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Susan Frank
Vice President and Chief Regulatory Officer
Regulatory Affairs

BY COURIER

November 28, 2012

Ms. Kirsten Walli
Secretary
Ontario Energy Board
Suite 2700, 2300 Yonge Street
P.O. Box 2319
Toronto, ON.
M4P 1E4

Dear Ms. Walli:

EB-2012-0136 - Hydro One Networks Inc. 2013 IRM Distribution Rate Application – Hydro One Networks Responses to Undertakings

I am attaching ten (10) paper copies of the Hydro One Networks' Responses to the Technical Conference Undertakings.

An electronic copy of the responses and the update have been filed using the Board's Regulatory Electronic Submission System.

Sincerely,

ORIGINAL SIGNED BY SUSAN FRANK

Susan Frank

Attach.

UNDERTAKING

Undertaking

To provide breakdown of CIS-related information.

Undertaking Response:

Hydro One has filed the attached Undertaking request respecting the breakout to the CIS-related information, pursuant to the Board's Practice Direction on Confidential Filing. Providing the detail for rows 4 to 6 as requested would result in the public disclosure of commercially sensitive information with respect to licensing & support costs of third party vendors. Moreover, negotiations are currently in progress with vendors on some of the future expenditures. Public disclosure of those estimates could significantly damage Hydro One's bargaining position and thus may potentially raise costs to customers as a result. A redacted version of the requested information is included below.

Item	2013 ($M)	2014 ($M)	2015 ($M)
SAP CIS license	[redacted]	[redacted]	[redacted]
Mainframe	[redacted]	[redacted]	[redacted]
OpenText	[redacted]	[redacted]	[redacted]
Itron License	[redacted]	[redacted]	[redacted]
Oracle (BEA iHub)	[redacted]	[redacted]	[redacted]
Group 1	[redacted]	[redacted]	[redacted]
ROW 4 TOTAL: License Fees	**$1.80**	**$2.42**	**$2.42**

Item	2013 ($M)	2014 ($M)	2015 ($M)
Inergi Infrastructure Management	[redacted]	[redacted]	[redacted]
Inergi Application Management	[redacted]	[redacted]	[redacted]
ROW 5 TOTAL - CIS Hosting & Support	**$7.93**	**$9.96**	**$7.13**

Item	2013 ($M)	2014 ($M)	2015 ($M)
Hydro One Back Office	[redacted]	[redacted]	[redacted]
Inergi Back Office	[redacted]	[redacted]	[redacted]
ROW 6 TOTAL - CIS Back Office	**$2.44**	**$4.11**	**$2.79**

Item	2013 ($M)	2014 ($M)	2015 ($M)
TOTAL ROW's 4-6	$12.17	$16.49	$12.34

Note: In 2013, there are legacy CIS costs (rows 1-3) and new CIS costs (rows 4-6) as a result of the application going in service mid-way through the year.

UNDERTAKING

Undertaking

To update Exhibit I, Tab 2, Schedule 1.01 Staff 2, Attachment 2, page 9 to conform to the Board's latest cost of capital parameters.

Response

Page 9 of the referenced item does not have any items that are affected by the Cost of Capital Parameters.

On Page 28 – Line 27 of the transcript, Dr. Higgin appears to be referring to Page 12; not page 9 as referenced in the undertaking. Page 12 does have items that would be affected by the Cost of Capital parameters and we have provided an update for that page in this undertaking.

Incremental Capital Adjustment

Current Revenue Requirement	Original IR Response			Updated for Cost of Capital Changes			
Current Revenue Requirement - Total			$ 1,148,879,509			$ 1,148,879,509	A
Return on Rate Base							
Incremental Capital CAPEX			$ 372,090,000			$ 372,090,000	B
Average Depreciation Expense			$ 22,800,000			$ 22,800,000	C
Incremental Capital CAPEX to be included in Rate Base			$ 349,290,000			$ 349,290,000	D = B - C
Deemed ShortTerm Debt %	4.0%	E	$ 13,971,600	4.0%	E	$ 13,971,600	G = D * E
Deemed Long Term Debt %	56.0%	F	$ 195,602,400	56.0%	F	$ 195,602,400	H = D * F
Short Term Interest	2.0%	I	$ 280,829	2.0%	I	$ 280,829	K = G * I
Long Term Interest	4.9%	J	$ 9,662,759	4.9%	J	$ 9,662,759	L = H * J
Return on Rate Base - Interest			$ 9,943,588			$ 9,943,588	M = K + L
Deemed Equity %	40.0%	N	$ 139,716,000	40.0%	N	$ 139,716,000	P = D * N
Return on Rate Base -Equity	9.16%	O	$ 12,797,986	8.93%	O	$ 12,476,639	Q = P * O
Return on Rate Base - Total			$ 22,741,573			$ 22,420,227	R = M + Q
Amortization Expense							
Amortization Expense - Incremental		C	$ 22,800,000		C	$ 22,800,000	S
Grossed up PIL's							
Regulatory Taxable Income		O	$ 12,797,986		O	$ 12,476,639	T
Add Back Amortization Expense		S	$ 22,800,000		S	$ 22,800,000	U
Deduct CCA			$ 94,780,000			$ 94,780,000	V
Incremental Taxable Income			-$ 59,182,014			-$ 59,503,361	W = T + U - V
Current Tax Rate (F1.1 Z-Factor Tax Changes)	26%	X		26%	X		
PIL's Before Gross Up			-$ 15,091,414			-$ 15,173,357	Y = W * X
Incremental Grossed Up PIL's			-$ 20,256,931			-$ 20,366,922	Z = Y / (1 - X)
Ontario Capital Tax							
Incremental Capital CAPEX			$ 372,090,000			$ 372,090,000	AA
Less : Capital Exemption (if any)			$ -			$ -	AB
Incremental CAPEX subject to OCT			$ 372,090,000			$ 372,090,000	AC = AA - AB
Ontario Capital Tax Rate (F1.1 Z-Factor Tax Changes)	0.00%	AD		0.00%	AD		
Incremental Ontario Capital Tax			$ -			$ -	AE = AC * AD
Incremental Revenue Requirement							
Return on Rate Base - Total		Q	$ 22,741,573		Q	$ 22,420,227	AF
Amortization Expense - Total		S	$ 22,800,000		S	$ 22,800,000	AG
Incremental Grossed Up PIL's		Z	-$ 20,256,931		Z	-$ 20,366,922	AH
Incremental Ontario Capital Tax		AE	$ -		AE	$ -	AI
Incremental Revenue Requirement			$ 25,284,642			$ 24,853,304	AJ = AF + AG + AH + AI

UNDERTAKING

Undertaking

To provide the variance analysis in Board-approved and actuals with respect to 2010 and '11 on the typical capital spending amounts; reference CCC TCQ No. 4.

Response

A summary of the variances in each of the Sustaining, Development, Operations and Shared Services areas are provided in the table below and the causes of the variances are explained below that. Capital expenditures associated with smart meters, distributed generation, smart grid and CIS are not included.

Actual Typical and OEB Approved Capital Expenditure				
	2010 Actual	2010 Approved	2011 Actual	2011 Approved
Sustaining	185.5	190.4	205.5	207.3
Development	150.6	168.5	143.6	169.1
Operations	1.2	1.4	1.3	1.4
Shared Services	93.2	109.7	81.4	59.8
Total Capital Spending	**430.5**	**469.9**	**431.9**	**437.6**

The variance in Sustaining Capital in 2010 was due to lower spending on Trouble Calls & Storm Damage and in 2011 it was due to lower spending on Joint Use and Relocations.

The variance in Development Capital in 2010 and 2011 was due to lower spending on New Connections, Upgrades and Meters.

The variance in Shared Services in 2010 was due to lower spending in Real Estate, Transport & Work Equipment and Minor Fixed Assets for IT and Office Equipment and the variance in 2011 was due to higher spending in Real Estate and Minor Fixed Assets.

UNDERTAKING

Undertaking

To provide Scotiabank report.

Response

The Scotiabank report is included in Attachment 1.

Scotiabank™

Global Views

Weekly commentary on economic and financial market developments

September 14, 2012

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Into The Aftermath Of The FOMC Meeting

- **Please see our full indicator, central bank, auction and event calendars on pp. A3-A8.**

What may be the most significant development next week is not on any of our event, release or auction calendars. It speaks to the ongoing market aftermath of the Fed announcements. New developments in **US** markets will seem counter-climatic to the past week, and most of the focus will likely remain upon the aftermath of the Fed's policy easing especially in terms of whether a broadly based rally in risk assets proves to be durable given other global developments. Following the introduction of QE3 via non-sterilized purchases of mortgage backed securities combined with a continuation of operation 'twist' and pushing off expected rate hikes until mid-2015 at the earliest, there are no fewer than 10 Fed speakers on the calendar over the week ahead as the black-out period on Fed communications lifts. Virtually all regional Fed Presidents are being marched out including voters like Dudley, Pianalto, Lacker and Lockhart; alternate voters like George, Evans, Rosengren and Bullard; and non-voting non-alternates like Fisher and Kocherlakota. That only leaves a hawk (Plosser, speaks the week after) and a dove (Williams) off the agenda that is represented by hawks and doves alike. Most will be addressing some aspect of the economy or labour markets as their speech topics. Clearly the Fed thinks it has some explaining to do. One outstanding issue is our view that once operation 'twist' expires in December, the Fed may have to further expand quantitative easing through non-sterilized purchases of Treasury securities. Right now, the Fed is selling short-dated securities to purchase Treasuries further up the curve and this is reinforcing the benefits of MBS-focused QE. When the twist expires, however, the Fed may be challenged to control base yields if it is only left targeting the spread product — thus potentially putting policy at odds with itself in controlling the all-in yields that influence mortgage rates. Note that these are all regional Presidents, and no Governors are scheduled to speak. US data risk will be fairly light and concentrated on housing and manufacturing. The Empire and Philly Fed manufacturing gauges are both expected to remain in contraction territory, but show a moderated pace of retreat in the September readings. Housing starts are expected to follow building permits higher and, combined with the S&P/Case-Shiller repeat-sales house price index, have been the two positive readings regarding developments in US housing markets. Defying this, however, is that new and existing home sales have lost the upward momentum they had over 2011H2 and moved largely sideways in 2012. Amid sharp downside risks to growth marked in no small part by fiscal cliff arguments into 2013, the sustainability of any housing rebound amid mixed data cannot be taken for granted. What will enhance the market's tracking of this story will also be resale data for August on Wednesday. Also watch for headlines flowing from the Federal Reserve's Flow of Funds report on Thursday that will update comprehensive developments in household and national finances. The US auctions 10 year TIPS in a reopening on Thursday.

