.99
	USDJPY	99	101	103	101	103	100	98	98
	EURUSD	1.31	1.25	1.24	1.23	1.23	1.25	1.28	1.27
	GBPUSD	1.55	1.48	1.49	1.49	1.50	1.52	1.56	1.55
	AUDUSD	1.02	0.96	0.99	1.01	1.03	1.04	1.06	1.05
	USDCHF	0.94	0.98	0.99	1.01	1.02	1.00	1.00	1.01
	USDBRL	2.01	1.93	1.95	1.94	1.97	2.01	2.05	2.05
	USDMXN	12.03	12.50	12.50	12.52	12.65	12.69	12.75	12.75

Forecast Update: Eyes on the Prize

Avery Shenfeld, Emanuella Enenajor and Andrew Grantham

Investors face a patch of mildly disappointing economic news ahead, but need to keep their eyes on the longer term prize. The US and Canada both opened 2013 at a decent, if unexciting 2½% pace, which surprised on the downside in the US and on the upside in Canada. Still ahead is the full bite of this year's fiscal restraint, and growth rates in both countries could run below 2% in the second and third quarters. But the surprise thereafter will be all on the plus side, if less so in Canada in terms of domestic growth, but perhaps more so in Canada in terms of profits and equity performance.

Globally, we're increasingly optimistic about the ability of heretofore sad-sack economies, those of the Eurozone and Japan, to contribute more meaningfully to global growth in 2014. While we retain our 3.0% global growth forecast for 2013, we've upped our next year target by two ticks to 4.4% (Table 1). That upside surprise poses a material risk to today's ultra-low bond yields (see page 1).

A Policy Turn in Europe

Europe is a clear swing factor in these projections, shifting from recession in 2013 to growth next year. On the ground, there's not much to cheer; the central bank's recent rate cut won't do much, given that a steady drop in lending rates has been more than countered by business investment pessimism, leaving loan volumes to business tumbling. Without support from a targeted program to buy the weaker sovereign debt, and with negligible progress towards a banking union, lending rates remain elevated in Italy, Spain and Portugal.

Table 1

Real GDP Growth Rates

	2012A	2013F	2014F
World*	3.2	3.0	4.4
US	2.2	2.0	3.3
Canada	1.8	1.7	2.4
Euroland	-0.5	-0.7	1.2
Japan	2.0	1.2	2.0
China	7.8	7.8	8.4

*at Purchasing Power Parity

But the politics of austerity is changing. Several countries have stepped away from earlier fiscal targets (Chart 1), and appear to be gaining the assent of Germany in adopting a softer line on restraint. While some of that is simply due to revenue shortfalls, the momentum towards milder spending restraint is likely to accelerate after the German elections. That will leave more room for growth to emerge against the backdrop of easier fiscal policy and a weaker euro in 2014.

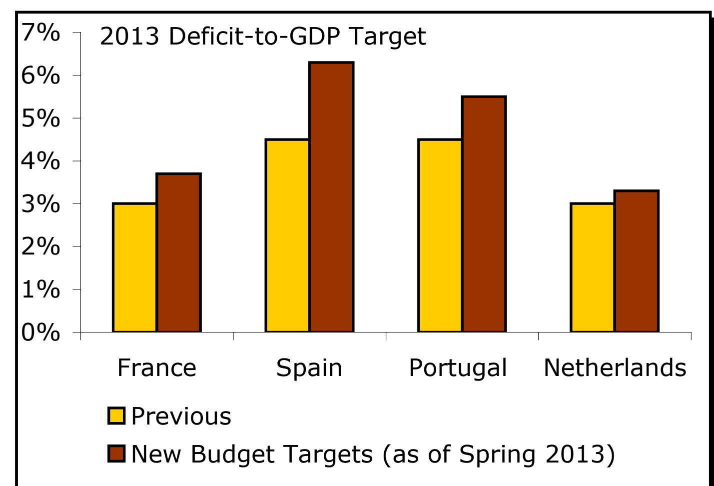
Canada's Mixed Picture

Upwardly revised data for Canadian January GDP and retail sales, accompanied by fresh news on February/March, more than reversed all of the downgrades we had made to our Q1 forecast. With Q1 headed for a 2.7% gain, we lifted our 2013 forecast by two ticks to 1.7%. That annual figure was dented by weak growth late in 2012, and captures headwinds from fiscal policy and a turn in home building that will extend into 2014. It's only our optimism about global growth, and its push to exports and capital spending, that has us sticking to a stronger 2.4% outlook for Canada next year (Table 2).

While that will still trail the US pace in both years, you don't invest in real GDP. What counts for equities is nominal GDP and profits. With resource prices lifted on better growth in 2014, Canada's nominal GDP will be much closer in line with American results at a roughly 5%

Chart 1

Europe Accedes to Wider Deficits



Source: Eurostat, Reuters, CIBC

Table 2

Canada Forecast Detail

	12:4A	13:1F	13:2F	13:3F	13:4F	14:1F	2012A	2013F	2014F
GDP At Market Prices ($Bn)	1,833	1,849	1,862	1,883	1,909	1,931	1,818	1,876	1,973
% change	1.9	3.4	2.8	4.6	5.7	4.7	3.1	3.2	5.2
Real GDP ($2007 Bn)	1,664	1,675	1,682	1,690	1,698	1,708	1,658	1,686	1,726
% change	0.6	2.7	1.8	1.9	1.8	2.4	1.8	1.7	2.4
Final Domestic Demand	2.6	0.7	1.1	1.3	1.5	1.6	1.9	1.4	1.5
Household Consumption	2.7	1.9	2.0	2.2	2.1	1.5	1.9	2.1	1.7
Total Govt. Expenditures	2.4	-1.5	-1.3	-1.0	-0.8	-0.7	-0.6	-0.4	-0.5
Residential Construction	0.8	-2.0	-1.0	-1.5	-2.0	-2.5	5.8	-1.1	-2.4
Business Fixed Investment*	3.3	1.1	2.5	3.7	5.1	8.3	5.1	2.6	6.4
Inventory Change ($2007 Bn)	2.7	4.8	5.7	5.6	7.8	7.5	5.5	6.0	6.0
Exports	1.2	8.3	5.2	6.7	5.3	8.0	1.6	3.5	7.6
Imports	-1.0	3.0	3.3	4.4	5.6	4.7	2.9	2.5	4.6
GDP Deflator	1.5	0.7	1.0	2.6	3.8	2.2	1.3	1.5	2.7
CPI (yr/yr % chg)	0.9	0.9	0.8	1.4	1.9	1.7	1.5	1.3	2.1
Core CPI (yr/yr % chg)	1.2	1.3	1.3	1.6	1.9	1.7	1.7	1.5	1.8
Unemployment Rate (%)	7.2	7.1	7.3	7.4	7.2	7.0	7.3	7.2	6.8
Employment Change (K)	103	33	-2	41	69	78	201	188	261
Housing Starts (AR, K)	202	174	183	186	182	178	215	181	178