European markets face a combination of first-tier data risk and event risk stemming from key meetings to start and end the week ahead. The meeting of Euro-area finance ministers and central bankers extends into this weekend, and with it goes two forms of headline risk. One concerns the possibility that the next installment of aid payments to Greece will be delayed particularly amid difficulty in achieving agreement on the required cuts within Greece's coalition, and given speculation that a further debt restructuring may be required. If true, then Europe's recent progress may encounter renewed market risk. Another form of headline risk relates to possible heightened pressure upon Spain to formally request aid from the so-called troika that consists of the ECB, EC and IMF. Spanish reluctance to accept intrusion into decisions affecting government spending and pensions is holding up such an aid request, and this reticence could well scuttle the benefits of the ECB's conditional bond buying program. Next on the meeting schedule will be the latest EU-China Business Summit on Thursday in Brussels. The Summit will take until its conclusion to get to the key speakers as each of China's Prime Minister Wen Jiabao, European Commission President Jose Barroso, and European Council President Herman Van Rompuy are scheduled to deliver the final addresses of the day. This is the last formal meeting between Premier Wen and EU leaders before Wen's successor takes over in the leadership transition, so the risk is that at this Summit China may not have the leadership continuity necessary to materially advance relations. This Summit could nevertheless be a lively one on multiple counts. First, China's ambassador to the EU, Wu Hailong, remarked following the German court ruling on the ESM that China is "reaching out to the ESM regarding potential cooperation," and "We continue to make investments in the European debt market." This may therefore be a pre-cursor to potentially supportive comments by Premier Wen at the Summit. Such dreams, however, are at risk to three factors. One is the politics associated with China altruistically investing in Europe given large per capita income disparities between Europe and China. Another is that China still has not

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been offered the criteria for investing that it has demanded to date and that include guarantees, no foreign currency exposure, and smoother trade relations in a quid pro quo understanding. To this last point, several trade irritants have developed recently. They include a recently launched high profile EC anti-dumping investigation into imports of Chinese-made solar panels. China exported €21 billion of solar panels and components to Europe in 2011 and this file has become a symbol of European concerns toward alleged Chinese practices. Another irritant is carbon emission fees for airlines that are being charged by Europe. Both China and India have prohibited their airlines from participating in the European emissions trading system, and the US Senate is also considering banning US airlines from complying with the EU law. Further, Beijing has blocked purchases of European aircraft by its carriers in retaliation, and this is a potentially significant dent in Airbus's prospects gives China is a major source of potential growth. For this reason, an internal lobbying effort is afoot within Europe to exempt airlines from the emissions trading system. European data risk will also be high. Europe's manufacturing sector is contracting, so next week's purchasing managers' indices for the manufacturing sector will be key to seeing how Q3 is handing off to Q4 growth risks. German and European investor sentiment reflected in the ZEW survey should be somewhat more positive in the September reading given the ECB's actions. UK markets will actively digest August CPI, alongside August retail sales as well as minutes to the September 6th Bank of England meeting that prompted no policy action. Meeting minutes behind the Riksbank's unexpected 25bps rate cut on September 6th will be evaluated for further signs regarding the policy bias. Eurozone trade and consumer confidence round out the hits. Auction risk should be relatively light with only German 2s, UK 2017s and Spanish bonds on tap.

Canadian housing markets will be front and centre by way of domestic attention next week when resale figures for the month of August arrive on Monday. We already know some of the regional results, and for the second month in a row they are not pretty for Vancouver and Toronto. Sales are 30.7% lower in y/y terms in Vancouver, and fell 21.4% m/m in August over July. August's sales were 39% below the last ten years' average for the month of August. Listings climbed 13.8% y/y but slipped by about 3% m/m. The combined results have pushed the sales to listings ratio to 9% which is a full ten points lower than in March when this ratio peaked. Higher inventory imbalances pose significant downside risks to Vancouver house prices going forward. The news was not that much better in Toronto where August's sales were 12.5% lower compared to August 2011. Toronto's new listings, however, fell 5.5% y/y although the stock of active listings is up 10.5% y/y. Across home categories, condo sales were 22% lower y/y, detached home sales were 10% lower, and semi-detached homes were 13% lower. Townhomes were flat. It's possible that for the second month in a row, the weakness in Canada's two largest cities may be offset by strengths elsewhere. In fact, Calgary's August sales tally has been reported to be about 10% higher compared to a year ago while new listings are down 12.7%. That said, Calgary's real estate board also publishes September month-to-date tracking data and sales this month are only 3% higher than they were in September 2011 as a sign that the hot Calgary market itself may be cooling. Canadian CPI will also attract attention on Friday. Following a drop to 1.3% y/y in headline inflation during July and 1.7% y/y on core, the risk is that of a modest rise in the headline print due in no small part to higher gasoline prices but we expect little by way of core pressures. After knocking a half percentage point off the headline due to the Bank of Canada's estimate of the CPI's inflation measurement bias because it does not adaptively shift weights on consumption categories over time, Canada's truer rate of inflation will continue to remain very comfortably within the BoC's 1-3% inflation target range and below the 2% policy mid-point. Canada also auctions 30 year bonds on Wednesday.

Asian markets will be principally driven by the global market tone in the wake of the Fed and given Eurozone risks over the upcoming week, but several first-tier regional factors pose additional local market risk. China risk returns following a wave of soft growth and inflation figures that are prompting stimulus talk. This time it lands in the form of the private version of China's purchasing managers' index for the manufacturing sector which has been in contraction throughout the year. It has recently been joined in contraction by a contracting state's manufacturing PMI. Japan's Democratic Party holds a leadership vote at the end of the week, and this will pit Prime Minister Yoshihiko Noda against three contenders. Noda is the favourite as Japan gears up for elections as soon as next month, and the polls are not being kind to his party in part due to his decision to sharply raise the sales tax rate in order to fund the country's massive debt position. The Bank of Japan also makes a rate decision against this highly politicized back-drop, and has been under enormous pressure to debase a strong yen. The Reserve Bank of India is expected to keep its policy rate unchanged next week. RBA minutes and likely cooler New Zealand GDP round out the regional hits.

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Should The Fed Have Eased Again?

- **The Fed probably did the right thing in offering additional stimulus, and the door is open to QE4 amid considerable risks to global growth and geopolitics that make it premature to argue that Treasuries are toast.**

At least two outstanding issues arise in the wake of the Federal Reserve's decision to introduce MBS-focused quantitative easing accompanied by rate guidance extension into mid-2015. They entail the issue of whether the Fed *should* have embraced additional stimulus, and whether there is a reasonable chance of QE4.

1. Should The Fed Have Provided More Stimulus?

There are at least three matters to be explored in addressing whether or not the Fed did the right thing.

a) The Alternative Might Have Been Worse

There are at least three counter arguments to the view that additional bond buying would carry no positive effect.

First, it is likely true that the incremental benefits to additional stimulus are marginal at best. It will probably only have a small positive influence on growth and employment over time, and cannot singlehandedly solve problems that plague the US economy. Our first point, however, is that even if those benefits are small they are still worth pursuing, much like how a company should readily contemplate any investment with a positive net present value regardless of the size of that value.

Second, additional stimulus must also be judged in relation to the alternative scenario whereby the Fed says it has done enough and no further stimulus will be forthcoming — or the equivalent of dragging it out for so long that the market reaches such a conclusion anyway. A steep market correction would most likely ensue and that would impair confidence and growth. The Great Depression taught us that the economy may never have gotten over such a thing for a very long time. The issue is therefore averting the fatter left tail market disappointment in response to Fed inaction as opposed to obsessing over what may be the less impactful results should the Fed actually deliver more stimulus.

Third, text book economics would dictate that a high probability of some form of fiscal contraction into 2013 through the fiscal 'cliff' dynamics may well necessitate additional monetary policy accommodation as a partially insulating factor. The lagged effects of monetary policy actions would necessitate acting now.

There are damaging effects to QE in the cost-benefit calculus that we may be about to repeat into next year, but our point is that one must also consider the damaging effects of doing nothing at all and at this juncture the latter probably outweighs the former.

b) Risky Exits?

We do not share the unhealthy and dark cynicism toward the Fed that characterizes some market views notwithstanding the fact that some of them come from highly regarded economists and long-time Fed watchers. John Taylor, for instance, opined in a recent contribution to the Wall Street Journal that the problem is the negative impact upon Treasury's interest expense (since the Fed rebates interest payments on bonds purchased back to Treasury), upon the stock of external debt owed by the US government because some of the bonds will have to be sold to foreigners, and upon bond yields when the Fed ultimately shifts toward selling these bonds back into the marketplace. Taylor may, however, be assuming that the Fed will do so in a rash, panicked manner and without deploying other policy tools beyond just asset sales in order to mop up excess liquidity if and when velocity, money multipliers and credit growth revert higher, assuming that happens this decade. Among those tools are term deposit sales and repo operations. The view that asset sales must occur first would seem to defy Bernanke's communicated order of operations upon seeking policy exits. Asset sales may not occur for a very long and drawn out period of time, consistent with other past experiences like Resolution Trust.

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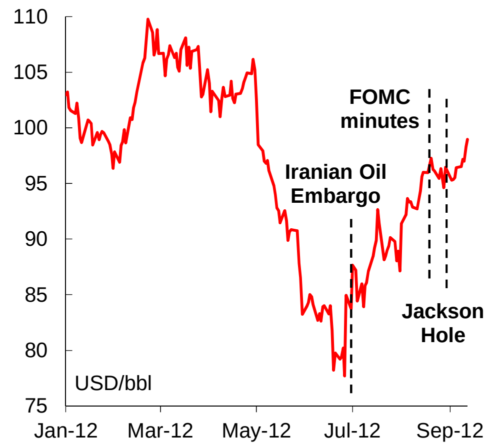
c) Harmful Commodity Inflation?

There is also a fair bit of controversy regarding the impact of Fed policy on commodity prices and what that does to the US economy with the presumption that the effects are sharply negative. I have some sympathy for this as one of the costs to be weighed against the benefits. There are, however, constraints on this view.

One is that rising US domestic production of energy products has considerably closed much of the gap compared to imports and this mitigates the negative impact upon consumer spending in a budget constrained environment where, unlike the past, consumers cannot back into credit or rely on wage/job gains to smooth over the impact.

More Than Just The Fed Behind Oil Prices



Source: Bloomberg, Scotia Economics.

Second is that there are many factors behind the run up in oil prices of late including geopolitical tensions (Iran etc), supply disruptions including in Canada's oil sands with production disruptions all summer long but also at NA refineries, combined ECB/Fed actions etc. As evidence, the run-up in WTI oil prices began around the July 1st embargo on Iranian oil, well before the FOMC minutes to the August 1st meeting were published on August 22nd and began to shift market thinking on QE odds, and well before Bernanke's Jackson Hole speech on August 31st. The accompanying chart demonstrates this point. In fact, WTI bottomed at US$75.5 at the end of June, and then climbed to US$97 before the minutes landed on August 22nd and were largely flat at US$96.5 by Jackson Hole. Of the full US$21 WTI rise from the end of June to today, only about US$2 has occurred since the August 1st Fed minutes were published on the 22nd. This is fairly convincing evidence that it ain't all just about the Fed; in fact, perhaps hardly at all.

Further, others disagree entirely with the notion that Fed policy inflates commodities in the absence of other influences. To this effect, a useful event study of the impact of large scale asset purchases on commodity prices was recently done by a former Fed economist who is now head of the CDN macro division at the BoC.[1]

2. Is QE4 Next?

With QE3 in the bag, is QE4 next? On the view that one is only as good as one's next call during fascinating times in markets and the broader global economy, this is clearly something that must be entertained given the open-ended nature of the FOMC statement.

A key issue is that once operation 'twist' expires in December, the Fed may have to further expand quantitative easing through non-sterilized purchases of Treasury securities in order to complement its purchases of mortgage backed securities. Right now, the Fed is selling short-dated securities to purchase Treasuries further up the curve and this may be reinforcing the benefits of MBS-focused QE. When the twist expires, however, the Fed may be challenged to control base yields if it is only left targeting the spread product — thus potentially putting policy at odds with itself in controlling the all-in yields that influence mortgage rates.

What could offset this upward risk to base yields is the fiscal 'cliff', in that market uncertainty stemming from year-end political wrangling could well put a bid to Treasuries and the USD in which case we're back to square one with growth-dampening risk aversion in play.

These arguments are in addition to the Fed's pledge that it "will provide additional accommodation as needed." When this prospect is combined with downside risks to global growth and still prevalent risks facing the eurozone, it would seem premature to argue that Treasuries are toast.

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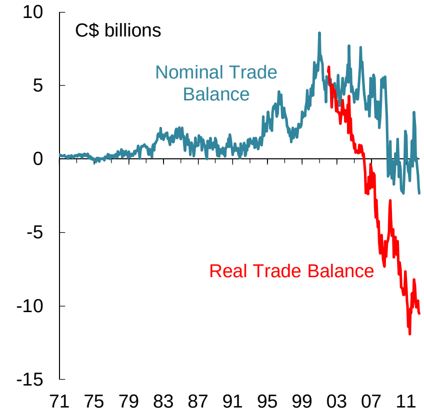
BoC Implications Stemming From Federal Reserve Policy

- **The BoC is facing growing pressure to turn more dovish by the October rate statement and MPR in part due to the connection between trade, CADUSD and Fed policy.**

With QE3 from the US Federal Reserve and a possible further Fed easing bias in place, what are the implications for Bank of Canada policy? Much of it stems from the currency response and its implications for Canadian growth through the trade account on which we make three points.

First, the backdrop for assessing the implications of ongoing CAD appreciation is one of record monthly Canadian trade deficits in real volume and nominal dollar terms (chart 1). As a consequence to the 2% m/m decline in the volume of exports and the 1.2% decline in the volume of imports during July, Canadian GDP growth is being set back into 2012Q3. In fact, while the data flow is lagging, it is thus far looking as if the Canadian economy fully stalled out in Q3. To be fair, exports are also weak thanks to a very soft US economy and temporary (yet recurring) production disruptions in some sectors, but the broad impact is persistent weakness in Canadian exports.

Record Trade Deficits

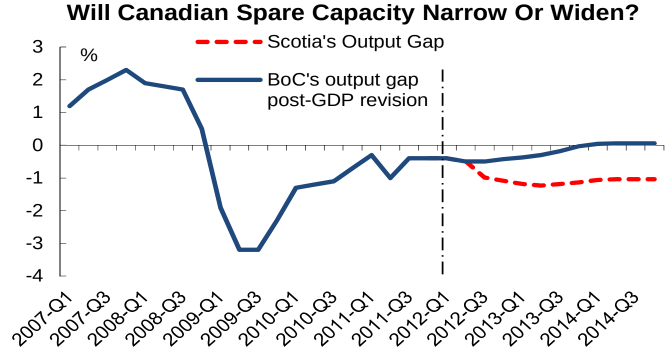


Source: Statistics Canada, Scotia Economics.

Second, CAD appreciation makes it unlikely that this will get any better any time soon. As a high-beta cross rate of exchange, CAD versus the US$ rallied sharply on the Fed easing news and is moving in the direction of highs set in 2007 and 2011. We view this as imposing net tightening upon the Canadian economy in such a manner as to pose additional downside risks to growth, and the performance of the trade account would thus far appear to support this view.

Third, as a consequence, the sum total of spare capacity in the Canadian economy is emerging to be significantly larger than the BoC estimates at present and we think it will continue to widen further. As chart 2 demonstrates, we're of the view that the output gap could widen to over 1% of GDP by year-end, or double what the BoC anticipates. We agree with BoC Governor Mark Carney when he notes that output gaps are an unreliable science, and yet paradoxically the BoC explains much of its policy bias in the context of output gap and inflation dynamics. More important is that we anticipate the output gap to remain wide throughout the forecast horizon into 2014 in contrast to the BoC's assumption in the July Monetary Policy Report that the gap will close by the end of next year.

Will Canadian Spare Capacity Narrow Or Widen?



Source: Bank of Canada, Statistics Canada, Scotia Economics.

Does this mean the BoC is about to turn relatively less hawkish at least in time for the next rate statement and Monetary Policy Report on October 23rd? We think so, but how it will do so merits attention. After beating a hawkish drum all summer following an earlier dovish bias that stretched back to the Fall of 2011, it is unlikely that the BoC will then abruptly shift course again and turn dovish in the rate guidance language. There is so much wiggle room in using words like "to the extent" their forecasts turn out correct, the BoC "may" tighten monetary policy at some point within "the medium term" that the BoC can simply stick with this same language as very loose guidance toward rate hikes at some point. Rather, the BoC could go more dovish by pushing out the point at which the BoC now thinks spare capacity closes off to beyond the end of next year, and with it becoming more cautious in its outlook for inflation that is sharply undershooting the BoC's 2% target. While the BoC has some scope for crafting independent monetary policy, unconventional easing at the Fed through QE3 and extended guidance to keep US policy rates on hold until mid-2015 make it exceptionally difficult for the Bank of Canada to tighten monetary policy any time soon. This is especially while two of the main pillars of the Canadian economy — trade and housing — are rapidly softening and with them confidence to borrow in the household sector. Scotia's later-than-consensus print forecast thus remains that the BoC is on hold until early 2014 — and in my opinion the fatter tail risk is later rather than sooner.

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More 'Decliners' Than 'Gainers' In Global Housing Markets

- **Global housing conditions remain strained, notwithstanding signs of improvement in some markets.**

Among the international property markets we track, the number of countries reporting declining average real prices on a year-over-year basis in Q2 outnumbered those reporting price increases by more than two to one. Weak consumer confidence, high unemployment and tight credit conditions continue to weigh heavily on housing demand and pricing. Market conditions appear to be stabilizing in a few major markets, including the U.S, the U.K., Australia and China, supported by renewed monetary policy easing. However, it will likely take considerably more time for a sustainable recovery to emerge. Stronger job and income growth will be required to generate the household purchasing power to support higher home sales, as will an easing in the restrictive lending conditions in a number of countries that are limiting the pool of potential buyers.

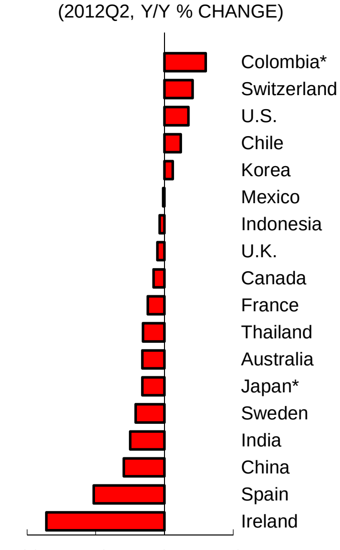
Housing markets remain weakest in Europe, where fiscal austerity, rising unemployment and financial sector strains are deepening recessionary conditions. In Ireland, average inflation-adjusted house prices tumbled 17% y/y in Q2, while in Spain they slumped 10% y/y. In European countries that are financially sound, there were some tentative signs of improvement. Real house prices in Sweden stabilized in Q2, while U.K. property prices edged up slightly in the quarter. Home prices also steadied in Australia in Q2.

Canadian housing activity remains relatively buoyant, but has shifted to a slower growth trajectory. Adjusted for inflation, national average prices fell 2% y/y in Q2. Housing demand has been tempered by a slower pace of job growth and the cumulative effects of tighter mortgage insurance rules over the past several years, while more balanced supply conditions in most parts of the country have restrained price increases.

In contrast, the U.S. housing market is showing increasing signs of recovery. Average inflation-adjusted home prices rose 3% y/y in Q2, moving the U.S. from its persistent position at the low end of our international survey toward the top. Near record U.S. homeowner affordability, rising rental costs and strengthening household formation are contributing to the pickup in sales. Lower inventory levels and a falling share of distressed property sales also have contributed to the stabilization in prices.

Asia's property market performance is mixed. An increasing number of cities in China are seeing renewed home price appreciation, supported by an easing in monetary conditions. However, there is little momentum in many other Asian nations. Property markets continued to soften in Thailand, Indonesia, South Korea and India in Q2. Meanwhile, housing markets in Latin America were relatively stable though mid-year. Inflation-adjusted average prices in Chile (Greater Santiago) were up 2% y/y in Q2, while average prices in Mexico were flat. Both countries continue to report relatively solid domestic growth, though global economic uncertainty is weighing on buyer confidence.

REAL HOUSE PRICES
(2012Q2, Y/Y % CHANGE)



Source: Scotia Economics. *2012Q1

We expect this uneven regional performance to continue. The U.S. market should continue to gradually improve with the Fed's recently-introduced QE3 helping to keep borrowing costs historically low. However, lacklustre economic growth and job conditions should limit the magnitude of the revival. Important ECB and fiscal steps are being taken to stabilize conditions in the hard-hit euro zone countries. Nevertheless, the financial problems are quite severe, with the high levels of unemployment and wealth losses expected to keep housing markets under pressure for a considerable time. In China, the recent approval of a US$157 billion infrastructure spending plan will help shore up the slowing economy, supporting the housing recovery. Slow economic growth and reduced affordability suggest Canada's relatively buoyant housing market will continue to moderate.

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Germany Update: Euro Area Growth Engine At Risk

- **From a political and economic perspective, Germany holds the key to the future of the European Monetary Union (EMU).**

On Wednesday, September 12th, the German constitutional court ruled against a challenge to the legality of the European Stability Mechanism (ESM), paving the way for the full ratification of the euro area's permanent bailout fund and fiscal pact. The provisional ruling came with two conditions: Germany's liability under the ESM cannot be enlarged beyond the current maximum level of €190 billion (27% of the fund's total capital) without prior approval of the Bundestag, and both the lower and upper houses of parliament must be kept informed of the fund's activities. The decision, though broadly anticipated, was welcome news for European financial markets, with peripheral bond yields initially tightening, the euro strengthening and equities rallying. Subsequently however, market behaviour was dictated by the announcement of a third round of quantitative easing by the US Federal Reserve, as well as Spanish and Greek political risks heading into a weekend summit of euro area finance ministers and central bank officials.