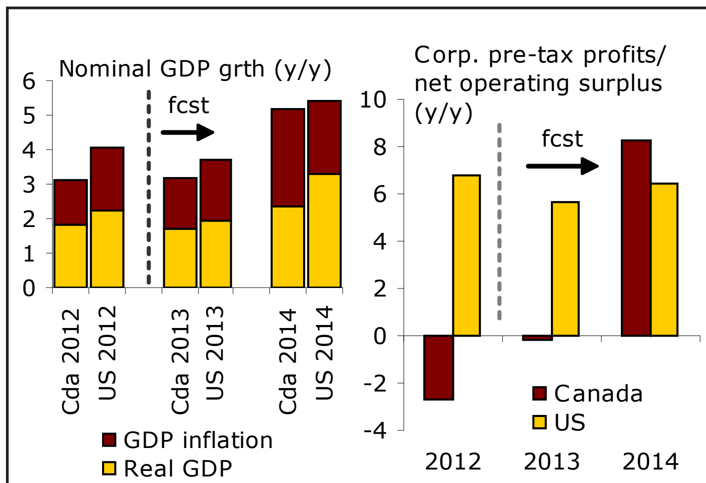
* M&E plus Non-Res Structures and Intellectual Property and NPISH

pace, and corporate profits should outgun those stateside (Chart 2).

With all the focus on the drag from government austerity in Europe, and tax hikes and sequestration cuts in the US, pessimistic Canadians might almost feel left out. But fiscal drag is very much a part of why Canada's growth rate is set to disappoint this year.

Chart 2

Resource Price Gains to Drive Canadian Nominal GDP and Profits

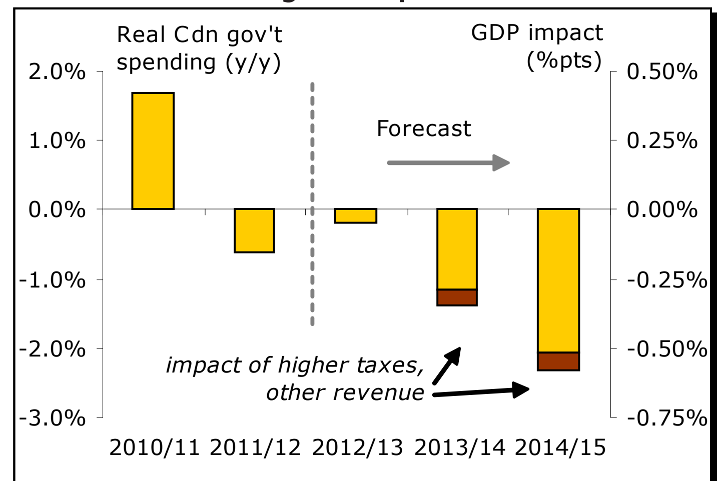


Source: Statistics Canada, CIBC

Budget plans for 2013/14, adjusting public accounts estimates with how they might translate into the national (GDP) accounts, show real purchases of goods and services, including capital, falling by roughly 1% in this fiscal year, subtracting about 0.3%-points from GDP. Add in tax hikes and other measures, and the drag adds up to something close to 0.4% points (Chart 3).

Chart 3

Canadian Fiscal Drag to Deepen



Source: CIBC, Federal & provincial budgets, Statistics Canada

Unlike the US and Europe, fiscal drag will remain a barrier to growth in 2014. Assuming it remains on plan, the federal government will be looking for a 0.7% of GDP improvement in the deficit, stripping out what the economy itself will provide, according to PBO estimates. That considerable headwind is a reason why we see monetary policy remaining on hold through 2014 to provide an offset through continued low short rates.

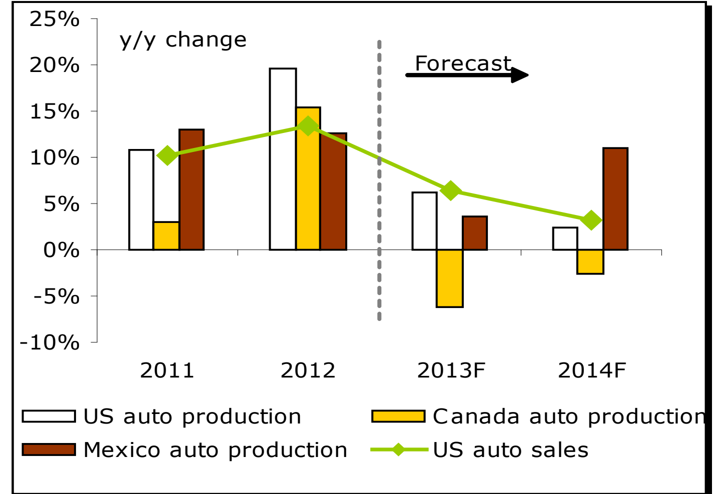
The benefit of low rates in Canada is, however, not as powerful as what we are seeing stateside, with consumer credit crawling at a growth rate more typical of recessionary times. Real consumption is being held in line with real incomes, the latter having been abetted by a temporary run of very weak CPI data, stretching the consumer's dollar.

That leaves the economy leaning on exports and capital spending. The former has seen a one-time lift from a rebound in mining and oil production after 2012 disruptions. Indeed, the resource sector has accounted for two-thirds of economic growth in the last six months (Chart 4, left). But big ticket resource projects are few and far between these days (Chart 4, right). Uncertainties over future pipeline availability and softer prices for metals point to an outright drop in capital budgets for 2013. Better global growth should help turn pricing and capital spending into a positive for 2014.

Elsewhere, factory exports could remain disappointing, with the auto sector in particular being held back by a Canadian dollar that we see weakening to five cents below parity this year, but returning to that level come 2014 as commodities rebound. Plant closures, both completed and upcoming, and less success in winning new facilities, mean that despite rising US vehicle sales, and higher North American production, Canadian assembly plans point to reduced real output in both 2013 and 2014 (Chart 5).

Chart 5

Cdn Factory Plans Miss US Auto Sales Advance



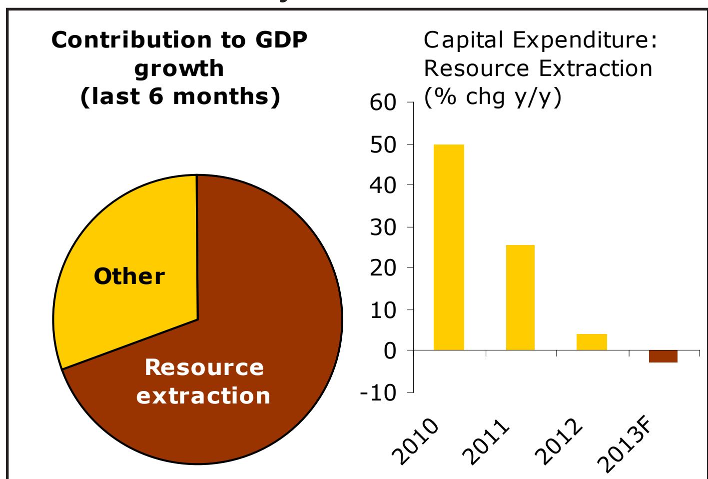
Source: Wards Auto, CIBC

US: Looking Through the Fiscal Drag

Fresh data for March trade point to a small upward revision to Q1 GDP, and recent job gains have been encouraging. But by and large, readings on late Q1 and early Q2 activity have been less robust, and we look for sub-2% growth over the middle two quarters of 2013 as a result. These quarters will feel the hit from sequestration spending cuts (Chart 6, left), and the consumer response to the drain on savings from higher taxes that kicked in at the start of the year.

Chart 4

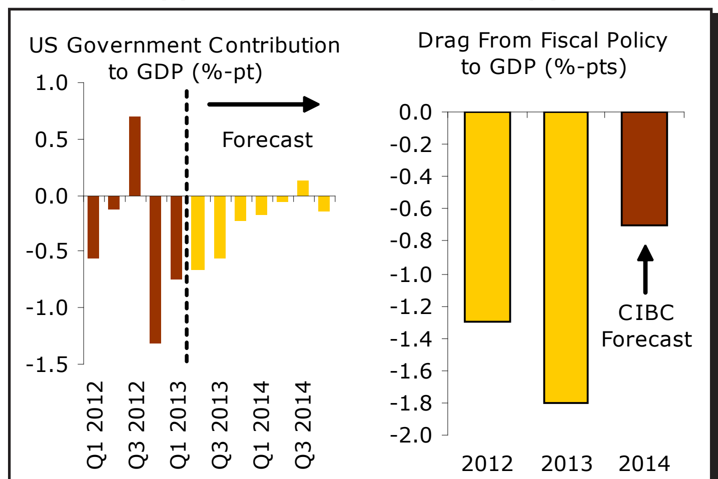
Resource Output Rebounds (L), But Investment Outlook Still Gloomy (R)



Source: Statistics Canada, CIBC

Chart 6

Government Remains a Significant Drag in the Near Term (L), But That Eases in 2014 (R)



Source: BEA, CBO, CIBC

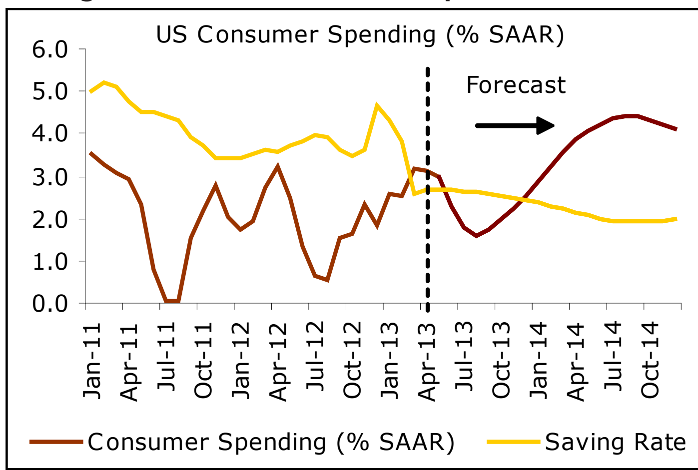
While the subsequent year's budget has not been set in stone, chances are that the year-on-year fiscal drag will be considerably lighter (Chart 6, right). Obama's proposal, for example, is in line with that direction, and while its details were considered DOA at Congress, horse trading between Democrats and Republicans could well end up at a similar level of net restraint, since the focus is now more on paring longer term deficits. If our estimates prove accurate, they imply an acceleration in growth, all else equal, of more than a full percentage point.

Clearly, the household sector, through both consumption and housing, has been key to the improvement in underlying fundamentals. Some point to the weakness in the first quarter savings rate as a reason for seeing that momentum tapped out. Far from it. First, low interest rates are designed to hold back the savings rate, which we do not see backing up from current levels (Chart 7). Second, job creation from the multiplier effect will, come 2014, give households additional income support, allowing real consumption to accelerate in the face of a steady savings rate.

As for housing starts, with 1.3 million a reasonable target, one still well below the last cycle's excesses, there's room for a further 30% advance over the next few years.

Chart 7

Savings Remain Low as Consumption Accelerates



Source: BEA, CIBC

At a 3.3% pace for growth in 2014, the US will hit the 6.5% unemployment threshold for a Fed hike before the end of that year (see pages 7-8). Even if that's not an automatic trigger, we would look for the Fed to hike rates just after the turn of the year, about a half year ahead of market expectations today, with the Bank of Canada on a similar calendar.

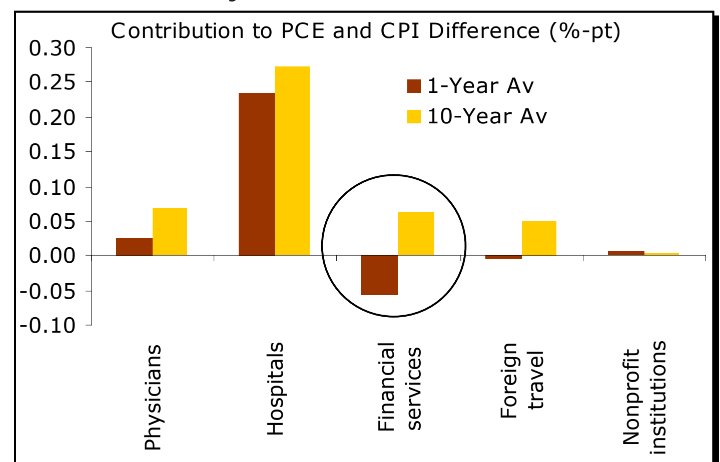
Some point to the recent drop in core PCE as a reason for the Fed to accelerate its bond purchase program, or as a leg of support for a longer run of low bond yields. But note that the core CPI has barely budged. Among the items included in the PCE, but not the CPI, financial services typically helps push PCE higher, but narrow lending spreads have it acting as a downward force on PCE (Chart 8).