Following a small contraction in the final quarter of 2011, the German economy rebounded strongly in the first half of 2012. We anticipate a downturn through the remainder of the year, however, with quarterly output losses in the third and fourth quarters limiting growth for the year to around ¾% (down from 3.1% in 2011, but still the strongest performance among advanced euro zone nations). Gradual improvements in domestic confidence and international economic conditions should underpin a modest recovery in 2013 of 1%. Exports - which account for 55% of total GDP - expanded 5.4% y/y in the January-July period thanks to the diversification of Germany's sales markets outside of Europe. Against moderate import growth of 2.3% y/y, this pushed the merchandise trade balance up 24% year-to-date. Meanwhile, record-low unemployment (at 5.5%), strong wage growth and low interest rates have enabled a sturdy advance in private consumption and buoyant construction activity. Looking ahead, the ongoing crisis-driven deterioration in business sentiment reflected in recent surveys suggests that few companies are currently looking to expand productive capacity, and both the labour and property markets will likely lose momentum in the coming months. The renewed climb in international commodity prices and expected euro depreciation will also eat into households' purchasing power, while moderating growth conditions in Germany's non-EMU trading partners (including the US, China and Japan) will dampen external demand.

Germany's fiscal position is relatively sound; the government's budget deficit fell to 1% of GDP last year (from 4.3% in 2010) as a result of the robust economic recovery from the global recession, and is set to moderate (slightly) further through 2013. The public debt ratio (at 81.2% of GDP in 2011) will likely edge higher this year before turning downward in 2013. In 2009, lawmakers approved a fiscal rule whereby structural federal government net borrowing may not exceed 0.35% of GDP per year by 2016 and state governments must balance their budgets over the economic cycle. At this point however, several state and local governments continue to carry substantial deficits, posing a risk to the nation's overall fiscal health. The Bundesbank has stated that "confidence in German public finances is a key anchor of stability in the current crisis", one that "cannot be taken for granted."

Previously resilient to the ratings stress faced by many euro area and developed market peers, Germany's sovereign creditworthiness has recently come under pressure as a result of the ongoing crisis in the EMU, now well into its third year. In July, Moody's adjusted the outlook on Germany's "Aaa" rating from "stable" to "negative", citing the increased risk of much higher contingent liabilities materializing from an intensification of the crisis (and possible Greek exit from the EMU), as well as the weakened structural position of the banking system. Conversely, S&P reaffirmed the "stable" outlook on its "AAA" rating, pointing to the demonstrated capacity of the German economy to weather financial and economic shocks, and committed public and private sector debt restraint. The crisis has produced extremely favourable borrowing conditions for the government, with safe-haven flows driving the yield on the 10-year bund down to a low of 1.17% on July 20th. Nevertheless, given the additional financial assistance and restructuring likely required by its euro area partners in the months ahead, Germany faces a heightened risk of shocks to its banking sector and fiscal position, and further downward adjustments to its ratings profile may be in store.

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Dominican Republic: New Government, Old Challenges

- **Weak public finances and external vulnerabilities continue to weigh on the economy.**

A decelerating economy with high fiscal constraints, possible new negotiations with the International Monetary Fund (IMF) for another Stand-by Agreement, a mild economic outlook in the US, the European debt crisis and pressures to suppress subsidies to electricity tariffs are some of the challenges that the newly-elected president, Danilo Medina, will be facing in his first year in office.

The central bank recently announced that the Dominican Republic's (DR) economy expanded by 3.8% y/y in the first half of the year, slightly below the 4.0% rate observed in the first half of 2011. With the exception of the construction sector, which has been lagging the economic recovery, all the sectors showed a positive performance. The services sector, which accounts for more than half of GDP, doubled its rate of growth in the first six months of the year compared with the first half of 2011, while the refined oil sector also contributed to the economic gain.

With the new government already committed to fiscal austerity measures, an expected mild economic growth path in the US and the European slowdown, we anticipate that the DR's economy will grow by close to 4.0% in 2012 and 4.4% in 2013. The resumption of ferronickel production , that will improve both the mining and the export sectors, the more accommodative monetary policy stance and the recovery — albeit slow — in US activity will continue to drive the domestic economy.

International oil prices will continue to drive local inflation trends (DR is a net oil and fuel importer). Headline inflation decelerated from 6.9% y/y in January to 1.6% in July, the lowest rate since 2009 and considerably below the 4.5-6.5% official target range. After adopting an inflation-targeting regime this year, and given the economic moderation and credit slowdown, the central bank cut the reference rate by 175 basis points (bps) from May to August, to its current level of 5.0%. We anticipate that yearly inflation will remain within the central bank's tolerance range in the coming months while economic activity decelerates, leaving the door open for further rate cuts. However, inflation could resume its upward trend in 2013 as a result of possible increases in taxes and electricity tariffs .

With a high oil dependency, we anticipate that the DR's current account deficit will decrease slightly in the coming years. Total exports expanded by 4.8% y/y in the first half of the year, mainly driven by exports to the free trade zones; while imports increased by 3.1% y/y in the same period, as a result of a rise of 4.2% y/y in the oil account. We maintain our view that the tourism sector will gradually recover in the coming year, as will remittances; however, the rebound will be slow. Foreign direct investment increased significantly in the first six months of the year, largely directed to the energy and mining sectors. We expect this trend to continue, though at a more moderate pace, in the second half of the year. Any shocks in oil prices will have a significant impact on both the current account and inflation, leaving the country in a highly vulnerable position.

The fiscal situation remains of concern to the new government. In July (before the elected president took the office), as a result of higher spending in the first quarter of the year, Congress approved a supplementary budget for 2012, which could take the fiscal deficit to close to 4.0% of GDP this year The new administration has already announced austerity measures that will try to alleviate public finance stress; however, the country needs a major fiscal reform that might include a higher tax base, lower subsidies to electricity tariffs and controlled government spending. This will also be a key issue for any negotiations with the IMF to reach a new Stand-by Agreement in the coming months.

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Toronto Hydro

In a rare instance where a provincial regulatory decision made headlines, **Toronto Hydro Corp. (A(high)/ A/ n.r.)** had a rate application turned down by the Ontario Energy Board in January, prompting a series of news stories outlining tidbits of what happened and why. Toronto Hydro has again made an application for rates for 2012, 2013, and 2014, in what it hopes is a format that the OEB will find fits its current regulatory mould, and result in approval of an admittedly larger than normal capex program. This outsized capital plan is a result of Toronto Hydro's multi-year infrastructure renewal program, as documented in detail, to replace a cohort of assets put in service during Toronto's 1960s and 1970s building boom that are at their end-of-life. The application requests inclusion in rate base of $1.4 billion in capex over the three year period, an average of approximately $470 million per year, compared to actual capex of about $370 million in the past two years, and roughly $200 million per year in the preceding five years. These amounts dwarf annual depreciation of about $140 million, posing very significant pressure on free cash flow, a commonly referenced credit metric. With $470 million of term debt maturing next May, we think the bond market may begin to pay more attention to some of the complexity of the OEB's rate regulation, even though we think the upcoming decision in Toronto Hydro's rate application is unlikely to have a direct effect on financial results or ratings. (DBRS confirmed its rating and stable trend last week.) We will follow the progression of the application through the regulatory process with interest, with a decision in this important rate case expected near year end or perhaps in early 2013.

IRM

Starting in 2009, the OEB began applying its "3rd Generation Incentive Rate Mechanism" (IRM or 3G IRM). This multi-year rate mechanism starts each utility's rates with a "base year" revenue requirement. Determining the base year requirement involves a thorough testing of evidence presented by the utility in its rate application, to determine the revenue requirement adequate to fund its operations, including its cost of debt, depreciation charged on its "rate base" of assets in use, and its return on equity. This base year assessment is just like a "cost of service" (COS) approach to rate setting, and involves significant time and expense on the part of the utility, interveners (chiefly customer groups), and the regulator.

In the next three years of IRM, a utility's rates are subject to a price cap, which is determined by formula as the previous year's rates increased by inflation less a productivity factor. This restricts the price increase to the consumer to less than inflation.

Since the price cap's annual rate increase is strictly less than inflation, management has a strong incentive to find ways to increase productivity and reduce growth in its costs to less than inflation. Otherwise, the utility may fall short of achieving its target allowed ROE.

As well, after the cost and effort of determining the base year rates, the regulatory burden is minimal for the remainder of the IRM period, until the next rebasing.

This incentive to drive utility productivity is the key reason that such rate mechanisms are now an increasingly common regulatory practice across Canada. Additionally, the cost savings of lowering the regulatory burden (for the regulator, as well as utilities and interveners), compared to successive COS rate proceedings, are not trivial.

Under-recovery of Capex

The "rub" of the OEB's demanding but otherwise uncontroversial 3G IRM is in its "sizing" of the revenue requirement for the recovery of capital costs. The portion of rates that recover the cost of assets, represented by depreciation, rises at the same "inflation less productivity" factor as OM&A costs. New assets do not enter the rate base until the next rebasing year, so growth in the depreciation component of rates will lag the additions to assets if the annual cash outlay for capex materially exceeds the depreciation expense. Simply given the effect of inflation, and considering the average age of assets in rate base, this will be the case for virtually all utilities.

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Any lag in assets entering rate base can become a credit concern for utilities whose capex programs are much larger than depreciation, since it pressures free cash flow and other credit ratios. We think that this adverse cash impact of a rising capital program is magnified under IRM. Bond investors and the rating agencies focus on such credit indicators as cash flow interest coverage, cash flow to debt, and even negative free cash flow. However, in our experience, regulators typically do not give much weight to these cash-based ratios, but rely on ROE as the key measure of utility financial health.

Under COS regulation, assets will enter rate base in the year when they are placed in service. Prior to being placed in service, they are not subject to depreciation, and non-cash revenues are accrued to cover the cost of financing the assets. All capital costs of the asset are capitalized until the asset is placed in service. Depreciation begins to be charged only when the asset is placed in service. Typically under COS, an asset will enter rate base half-way through the year it is placed in service (the "half-year rule"). So, while there may be a difference of some months in the timing of an asset entering service and having depreciation charged to earnings, and its entering rate base, the earnings effect is typically not very material. As a result, apart from these generally small timing differences which are typically not very material, under COS, ROE is insensitive to any mismatch between cash capex and depreciation. Hence, virtually the entire capital cost of the asset is fully recovered in rates.

Under 3G IRM, new assets do not enter rate base until the next rebasing. However, they are subject to annual depreciation from the time they are placed in service. This depreciation on new assets is charged to earnings, and if the amounts are material, they will materially reduce ROE. As well, upon IRM rebasing, only the depreciated cost of the new assets, not the as-new historical cost, enters rate base. This results in the utility funding the "lost" depreciation (compared to a rate regime that allows new assets to enter rate base more or less upon completion) from its own equity.

For a utility with little mismatch between capex and depreciation, this loss can be immaterial. For some utilities with large capital programs, particularly Toronto Hydro, the permanent loss of earnings will be material, and can not only affect shareholder returns, but could place significant pressure on credit ratios.

The potential for such a deadweight loss – which we think is quite punitive compared to either COS or a form of IRM that applies only to OM&A, and not to capital-related costs – creates an incentive for utilities to arrange capital spending so that it enters rate base in the base year application, and then defer capex as much as possible until the next rebasing year. This (and perhaps other perverse incentives) could in the view of many lead to inefficiencies in capital planning and implementation, and could even "push the envelope" on capacity, reliability, and safety margins.

IRM and ICM

In an attempt to address these shortcomings of IRM, the OEB allowed utilities, as part of its 3G IRM, to apply for an "Incremental Capital Module" (ICM), and allow certain new assets to enter rate base prior to the next rebasing. This would result in an approved, specific increase in rates over and above what the IRM price cap would otherwise allow.