Even if spreads remain steady, a year from now they will no longer be a source of disinflation in the PCE. We therefore expect that CPI and PCE will be running close enough to 2% by the time the Fed thinks of hiking at the end of 2014.

For now, sluggish growth through the summer months could give comfort to bonds, and hold back enthusiasm for stocks. But those keeping their eyes on the longer term prize will be using those months to begin to shift weight towards equities that can benefit from 2014's surprising vigour.

Chart 8

US Inflation: Key Items in PCE But Not CPI



Source: BEA, CIBC

US: From Baby Boom to Participation Rate Bust

Emanuella Enenajor and Andrew Grantham

Economists may be patting themselves on the back, having accurately predicted the US economy's 2012 growth rate. But the praise stops there, as unemployment rate forecasts have been off the mark. The jobless rate ended the year at 7.8%, well below the 8.1% the street had been expecting, with an unforeseen exodus of workers from the labour force putting downward pressure on the jobless rate.

What the market might be missing is that, with baby boomers leaving the workforce, the falling participation rate is increasingly being driven by engrained demographic trends, rather than cyclical forces. Those factors will also dampen longer-term US growth. And with slower trend growth, it won't take much hiring to stoke inflation once the economy perks up again. With those demographic forces persisting, we could approach the Fed's 6½% by late 2014—sooner than most, including Fed members themselves, are expecting.

Why the Jobless Rate is Dropping

It's well documented that the recent drop in jobless rate has partly reflected falling labour force participation. While roughly 65% of the population was working or actively looking for work when the jobless rate peaked in October 2009, that share is down to 63.3% today. So there is a smaller pool of available labourers, putting downward pressure on the jobless rate.

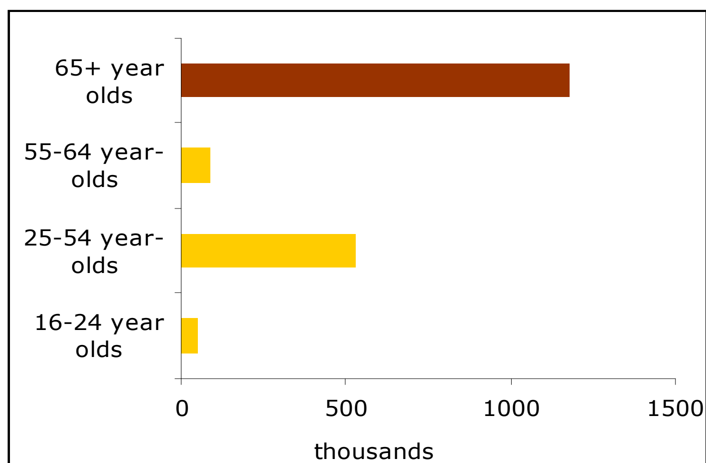
But the reasons for that shrinking workforce are less well understood. In the past year, roughly 1.8 million individuals exited the labour pool. A quick glance at the composition of that change shows a stunning demographic shift, with roughly two thirds of the exits driven by older workers (Chart 1) who comprise less than a fifth of the total population. These older individuals will not likely be drawn back to the job search if activity picks up.

With the US population aging, the share of prime working-age individuals (25-54), who have the highest participation rate, is gradually falling (Chart 2). That demographic shift has been the key driver of the fall in the participation rate over the past year, as the increasing share of older individuals in the population, with lower average labour force participation, has driven the aggregate participation rate lower. Compare that to earlier in the recovery, when a drop in the participation rate of similar magnitude was due primarily to cyclical factors, as workers became increasingly discouraged over job prospects (Chart 3).

With broader measures of the jobless rate still tracking near the 9% mark, there is clearly still slack in the labour market. But looking ahead, demographic trends could keep the participation rate from showing any recovery, let alone getting back to its pre-recession levels.

Chart 1

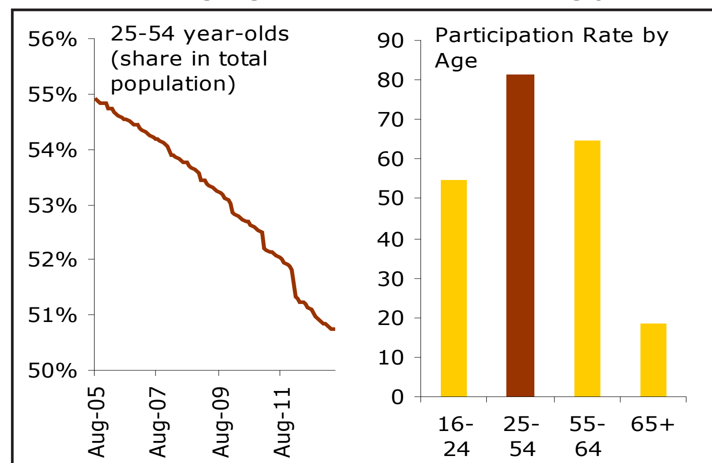
Who are the 1.8 mn People That Left the Labour Force Last Year?



Source: Bureau of Labor Statistics, CIBC

Chart 2

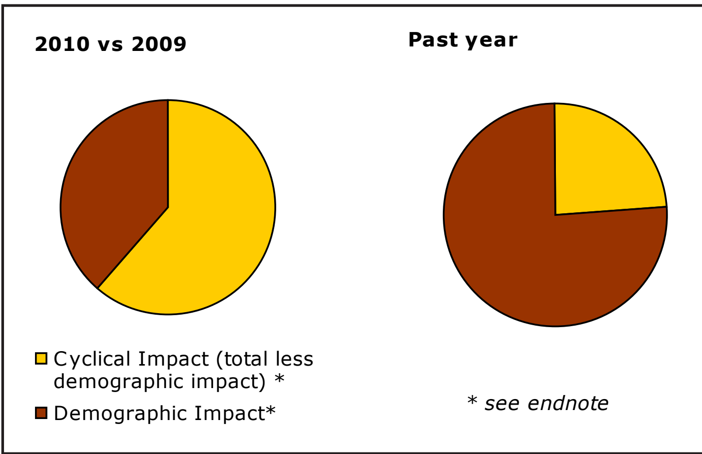
Prime Working Age Individuals Increasingly Scarce



Source: Bureau of Labor Statistics, CIBC

Chart 3

Participation Rate Drop: Increasingly a Baby Boom Story



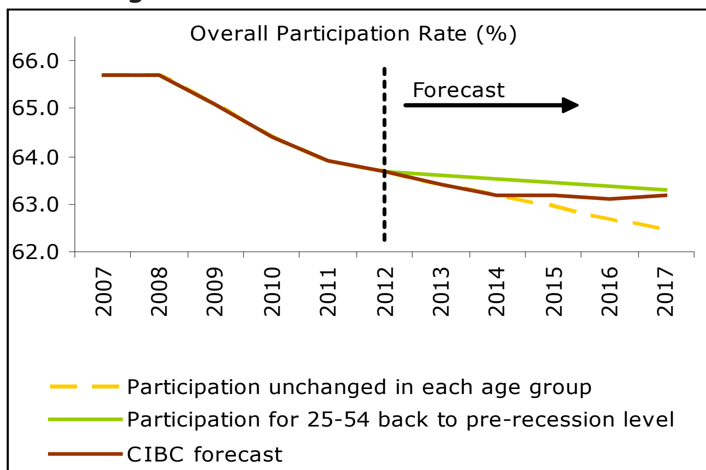
Source: Bureau of Labor Statistics, CIBC

Six-and-a-Half: Sooner Than You Think

Although older workers are staying in the labour force longer, that is more than offset by an aging population and a greater number of young people staying in school longer. As such, even assuming that participation rates outside of the youngest and oldest age brackets (i.e. within the 25-54 age group) recover to pre-recession levels, overall participation in the US labour market would keep falling due to demographic trends. And that's assuming participation in that core 25-54 group starts to pick up right away. In reality, it may not happen until we see strong and sustained growth, which we don't expect until 2014 (Chart 4).

Chart 4

Aggregate Participation Rate Will Fall Even as Discouraged Workers Return



Source: Census Bureau, BLS, CIBC

As a result, labour force participation will continue to fall this year, and may only post a mild recovery thereafter. That's assuming a smooth re-entry of discouraged workers, and no sudden influx of immigration. With that profile, even job growth tracking the pace of recent years would see the jobless rate reach 6.5% by February 2015. That's before the mid-2015 market consensus. Add in the stronger economic growth and hiring we expect for next year, and the unemployment rate should hit the 6.5% threshold in October 2014. While that may not mean an instant rate hike, a lower jobless rate could pressure wages higher and stoke fears of inflation accelerating down the road. That should see a forward-looking Fed nudge rates higher just after the turn of the year—a half-year before the mid-2015 date that markets expect.

The labour market clearly isn't fully healed, with nearly 12 million jobless and many more on the sidelines waiting to see a more engrained recovery before they dip their toe in the labour market again. But for fixed income markets, the risk of a selloff isn't in a sudden return to pre-crisis conditions—rather, it's any clear sign that the economy is moving in the right direction in a sustained fashion.

With stronger employment growth and demographic effects bringing the unemployment rate below 6.5% before the end of 2014, the surprise for next year could be how abruptly the Fed changes its monetary policy tune.

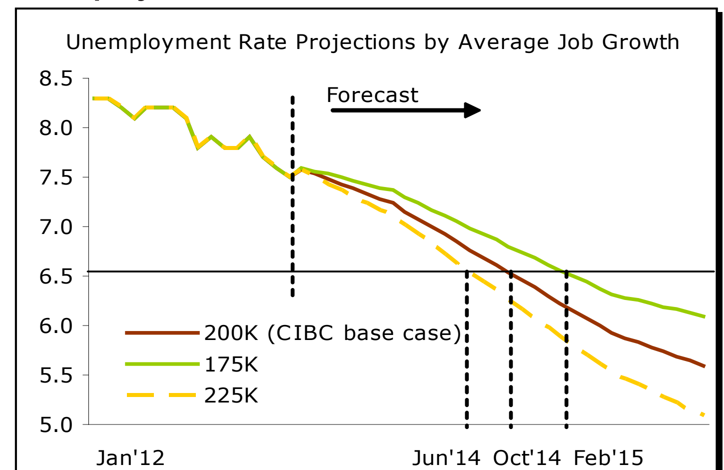
Endnote:

$$LFPR_t - LFPR_{t-1} = \sum_i \{[LFPR_t^i - LFPR_{t-1}^i]p_t^i + [p_t^i - p_{t-1}^i]LFPR_{t-1}^i\}$$

where the change in the aggregate LFPR can be broken down into the change in each demographic group's LFPR (weighted by the population share in the current period) plus the change in each demographic group's population share (weighted by the group's prior-period LFPR). See Hotchkiss, Julie 2009. Changes in the Aggregate Labor Force Participation Rate. FRB of Atlanta Economic Review 94, no. 4: 1-6

Chart 5

Unemployment to Reach 6.5% in 2014



Source: BLS, CIBC

Where is the GTA Condo Market Heading?

Benjamin Tal

Counting cranes is a new pass-time in Toronto given the city's latest claim to fame as the urban centre with the most high-rise real estate projects in North America. Are we in a bubble? It takes more than counting cranes to provide a credible answer. The GTA condo market is a multi-dimensional market that is often misrepresented for the sake of simplicity. Zooming in on the condo market without a good understanding of the context of the broader housing market in the area is a common error that can easily lead to misdiagnosis. A closer look reveals a reasonably balanced market, but a market that has not yet faced its ultimate test.

The Big Shift

At first glance the picture is alarming. Condo pre-construction sales in the GTA were down by 24% (year-over-year) in the first quarter of 2013 and are more than 10% below their long-term average. Builders, on average, are able to pre-sell only 20% of their units in the first month following the launch of a new project—less than half the rate seen in the past few years (Chart 1, left). Yet, developers continue to break ground. At close to 60,000 units in construction, condo activity is currently at a record high (Chart 1, right).