However, to prevent a flood of ICM applications from utilities with only moderately above-average capital spending, criteria were established to make ICM applications quite rare. As the OEB said, "the capital module is intended to be reserved for unusual circumstances … where the distributor has no other options for meeting its capital requirements within the context of its financial capacities underpinned by existing rates."[1]

1. Ontario Energy Board, Supplemental Report of the Board on 3rd Generation Incentive Regulation for Ontario's Electricity Distributors, September 17, 2008.

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ICM Criteria

To reserve ICM applications for unusual circumstances, the OEB set three eligibility criteria, based on Materiality, Need, and Prudence[2]. To meet the Materiality threshold, capital spending for a given year must exceed depreciation by at least 20%. (This threshold can vary among distributors, and is set by a formula, with a minimum value of 20%, though it will generally be a little higher than 20%. The threshold value for Toronto Hydro, according to its rate application, is about 125%.) Even if the ICM application is approved, only the capital spending above the threshold will enter rate base, creating a roughly 20% to 25% or more "deadband".

To meet the Need criterion, the incremental amounts must be driven by circumstances that are "clearly non-discretionary." [3] To meet Prudence, the decision to incur the capex costs must represent the most cost-effective option (though not necessarily the least initial cost) for ratepayers.

In practice, while several ICM applications have been approved by the OEB, there has been considerable uncertainty in the sector over the evidentiary requirements to demonstrate that these criteria are being met. While all rate applications are long documents, we believe that Toronto Hydro's current application – which focuses exclusively on the capital module, since the OM&A portion of rates will continue to be set by the IRM formula – is unusually long, at just under 4,000 pages. Hundreds, if not thousands, more pages will be added to the record as the rate proceeding moves along, and as interveners enter evidence and engage Toronto Hydro in the Interrogatory (written Q&A) part of the proceeding.

Last Year's Cost of Service Application

Toronto Hydro has very large capital spending needs for the next decade, due to the renewal requirements of aging infrastructure following a building boom in the 1960s and 1970s. Toronto Hydro also had unusual workforce renewal requirements related to a demographic bulge of pending retirements, and the need for extensive on-the-job training to properly fill its skilled labour positions. To address this, Toronto Hydro filed a COS application last year for the rate years 2012, 2013, and 2014. The COS application requested a revenue requirement tailored to match the unusually lumpy pattern of operating expenses and the large capital program, which would not be accommodated under the "set and forget" IRM rate mechanism.

The rate increases sought by Toronto Hydro were large, and such material increases are typically universally opposed by interveners in the regulatory process. We note, however, that some intervener groups were supportive of key elements of the COS application, recognizing the potential threat to capacity and reliability of understaffing and underinvestment.

In a high-profile decision released in early January, the OEB declined to hear the COS application, as "it is considered an early rebasing, and hence a departure from the (IRM) policy."[4] In a subsequent (and highly exceptional) public letter from the OEB Chair & CEO to Toronto Hydro's Chair, the OEB explained its intent to apply the IRM framework to Toronto Hydro, in the interests of fair and transparent regulation and consumer protection. The OEB Chair invited Toronto Hydro to make an ICM application for "unforeseen or extraordinary investment."[5]

In direct response to the denial of COS, Toronto Hydro began implementing a workforce restructuring program aimed at reducing operating expenses. Layoffs encompassed severance of some management

2. Ibid.
3. Ibid.
4. OEB, Decision with Reasons on the Preliminary Issue, January 5, 20122012 (Updated August 8, 2012)
5. OEB, Letter to Clare Copeland, Chair, Toronto Hydro Corp, January 13, 2012

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positions, and voluntary exit incentives for targeted unionized labour positions. As of Q2, of the $27.8 million in restructuring charges incurred to date, $19.8 million remains unpaid. In Q2, the workforce reduction resulted in an expense savings of $2.7 million.

Also in Q2, receipt of a non-recurring tax refund, due to a change in regulation related to prior years, helped offset the restructuring charges taken in Q1, which will ameliorate the net income and the cash flow impact of the charge in full-year 2012 results.

In our view, the sizable headcount reduction demonstrated a very strong will on the part of management and Toronto Hydro's Board of Directors to manage costs aggressively to fit within the constraints posed by the OEB's IRM-derived revenue requirement.

The IRM ICM Application

This past May, Toronto Hydro filed its application for IRM rates and for ICM "rate adders". While the filing is intended to largely conform to the OEB's standard filing requirements for such applications, it nonetheless makes specific, intentional deviations from the standard, with justifications. These "Special Issues" include a request that the OEB consider three successive years of ICM requests in the current application, in the interests of regulatory efficiency, and to allow predictability of funding, which in turn allows capital planning on a "reasonable multi-year horizon, which is strongly conducive to cost effectiveness."[6]

The application also requests that the 2011 year-end rate base be recognized in 2012 rates. Normally, the average rate base would be used. (Due to high capex in 2011 of $379 million, the year-end rate base is materially higher than the average rate base.) As well, Toronto Hydro requests that the dead band created by the ICM materiality threshold be suspended, while at the same time, the typical "half-year rule" (which allows average capex to enter rate base in the year it is spent) be reinstated for ICM-approved capex. Together, these two requests would allow rate increases to more closely track capital asset additions, while potentially resulting in a lower cumulative rate increase to consumers over the duration of the 3 year IRM period.

The voluminous IRM ICM application describes in great detail why Toronto Hydro believes its capex should meet the stringent eligibility criteria. Need is demonstrated by statutory or other external stipulations, safety, reliability, capacity, or long-run cost minimization considerations. Prudence is argued based on minimizing life cycle costs, subject to safety and other constraints. The "unusualness" of proposed capex is a harder stricture to demonstrate, as Toronto Hydro acknowledges that much of its capital program is foreseeable, and involves jobs "regularly undertaken by a mature urban utility."[7] Here, Toronto Hydro notes that a significant chunk of its assets were added during the City's 1960s and 1970s building boom. The application provides evidence (which it notes has been detailed in previous OEB applications) that certain of these assets are near, at, or beyond their end-of-life.

Financials

As of Q2, Toronto Hydro's LTM FFO interest coverage was 4.3x, quite consistent with the past several years' results, and in our view supportive of the current ratings. The non-recurring tax recovery will help insulate this year's earnings and cash flow from the restructuring charges taken to date, though further restructuring charges could be taken if the capital spend proposed in the ICM is cut back aggressively by the upcoming rate decision. The continued relative success of energy conservation and demand management initiatives (as well as general public awareness) has the ongoing result of putting downward pressure on

6. Toronto Hydro-Electric System Limited Application 2012, 2013 and 2014 IRM Rate Adjustments and ICM Rate Adders, May 10, 2012 (Updated August 8, 2012)
7. Ibid.

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volume-sensitive revenues. Near term, though, what we suspect was a high summer heating load may have been enough to more than offset this effect, and could lead to fairly strong Q3 results for Toronto Hydro and the sector generally.

Rating Implications

Toronto Hydro has already taken a significant step in shedding operating costs to live within the operating expense constraints of the IRM. We understand that management and the Board of Directors are similarly determined to trim the capital program, if and as necessary, to live within the constraints of the OEB's decision on its current ICM rate adder application. While the application describes the proposed level of capex as "essential to the maintenance of system health and functionality"[8], we think Toronto Hydro would pare it back further, and delay even more until the next rebasing period (expected in 2015), in order to protect its financial integrity, its ratings, and its cost of borrowing. Hence, we think that even if much of the application's "ask" is denied by the OEB, material deterioration in financial metrics is unlikely.

Having said that, we believe that the rating agencies will be following the rate proceeding's outcome very closely. Under-investment in capex could eventually affect the distribution system's reliability scoring, and conceivably even system safety margins, both of which could have longer-term negative financial impacts.

More broadly, we believe that an adverse decision could gradually influence the rating agencies' opinions on the degree to which the regulatory relationship is supportive, benign, or somewhat adversarial, which we think is a constant if often unstated element of the ratings.

For these reasons, we think that the bond market should be sensitive to the proceeding as it evolves this fall. A decision is expected near year-end, or perhaps early in 2013. We gather that the other large Ontario electricity distributors, and likely the gas distributors, are following the proceeding with great interest, as many of the questions posed affect them too, even if Toronto Hydro is most affected due to its circumstances. We will follow the proceeding with great interest as well.

8. Ibid.

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EEB/TGI: Stability In The Pipeline Business

We continue to expand our Colombian corporate coverage with a review of TGI, the gas pipeline operator and subsidiary of EEB which issued bonds in March of 2012.

Introduction to the company

Transportadora de Gas Internacional (TGI) is the largest Colombian company engaged in the transportation of natural gas in Colombia, with a market share of more than 50%. The Colombian gas-transport market is divided into 2 regions, with two companies covering practically the entire market and operating with natural monopolies in their respective regions. TGI connects various gas fields (including la Guajira, with the greatest production volume, and Cusiana) to zones that include the country's largest consumer base. The company is majority owned by Empresas de Energía de Bogotá (EEB), an integrated energy company that operates mostly in Colombia but also in Peru and Guatemala. The District of Bogota holds a three-quarter stake in EEB, demonstrating that the government has a strong interest in the firm's viability. S&P recently gave EEB an investment grade rating based on the diversification of the company's sales, the profitability of its businesses, and the stability of its income, as well as on the expectation that EEB could count on support from the District of Bogota if needed.

Regulatory aspects

TGI transports gas from the production fields—where it is extracted by private companies under government contract—and then delivers it to distributors or large consumers. Since TGI faces no competition in the area it serves, every 5 years the CREG (Gas and Energy Regulatory Commission) establishes the maximum fees the company is permitted to charge, taking into account its investment costs, operating expenses, and projected demand. The Commission assumes a useful contract life of 20 years and sets prices to allow for rates of return of between 15% and 17%. In seeking to ensure the financial viability of the participating companies, they permit high financial margins, with Ebitda margins for the last 3 years above 75%.

The Colombian Government has launched initiatives to promote gas consumption, because it is one of the least expensive energy sources; programs include subsidies for companies that use gas to generate electricity. Gas also plays a strategic role as a backup supply for electric generation, especially during periods when the country's weather pattern is affected by "el Niño," resulting in little rainfall and little hydro-electric production. Natural gas production has posted compound growth of more than 5.5% since the year 2000, according to data from ANH (National Association of Hydrocarbons). There has been practically no change in gas reserves since then, as a result of which the reserves-to-production ratio has diminished. Nevertheless, the country still has a cushion of 17 years of reserves as of the end of 2011.

Stable and predictable demand

The type of clients TGI works with is an advantage. The company's 5 main customers, representing more than 75% of sales, are all solid companies with a significant role in the country's economy. Three of them have an investment grade rating. One of these clients is the state-owned company Ecopetrol, and others pertain to Colombia's main gas distribution and commercialization enterprises, which themselves enjoy diversified client bases. Other clients are the country's largest electricity companies. Most important for TGI's sales outlook is that its client contracts have an average life of close to 10 years, and in approximately 80% of the contracts, the client promises to pay for a certain capacity, regardless of the actual amount ultimately sent through the pipeline. TGI, in turn, is obliged to maintain that bandwidth available for the client. As a result, a significant part of its income is predictable, enabling the company to plan its investments according to future demand.