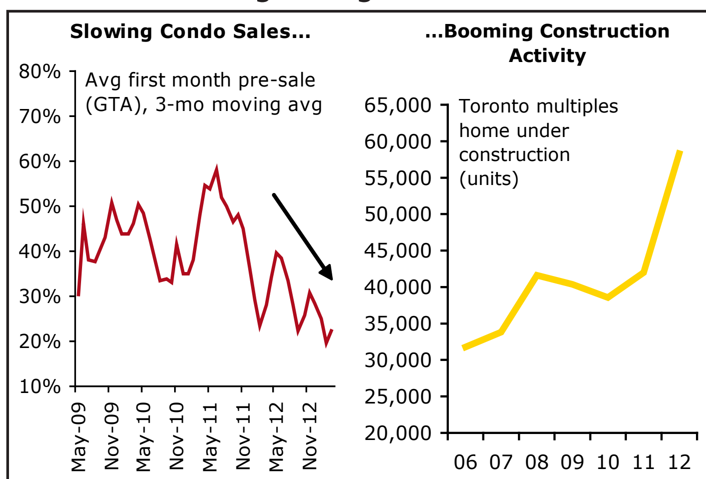
But looking at today's condo market in isolation is an error that even a casual observer should not make. The recent surge in condo activity is, in many ways, a direct consequence of the structural shift in the GTA's housing mix, whereby the condo market compensated for the lack of growth in low-rise housing. This shift from low-density to high-density housing has been directed by provincial intensification policies under the "Places to Grow Act", encouraging a more sustainable approach to urban development by restricting land availability for the low-rise market. In many cases, local interests in the Greater Golden Horseshoe area are not aligned with the province's goal of intensification—leading to significant delays in the approval process—further limiting supply.

So significant has been the move from lateral to vertical developments that currently, multiple units account for a record-high 75% of all housing starts in the GTA. That is 20 percentage points above the long-term average.

Yet, a casual examination of the available inventories in the market reveals none of this drama. At just under 1,600, the number of newly completed & unoccupied units in the GTA market is comfortably close to its long-term average (Chart 2, left) , and it is, in fact, below that threshold when adjusted for population growth. But the right side of Chart 2 tells the real tale. The relative stability of total available inventories masks rising inventories in the condo market and falling inventories in the single and semi-detached market. The high level of volatility in condo

Chart 1

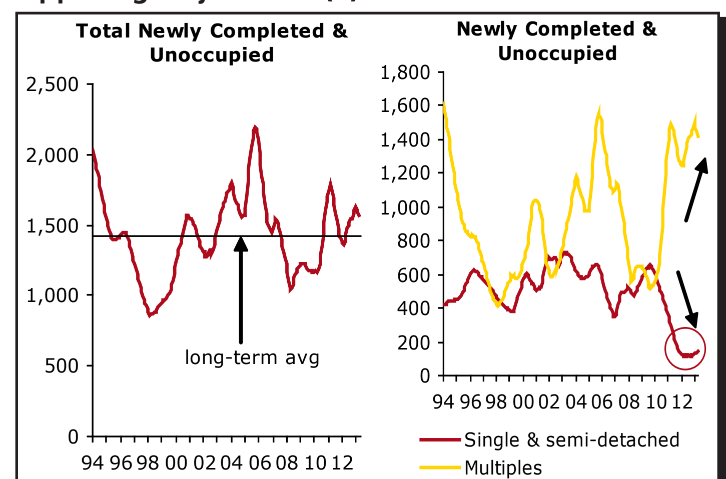
Is There Something Wrong With This Picture?



Source: RealNet Canada, CMHC, CIBC

Chart 2

Unalarming Available Inventories (L) Mask Two Opposing Trajectories (R)



Source: CMHC, CIBC

inventories is nothing new. What is new is the dramatic dive in the number of single & semi detached units, which is now at its lowest level on record. No surprise then that virtually all the increase in new home prices in the GTA over the past two years came from the low-rise market. In fact, per square foot, the price gap between low- and high-rise units is at a record high.

The Rental Factor

The surge in condo activity also reflects the fact that due to a multitude of reasons such as rent control and preferences, condo rentals replaced apartment building as the main source of rental units. In fact, since 2007 virtually all the increase in units available for rent came from the condo market, with 22% of the stock of condos and (estimated) one-third of the flow (new construction) currently for rent (Chart 3). Still the vacancy rate in the condo space is around 1% while rent is estimated to be rising at an inflation-beating 3%.

Important here is that in response to affordability issues and growing investor demand, condo builders have reduced the average unit size by almost 15% since 2009. This trend has two important implications: first, the move towards smaller units might represent short-term thinking and could result in a mismatch among the type of units supplied and ultimately demanded for occupancy by growing young families that are priced out of the single-detached market, and by aging baby boomers. Second, the consensus in the building industry is that we have reached the minimum average unit size that the market will tolerate, suggesting that builders will no longer be able to improve affordability in any meaningful way.

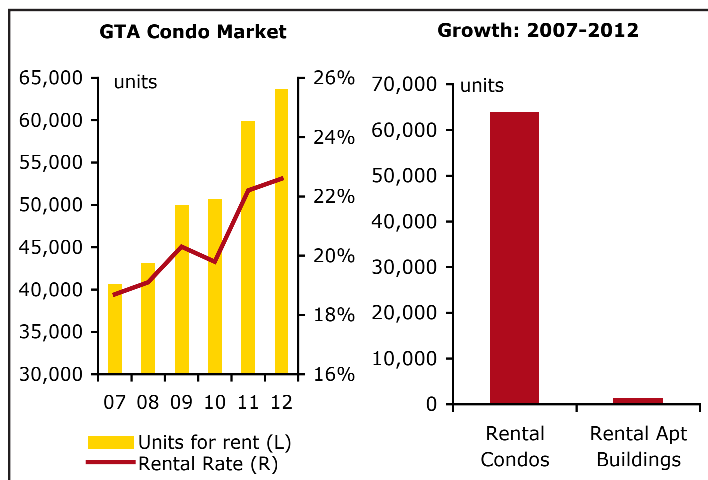
Can They Build It?

While the big shift from lateral to vertical developments can easily explain the recent trajectory of the condo market in the GTA, can it explain its magnitude? The short answer is no. A glance at Chart 4 reveals a record-high gap between total housing starts and completions in the GTA with starts rising strongly in both 2011 and 2012. Based on the average length of condo construction it is reasonable to expect 2013 to see the number of condo completions rising to just under 20,000. But the big story will be in 2014 when, in theory, completions can reach close to 35,000. Given that over the past 10 years the number of condo completions averaged less than 15,000 we are clearly in uncharted territory.