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The company's cost-to-sales ratio is stable, with quarterly variations due mostly to maintenance costs. Recently, renewed FARC attacks on TGI's infrastructure (as well as on the installations of other energy companies) have led to interruptions in the supply of gas beyond the company's control.

Significant increases in capacity planned

As a result of its clients' increased consumption of gas, TGI has invested and plans to continue to invest in expanding its networks, many of which currently are near their saturation points with existing contracts. The expansion projects that have already gone online have yielded favorable results, in that they have enabled the company to extend the average life of its contracts considerably, and permitted double-digit sales growth for the last year. Over the next 5 years, the company plans to allocate US$470 million to capex, financed with internal cash-flow generation; this should not be difficult since annual Ebitda for the last 3 years has been above US$220 million. In addition to expanding its network in Colombia, TGI seeks to continue expanding into other Latin American markets, ones that have stable regulatory frameworks and positive growth outlooks.

Despite the investments it has made, TGI has lowered its total leverage in annual terms. The net debt-to-ebitda ratio for 2Q12 was 2.8x, a comfortable level relative to the 4.8x established in bond covenants.

Lower spreads among peers

The company's closest comparable issuer is Promigas, a gas pipeline operator in another region of Colombia; Promigas only issues in the local market, however. Many of the companies that operate in the sector in other countries carry out a variety of oil and gas related activities, making their comparison with TGI difficult. Companies in the US with a similar rating, such as El Paso Pipeline, which has numerous gas pipelines in the country, trade around 250 bps above US Treasuries.

US pipelines in general are viewed as very secure investments for bondholders and almost never have problems as long as they stick with their core business. They are heavily regulated, with the government ensuring that they are profitable but not too profitable. A US regulator would typically target a rate of return of around 10% to 11% for equity holders. We imagine that the higher return allowed in Colombia is justified by the fact that local interest rates in Colombia are higher; local TES government bonds currently trade about 5% above US Treasuries.

Of course, regulatory risk is the key consideration in this business, and it is likely higher in developing countries. For example, Transportadora de Gas del Sur, which holds an exclusive license to operate Argentina's southern gas transportation, trades at a spread of over 1,000 bp. Colombia's regulatory risks are of course relatively very low. As we explained in our article, "Does Politics Matter in Colombia (December 18, 2009)," Colombia is among the least left-leaning countries in Latin America according to Latinobarómetro cross-country polls. Those views probably result in part from the fact that leftists are associated with guerrillas, whom the public generally does not like. In addition, Colombia´s nearly 150 year history of democracy has institutionalized regime change and diminished the incentive of parties to resort to populist measures. We do not foresee a detrimental regulatory change in Colombia for this reason.

We view credit risks for TGI as closely linked with the credit risks for the country as a whole, and we think that additional idiosyncratic risks with the company are limited. Thus, we think that TGI´s yield of 4.6% offers an attractive pickup over the 2.6% available in the sovereign curve.

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France's Fiscal Path Under The Spotlight

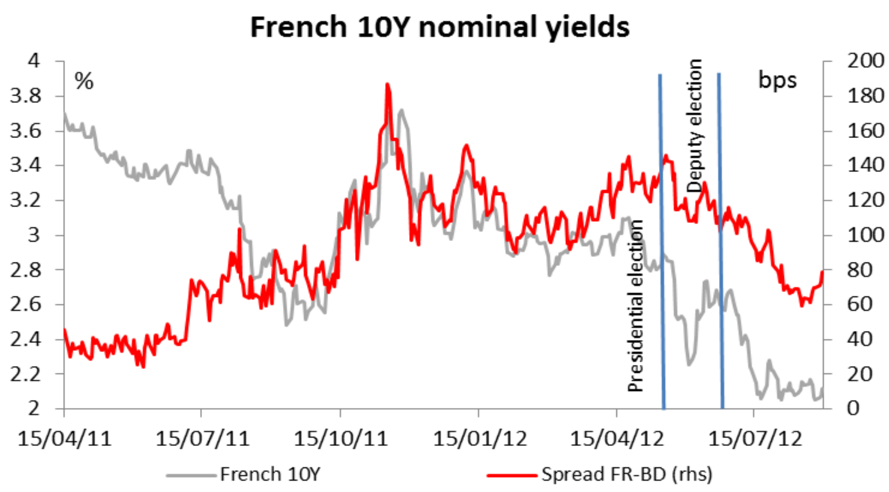
- **The coming weeks will see the presentation of the 2013 budget law in France and the ratification of the European fiscal pact.**
- **The government is committed to the 3% budget target for next year and a new set of measures has been announced.**
- **Most of the efforts will be carried through higher taxation but the renewed debate on French competitiveness suggests that the coming months could see major changes in both labour and fiscal policies.**

France, still on the core side!

During the coming weeks, France's fiscal position will be addressed through the presentation of the 2013 budget law on September 28th and the expected ratification of the fiscal pact, around the beginning of October.

So far, despite early fears around the election of the socialist F. Hollande, France has actually seen its position strengthening in financial markets. Nominal yields moved back close to record lows this summer while the spread vs. Germany tightened. This showed that in the middle of rising worries regarding the existence of the euro area, France was still seen as being among the core.

Chart 1: French nominal yields



Looking to some market and vulnerability indicators produced by the IMF to track the pressure on sovereign debt, the position of France could seem at risk, particularly with respect to fiscal and debt fundamentals (debt-to-GDP ratio, Primary balance) and short-term financing needs, and, given its high ratio of external funding, could therefore be vulnerable to shifts in market sentiment. On the other hand, a looser link with the banking sector tends to protect France from the recent worries linked to possible spill-overs from any banking crisis. We also added another element in this picture produced by the OECD by taking into account potential growth which is, at the end of the day, the room to manoeuvre for each country to repay its debt. On this metric, France also is a strong performer. All in all, a mixed picture, but the capacity of France to adjust its fiscal and debt underperformance remains the main point to address.

So far, the market gave to the new government the "benefit of the doubt". The fact that Mr. Hollande and his government were able to get a strong majority at the parliament following the June Deputy election (no need for a coalition with the Communist party) was already seen as an encouraging step, strengthening the more pragmatic and rigorous stance defended by the new president. However, there is now a need to see concrete acts from the new government!

One point of focus will be on the ratification of the Fiscal Pact, expected by the beginning of October. The uncertainty has been reduced, following the ruling by the French Conseil d'Etat that there is no need to change the

[1] Global Financial Stability Report, IMF, April 2012, table 2.1, p23

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Chart 2: France is lagging on fiscal and debt fundamentals…

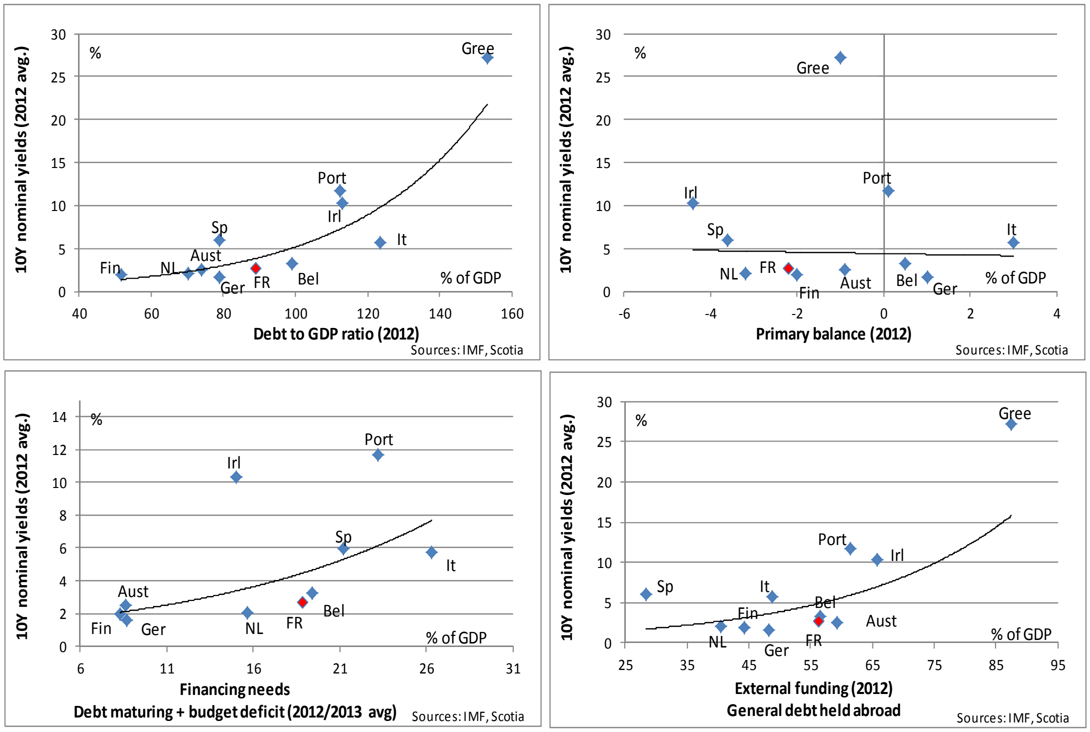
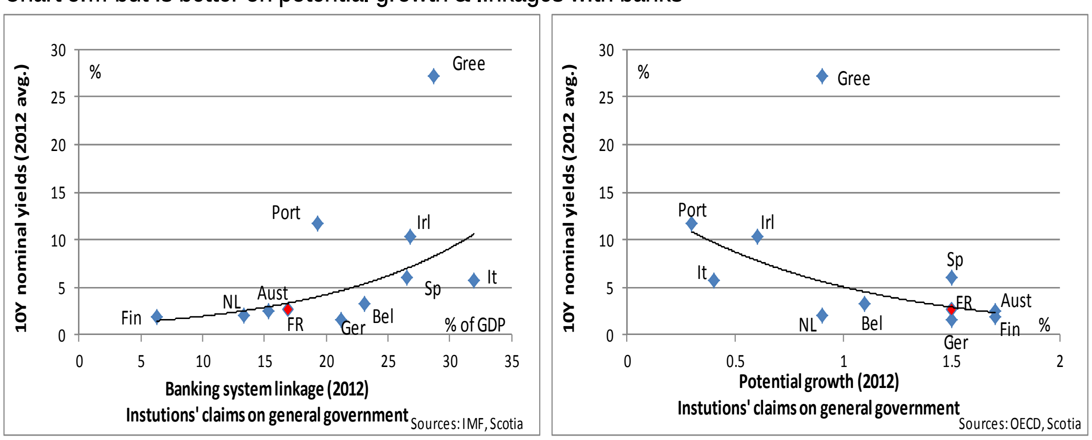


Chart 3:… but is better on potential growth & linkages with banks



constitution and a simple majority at the French Deputy chamber will be required. While for pure domestic political reasons, Mr. Hollande would like to ensure that all socialist deputies (even from the left wing) will vote in favour of the text, the fact that most of the right-wing opposition will also provide support makes this hurdle easy to pass.

Trickier could be next year's Fiscal law. The French president already provided the main direction early this week.

What does not change? The 3% budget deficit target…

First and foremost, a clear commitment to reach the 3% deficit target for next year, after an expected 4.5% figure for this year. Given that France is about to endorse the fiscal pact, it would be difficult not to stick to this target. Early this summer, the French Cour des Comptes indicated that there will be a need for a €30 billion budget consolidation to reach the 3% line with GDP growth running at around 1%.

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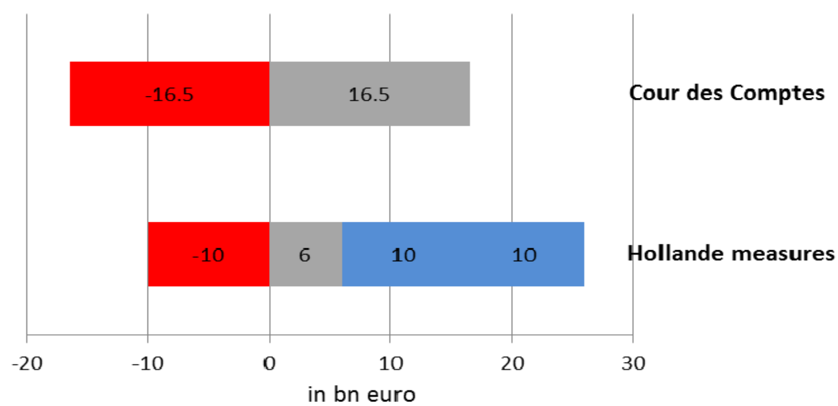
Mr. Hollande indicated that the assumptions for GDP growth for next year will be lowered to 0.8% from 1.2% announced in early summer. So, the figure looks more credible. Although the risk could be still on the downside in view of the 0.4% figure seen in latest consensus forecasts, given the high uncertainty on the macroeconomic cycle over the recent years, this difference is meaningless.

On the back of this, Mr. Hollande announced a €30 bn additional package. Taking into account the €6 bn extra package already adopted before the summer break (wealth tax, re-taxation of extra hours worked, etc.), this brings the total efforts to €36 bn (1.8% of GDP), which matched the recommendation of the Cour des Comptes with a growth assumption which is now slightly lower. So, the arithmetic is also consistent with the recommendation and illustrates the strength of the new government to stick with the target despite a less favourable growth environment.

… and the split between higher taxes and lower spending!

However, the way to reach this 3% target is different from the Cour des Comptes' recommendation. While in early June, the Cour recommended a balanced approach with an equal split between higher taxes and tighter spending, the announced measures by the French president favour a 2/3 split in favour of higher taxation (after the €6 bn extra taxation already implemented this summer). On the new €30 bn package announced, around €20 bn will indeed come from higher taxes on households as well as on corporates (€10 bn each) and €10 bn through tighter spending control. This isn't surprising given Mr. Hollande's electoral platform, which favoured higher taxation.

Split between higher taxes and lower spending



The French president mainly gave details on the new measures impacting households. In line with his presidential campaign, most of the burden will impact higher revenues through the introduction of new income tax brackets and the decision to tax capital incomes in the same way as labour incomes. However, other measures like the de-indexation of income tax to inflation (a measure already in place under the previous right-wing government) or the lower deduction on children's allowances will also impact middle-income households which, during the electoral campaign, were supposed to be protected from the impact of the crisis.

Regarding the impact on corporates, the presidential program already pointed to higher taxation on big corporates while those small- and medium-sized are supposed to be more protected. Higher taxes will come in particular from lower tax deductibility for big corporates but the presentation of the Fiscal law at the end of this month will provide more insight on this.

Estimated impact of main measures on Households

	in EUR bn
Dexindexing of Income tax	1.5
Higher taxes on capital income (in line with those on labour income)	4.5
New 45% income tax	0.7
Lower deduction for some tax exemptions	1.3
Lower deduction for children allowances	0.45
75% tax on income revenue of EUR 1 million or more	0.3
Total	8.75

Source: Scotia

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Finally, the €10 bn coming from a tighter control on spending is expected to come from a freeze in "value". However, there has not been further detail on how to reach this target, especially when there is the feeling that there is more and more announced spending which needs to be financed. For example, the government just announced the creation of a 500K youth employment program. This measure is estimated to cost the budget €2.5 bn per year and was supposed to be financed by lower tax exemptions for corporates on low-paid workers. However, given the risk it could have on French competitiveness, the government moved backward on this issue and so far there has been no indication on how it will be replaced. Also, while the French president repeated his commitment to freeze the number of civil servants, there are not yet details on which Ministries will need to be adjusted to compensate for the programmed increases in the education, security and the justice sectors. These uncertainties will need to be clarified at the end of September or it could question the credibility of this tighter spending control and the budget as a whole.

What could change? A shift back to the issue of competitiveness?

Pushing for higher taxes, especially on corporates, rather than lowering spending could nonetheless raise questions regarding France's future potential growth which, so far, appears to have been one of the supporting elements. It brings back to the table the debate regarding the loss of French competitiveness. This issue was hot during the presidential campaign. At this time, Mr. Sarkozy responding to it by announcing a hike in the VAT in October to help lower labour costs (the "social VAT"), copying the choice made by Germany in 2007. This measure was cancelled by the current government.

The quick deterioration of the job market over the summer months has nonetheless refuelled the pressure on this issue. As we mentioned above, the government finally stepped back from its willingness to finance its youth employment program by implementing higher taxes on corporates. However, there is a need for significant changes to favour a stronger competitive focus. Mr. Hollande pointed to this direction last week-end, suggesting that he wanted to put in place over the coming months the conditions for a "competitiveness shock".

First, he asked for both labour unions and employers to present by the end of the year a complete reform of the labour market in order to offer stronger flexibility for corporates. In case of no agreement, the government will take the lead on this issue.

Second, rather than returning to the "social VAT", the new government seems now to favour a rise in the CSG tax in order to lower labour costs (a "social CSG"). While a rise in the VAT or the CSG was clearly mentioned by the Cour des Comptes, it was not included in the electoral platform of Mr. Hollande and was opposed by the government until recently. Compared to household income tax which only impacts labour income, the CSG has much broader bases, impacting all household incomes (labour, pensions, unemployment, capital). A 1% rise in the CSG is thus estimated to bring back around €11 bn (0.5% of GDP), a bit higher than a 1% rise in the VAT (around € 8 bn).

This changing attitude from the government could suggest an important shift in the debate regarding the restoration of French competitiveness. While the 2013 fiscal law will come too early for illustrating this point, the coming months will be closely watched to see if Mr. Hollande is about to become the French "Schröder".

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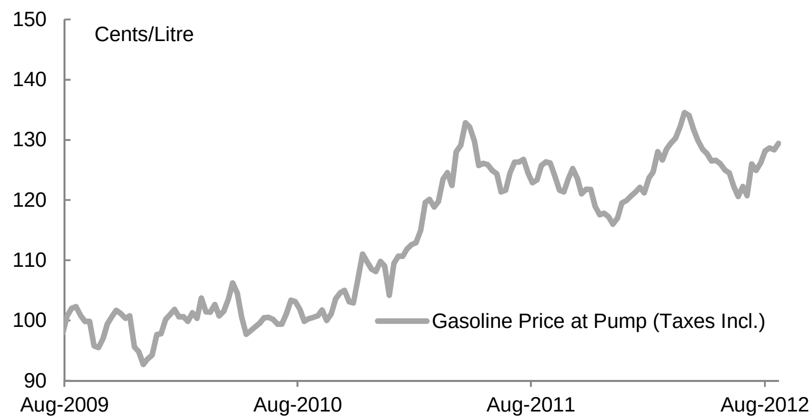
Key Data Preview

CANADA

Scotia is expecting a fairly strong 0.3% m/m **CPI** print that will translate into 1.3% y/y CPI growth on September 21. The major factor here will probably be gasoline prices, which were up 3.8% m/m in August (NSA) and have continued to climb in September. The higher prices at the pump should add a couple of tenths of a percentage point to monthly CPI. Scotia is also expecting that higher world food prices should start to pass through to Canadian consumers' grocery bills eventually this year, with food costs rising mildly in August (so far this relationship is yet to materialize in Canada — though it has globally). Clothing prices should also be higher as summer sale discounts were particularly deep in July and should be counteracted as fall clothing collections were introduced into stores. Auto prices could well be a drag as dealers ran 'employee discount' incentives and other sales through the summer and into August.

Canada Gasoline Prices: Picking up Again



Source: Bloomberg, Scotia Economics

What does it all mean for monetary policy? Inflation is running quite low, albeit a shade higher than the Bank of Canada's near-term economic forecast anticipates (the BoC forecasted an average CPI level of 1.1% during Q3 in its July 2012 MPR). It's hard to see how this type of inflation environment could necessitate rate hikes, implying that the gradual withdrawal of monetary policy stimulus that the BoC contemplates "eventually" happening in its statements is still far off.

UNITED STATES

Is the US experiencing a housing renaissance? While we've seen strength in select metrics of late — mainly the Case Shiller Home Price Index and to a lesser extent housing starts — other metrics including re-sales and new home sales have essentially flat-lined through mid-2012 after posting decent gains in late 2011 and the start of this year. **Housing starts** (September 19) have been tracking at +/- 750k since April after holding in the 600k range during the summer of 2011. We're expecting more of the same for August, forecasting a 760k annualized print. Permit issuance did however pick up considerably through the summer, with July's 811k building permits being the highest level of issuance since prior to the collapse of Lehman Brothers. That augurs a more rapid pace of home building as the year progresses.

The story with respect to **existing home sales** is fairly similar. While the level of existing home sales has improved compared to mid-2011, real estate turnover is tracking a tad lower than it had been earlier during 2012. Leading indicators for home sales are fairly mixed, with pending home sales and the NAHB housing market index pointing to strength while mortgage purchase applications were quite low in August as compared to July. Scotia isconsequently expecting a fairly muted 0.5% improvement in existing home sales during August (September 19).

Last but not least, the **Philly Fed Index** will be released on September 20th. Scotia is expecting that the index will continue to improve from its very low prints earlier this summer, however with the jobs outlook weak and manufacturing slumping globally, it's hard to see the Philly Fed index busting entirely out of its summer slump and into growth territory.

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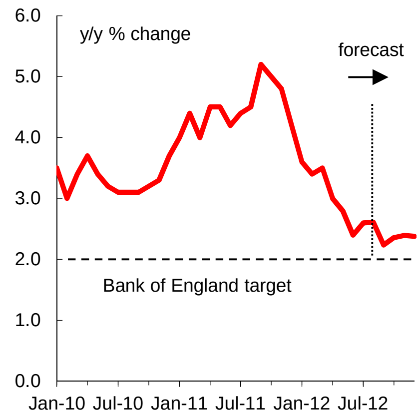
EUROPE

We expect UK CPI and RPI inflation to remain unchanged in August at 2.6% y/y and 3.2%, respectively. These estimates are slightly above consensus expectations for moderate decelerations. Although we are on the high side of consensus, we could easily aim a little higher, as there is room for a bigger surprise. Among the likely key influences are: petrol prices, which gained roughly 2.5% m/m in the month; clothes price inflation, which will likely snap higher, reversing the deeper (and earlier) than usual summer discounts; and airfares, which should see some payback for a very big increase in the previous month. More generally, we have seen upward surprises pretty much everywhere in the euro zone in August. Energy prices have played a role. For now we don't anticipate any early effects of the drought conditions in the US on food costs. However, that should start to become more evident from around the turn of the year. The renewed upward pressure on both energy and food prices is likely to ensure that headline CPI inflation does not dip below the Bank of England's 2% target for at least the next two years.