Such a level of completions is viewed by many in the industry as unachievable due to capacity limitations. Yes, in the 1970s the industry was able to complete as many as 25,000 high-rise units in a given year, but those were apartment buildings that required a much simpler skill set to build than today's new condos. Financing is also becoming an issue with the rapid pace of development causing many lenders to think twice before extending credit, even when the usual threshold of 70% pre-construction sales has been reached. We estimate that condo developers currently face a $2-3 billion financing gap—mainly when it comes to tier-2 players and/or the luxury condo space.

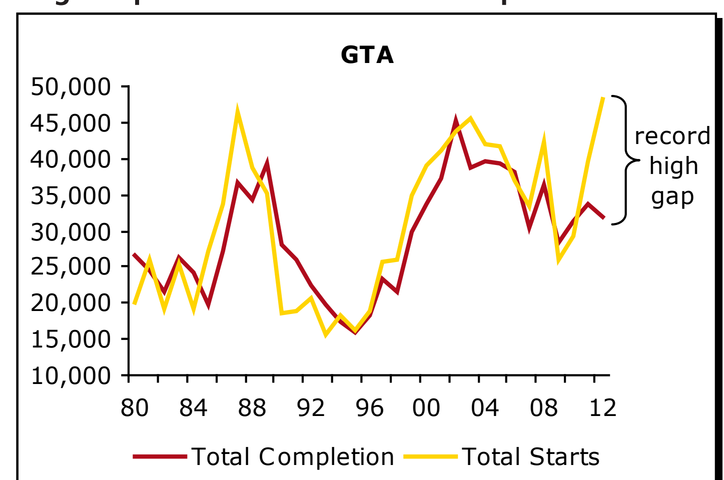
Accordingly, and based on many discussions with developers, we project that 2013 will see 18,000 condo

Chart 3
Condos For Rent



Source: CMHC, CIBC

Chart 4
Huge Gap Between Starts and Completion



Source: CMHC, CIBC

completions, followed by 23,000 completions in 2014. The practical implication of such a scenario is potentially large-scale delays in project delivery in the coming two years.

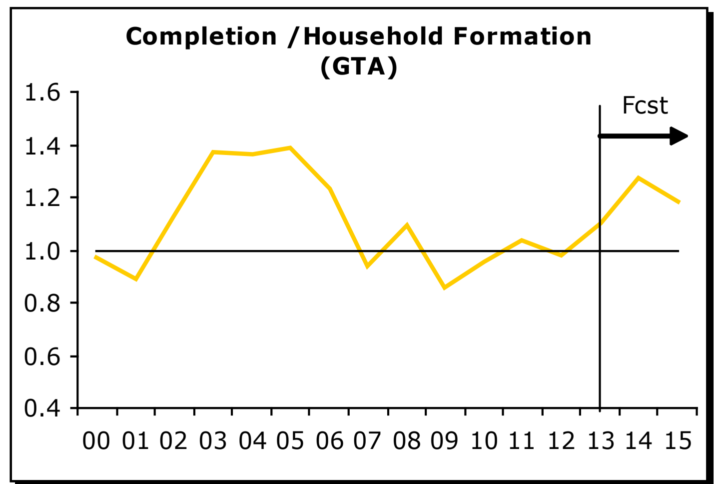
If They Build It, Will They Come?

So far the number of completions has kept up with the increase in household formation. But that will not be the case going forward. Two opposing forces will determine demand for condo units in the coming years. Immigration is key since new immigrants are twice as likely to live in a condo relative to non-immigrants. And here the trend is becoming less friendly, with the city currently receiving 20,000 fewer new immigrants a year than it did on average over the past decade. In fact, the GTA is currently accounting for just over 30% of all new immigrants arriving to Canada, down from 45% as recently as 2006 (Chart 5, left). Helping to offset this trend is the rapid rise in the number of young people in the GTA. At north of 2% year-over-year growth, their number is now rising at the fastest rate in more than two decades (Chart 5, right).

Based on these trends and adjusting for the rising share of growth in one-person households and the larger than average household size among new immigrants, we estimate that household formation in the GTA will average 31,000 in the coming few years—not fast enough to account for the projected rise in total (low- and high-rise) unit compilations (Chart 6). Overbuilding, however, does not mean an inevitable crash. As past experience reveals, more often than not it leads to a gradual slowing in supply—a process that has already begun (Chart 7).

Chart 6

Completions Will Outpace Household Formation in Coming Years

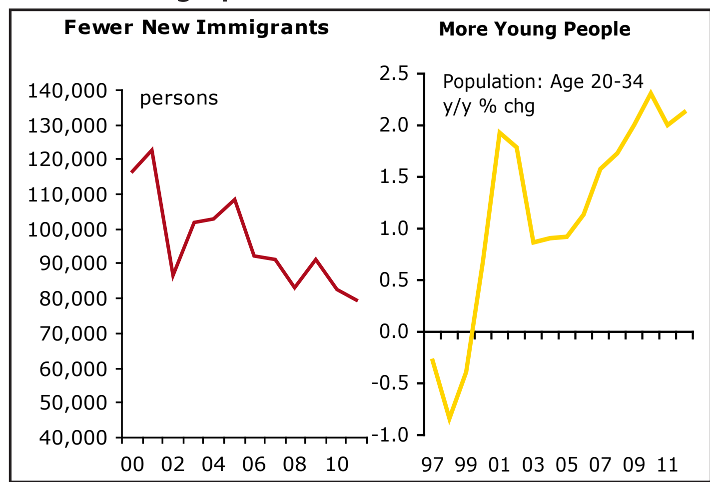


Source: CMHC, Statistics Canada, CIBC

So the picture that is emerging is that 2014-15 will be a turning point in the condo market. With the notable increase in supply we expect to see rental conditions easing, and a gradual increase in vacancy rates, a slowing in rent inflation and some downward pressure on prices. Key for such a trajectory will be the response of condo investors to any increase in supply. If the majority of investors are heavily leveraged (say less than 20% down-payment) and are in the market for the short-term, then we will face the risk of a mass exit with a more notable impact on prices. Our assessment is that's not the case and that the majority of investors will be able to absorb the changing rental market conditions without being forced to sell.

Chart 5

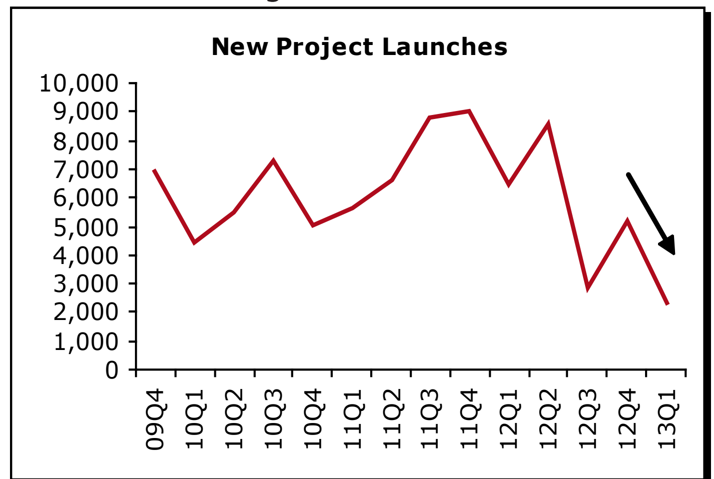
GTA's Demographic Picture



Source: Statistics Canada, CIBC

Chart 7

Builders Are Scaling Down



Source: RealNet Canada, CIBC

ECONOMIC UPDATE

CANADA	12Q4A	13Q1F	13Q2F	13Q3F	13Q4F	14Q1F	2012A	2013F	2014F
Real GDP Growth (AR)	0.6	2.7	1.8	1.9	1.8	2.4	1.8	1.7	2.4
Real Final Domestic Demand (AR)	2.6	0.7	1.1	1.3	1.5	1.6	1.9	1.4	1.5
All Items CPI Inflation (Y/Y)	0.9	0.9	0.8	1.4	1.9	1.7	1.5	1.3	2.1
Core CPI Ex Indirect Taxes (Y/Y)	1.2	1.3	1.3	1.6	1.9	1.7	1.7	1.5	1.8
Unemployment Rate (%)	7.2	7.1	7.3	7.4	7.2	7.0	7.3	7.2	6.8

U.S.	12Q4A	13Q1A	13Q2F	13Q3F	13Q4F	14Q1F	2012A	2013F	2014F
Real GDP Growth (AR)	0.4	2.5	1.9	1.9	3.0	3.7	2.2	2.0	3.3
Real Final Sales (AR)	1.9	1.5	2.2	1.9	3.0	3.9	2.1	2.0	3.4
All Items CPI Inflation (Y/Y)	1.9	1.7	1.5	1.8	2.1	2.1	2.1	1.8	2.3
Core CPI Inflation (Y/Y)	1.9	1.9	1.8	1.8	1.9	1.9	2.1	1.9	2.0
Unemployment Rate (%)	7.8	7.7	7.6	7.6	7.4	7.2	8.1	7.6	6.8

CANADA

A firmer-than-expected start to the year has seen us significantly boost our Q1 GDP call to 2.7% (from 1.5% only a month ago). Although some of that simply brought forward growth we had expected later in the year, it leaves 2013 on track for a 1.7% pace, two ticks above our earlier expectations. Inflation data have continued to come in on the soft side and with ongoing retail competition putting downward pressure on prices, we have nudged down our forecast this year.

UNITED STATES

2013 may not have started with quite the bang we were expecting, although we could still see a small upward revision to Q1. But slower growth is still likely in Q2/Q3 with those quarters seeing the biggest bite from fiscal policy. Better jobs figures for April make us hopeful for only a modest slowdown rather than a sharper slump which some feared as March data rolled in. The unemployment rate continues to fall due largely to demographic factors—a trend we now see continuing and bringing unemployment to 6.5% before the end of 2014.

This report is issued and approved for distribution by (a) in Canada, CIBC World Markets Inc., a member of the Investment Industry Regulatory Organization of Canada, the Toronto Stock Exchange, the TSX Venture Exchange and a Member of the Canadian Investor Protection Fund, (b) in the United Kingdom, CIBC World Markets plc, which is regulated by the Financial Services Authority, and (c) in Australia, CIBC Australia Limited, a member of the Australian Stock Exchange and regulated by the ASIC (collectively, "CIBC") and (d) in the United States either by (i) CIBC World Markets Inc. for distribution only to U.S. Major Institutional Investors ("MII") (as such term is defined in SEC Rule 15a-6) or (ii) CIBC World Markets Corp., a member of the Financial Industry Regulatory Authority. U.S. MIIs receiving this report from CIBC World Markets Inc. (the Canadian broker-dealer) are required to effect transactions (other than negotiating their terms) in securities discussed in the report through CIBC World Markets Corp. (the U.S. broker-dealer).

This report is provided, for informational purposes only, to institutional investor and retail clients of CIBC World Markets Inc. in Canada, and does not constitute an offer or solicitation to buy or sell any securities discussed herein in any jurisdiction where such offer or solicitation would be prohibited. This document and any of the products and information contained herein are not intended for the use of private investors in the United Kingdom. Such investors will not be able to enter into agreements or purchase products mentioned herein from CIBC World Markets plc. The comments and views expressed in this document are meant for the general interests of wholesale clients of CIBC Australia Limited.

This report does not take into account the investment objectives, financial situation or specific needs of any particular client of CIBC. Before making an investment decision on the basis of any information contained in this report, the recipient should consider whether such information is appropriate given the recipient's particular investment needs, objectives and financial circumstances. CIBC suggests that, prior to acting on any information contained herein, you contact one of our client advisers in your jurisdiction to discuss your particular circumstances. Since the levels and bases of taxation can change, any reference in this report to the impact of taxation should not be construed as offering tax advice; as with any transaction having potential tax implications, clients should consult with their own tax advisors. Past performance is not a guarantee of future results.

The information and any statistical data contained herein were obtained from sources that we believe to be reliable, but we do not represent that they are accurate or complete, and they should not be relied upon as such. All estimates and opinions expressed herein constitute judgments as of the date of this report and are subject to change without notice.

This report may provide addresses of, or contain hyperlinks to, Internet web sites. CIBC has not reviewed the linked Internet web site of any third party and takes no responsibility for the contents thereof. Each such address or hyperlink is provided solely for the recipient's convenience and information, and the content of linked third-party web sites is not in any way incorporated into this document. Recipients who choose to access such third-party web sites or follow such hyperlinks do so at their own risk.

© 2013 CIBC World Markets Inc. All rights reserved. Unauthorized use, distribution, duplication or disclosure without the prior written permission of CIBC World Markets Inc. is prohibited by law and may result in prosecution.