UK Consumer Price Inflation

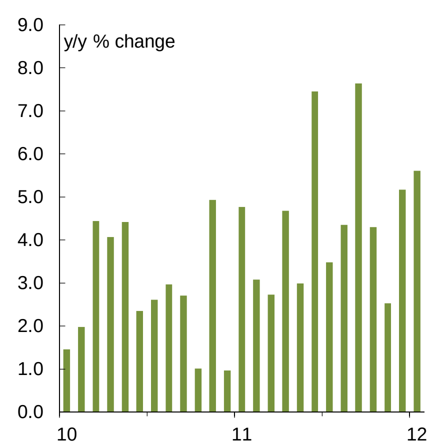


Source: Bloomberg, Scotia Economics.

LATIN AMERICA

The Mexican economy continued to produce solid economic data in the beginning of the third quarter of the year. In the previous quarter, local consumption was one of the key drivers of economic growth, with retail sales expanding by an average rate of 4.4% y/y in three months to June. Retail sales for July will be released on September 20th and we expect another solid performance above the 5.0% y/y mark. We anticipate that some of the post-election effect will remain in the consumption figures for July. Additionally, industrial production expanded by 4.9% y/y in July, as a result of a significant rebound in the construction sector and electricity, water and gas for final consumption, which confirms a strong economic performance as we entered the third quarter.

Mexican Retail Sales



Source: Thomson Reuters.

Key Indicators for the week of September 17 - 21

North America

Country	Date	Time	Indicator	Period	BNS	Consensus	Latest
CA	09/17	08:30	International Securities Transactions (C$ bn)	Jul	--	--	-7.9
US	09/17	08:30	Empire State Manufacturing Index	Sep	-3.0	-2.0	-5.9
US	09/18	08:30	Current Account ($ bn)	2Q	--	-126.6	-137.3
US	09/18	09:00	Total Net TIC Flows ($ bn)	Jul	--	--	16.7
US	09/18	10:00	NAHB Housing Market Index	Sep	38.0	38.0	37.0
US	09/19	07:00	MBA Mortgage Applications (w/w)	SEP 14	--	--	11.1
US	09/19	08:30	Building Permits (mn a.r.)	Aug	--	795	811
US	09/19	08:30	Housing Starts (000s a.r.)	Aug	760	765	746
US	09/19	08:30	Housing Starts (m/m)	Aug	1.7	2.6	-1.1
US	09/19	10:00	Existing Home Sales (mn a.r.)	Aug	4.5	4.6	4.5
US	09/19	10:00	Existing Home Sales (m/m)	Aug	0.5	2.0	2.3
US	09/20	08:30	Initial Jobless Claims (000s)	SEP 15	375	370	382
US	09/20	08:30	Continuing Claims (000s)	SEP 8	3250	--	3283
MX	09/20	09:00	Retail Sales (INEGI) (y/y)	Jul	5.7	3.4	5.6
US	09/20	10:00	Leading Indicators (m/m)	Aug	--	-0.1	0.4
US	09/20	10:00	Philadelphia Fed Index	Sep	-5	-3.3	-7.1
CA	09/21	08:30	CPI, All items (m/m)	Aug	0.3	0.3	-0.1
CA	09/21	08:30	CPI, All items (y/y)	Aug	1.3	1.3	1.3
CA	09/21	08:30	Core X8 CPI (m/m)	Aug	0.4	0.3	-0.1
CA	09/21	08:30	Core X8 CPI (y/y)	Aug	1.7	1.6	1.7
CA	09/21	08:30	CPI SA, All items (m/m)	Aug	0	0.3	-0.1
CA	09/21	08:30	Core CPI SA, All items (m/m)	Aug	-0.1	0.1	0.0
CA	09/21	08:30	Wholesale Trade (m/m)	Jul	-0.1	-0.2	-0.1
MX	09/21	09:00	Unemployment Rate (%)	Aug	5.2	5.1	5.0

Europe

Country	Date	Time	Indicator	Period	BNS	Consensus	Latest
EC	09/17	04:00	Current Account (€ bn)	Jul	--	--	12.7
EC	09/17	05:00	Trade Balance (€ bn)	Jul	--	15.0	14.9
UK	09/18	04:30	CPI (m/m)	Aug	0.6	0.5	0.1
UK	09/18	04:30	CPI (y/y)	Aug	2.6	2.5	2.6
UK	09/18	04:30	DCLG House Prices (y/y)	Jul	--	2.1	2.3
UK	09/18	04:30	RPI (y/y)	Aug	3.2	3.1	3.2
EC	09/18	05:00	ZEW Survey (Economic Sentiment)	Sep	--	--	-21.2
GE	09/18	05:00	ZEW Survey (Current Situation)	Sep	--	18.0	18.2
GE	09/18	05:00	ZEW Survey (Economic Sentiment)	Sep	-19.0	-20.0	-25.5
TU	09/18	07:00	**Benchmark Repo Rate (%)**	Sep 18	**5.75**	**5.75**	**5.75**
GE	09/20	02:00	Producer Prices (m/m)	Aug	--	0.4	0.0
GE	09/20	03:30	Manufacturing PMI	Sep A	--	45.2	44.7
GE	09/20	03:30	Services PMI	Sep A	--	48.5	48.3
EC	09/20	04:00	Composite PMI	Sep A	--	46.6	46.3
EC	09/20	04:00	Manufacturing PMI	Sep A	46.0	45.5	45.1
EC	09/20	04:00	Services PMI	Sep A	--	47.5	47.2
UK	09/20	04:30	Retail Sales ex. Auto Fuel (m/m)	Aug	0.3	-0.4	0.0
UK	09/20	04:30	Retail Sales with Auto Fuel (m/m)	Aug	0.3	-0.3	0.3
FR	09/20	06:59	Manufacturing PMI	Sep P	--	46.4	46.0
FR	09/20	06:59	Services PMI	Sep P	--	49.5	49.2
EC	09/20	10:00	Consumer Confidence	Sep A	--	-24.0	-24.6
UK	09/21	04:30	PSNB ex. Interventions (£ bn)	Aug	14.0	15.1	0.6
UK	09/21	04:30	Public Finances (PSNCR) (£ bn)	Aug	--	-5.5	-22.9
UK	09/21	04:30	Public Sector Net Borrowing (£ bn)	Aug	--	13.2	-1.8

Forecasts at time of publication.
Source: Bloomberg, Scotia Economics.

Key Indicators for the week of September 17 - 21

Asia Pacific

Country	Date	Time	Indicator	Period	BNS	Consensus	Latest
SI	09/16	20:30	Exports (y/y)	Aug	--	-4.0	5.8
IN	09/17	01:30	**Repo Rate (%)**	Sep 17	**8.00**	**8.00**	**8.00**
IN	09/17	01:30	Reverse Repo Rate (%)	Sep 17	--	7.00	7.00
IN	09/17	01:30	Cash Reserve Ratio (%)	Sep 17	--	4.75	4.75
HK	09/18	04:30	Unemployment Rate (%)	Aug	--	3.3	3.2
JN	09/19	01:00	Coincident Index CI	Jul F	--	--	92.8
JN	09/19	01:00	Leading Index CI	Jul F	--	--	91.8
JN	09/19	01:00	New Composite Leading Economic Index	Jul F	--	--	91.8
MA	09/19	05:00	CPI (y/y)	Aug	--	1.4	1.4
JN	09/19	06:59	**BoJ Target Rate (%)**	Sep 19	**0.10**	**0.10**	**0.10**
NZ	09/19	18:45	GDP (q/q)	2Q	--	0.4	1.1
JN	09/19	19:50	Merchandise Trade Balance (¥ bn)	Aug	--	-829.3	-518.9
CH	09/19	22:30	HSBC Flash China Manufacturing PMI	Sep	--	--	47.8
JN	09/20	00:30	All Industry Activity Index (m/m)	Jul	--	-0.5	0.2
JN	09/20	02:00	Machine Tool Orders (y/y)	Aug F	--	--	-2.6

Latin America

Country	Date	Time	Indicator	Period	BNS	Consensus	Latest
PE	09/17	06:59	Economic Activity Index NSA (y/y)	Jul	--	6.9	7.1
PE	09/17	06:59	Unemployment Rate (%)	Aug	--	6.4	6.2
CO	09/19	17:00	Retail Sales (y/y)	Jul	--	3.6	4.0
BZ	09/20	08:00	Unemployment Rate (%)	Aug	--	5.6	5.8
CO	09/20	12:00	GDP (y/y)	2Q	--	4.1	4.7

Forecasts at time of publication.
Source: Bloomberg, Scotia Economics.

Global Auctions for the week of September 17 - 21

North America

Country	Date	Time	Event
US	09/17	11:00	U.S. Fed to Purchase USD4.50-5.50 Bln Notes
US	09/17	11:00	U.S. Fed to Sell USD7.00-8.00 Bln Notes
US	09/17	11:30	U.S. to Sell 3-Month Bills
US	09/17	11:30	U.S. to Sell 6-Month Bills
US	09/18	11:00	U.S. Fed to Purchase USD4.25-5.00 Bln Notes
US	09/18	11:30	U.S. to Sell 52-Week Bills
US	09/18	11:30	U.S. to Sell 4-Week Bills
US	09/19	11:00	U.S. Fed to Purchase USD1.50-2.00 Bln Notes
CA	09/19	12:00	Canada to Sell 30-Year Notes
US	09/20	11:00	U.S. Fed to Sell USD7.00-8.00 Bln Notes
US	09/20	13:00	U.S. to Sell 10-Year TIPS Reopening
US	09/21	11:00	U.S. Fed to Purchase USD1.50-2.00 Bln Notes

Europe

Country	Date	Time	Event
NE	09/17	05:00	Netherlands to Sell Up to EUR2 Bln 99-Day Bills
NO	09/17	05:10	Norway to Sell NOK5 Bln 364-Day Bills
FR	09/17	09:00	France to Sell Bills (BTF)
SP	09/18	04:30	Spain to Sell 12-Month and 18-Month Bills
DE	09/18	04:30	Denmark to Sell Bonds
GR	09/18	05:00	Greece to Sell Bills
BE	09/18	05:30	Belgium to Sell Bills
SZ	09/18	05:30	Switzerland to Sell 3-Month Bills
SW	09/19	05:03	Sweden to Sell SEK3.5 Bln 3.5% 2022 Bonds
GE	09/19	05:30	Germany to Sell Add'l EU5 Bln 2-Year Notes
PO	09/19	05:30	Portugal to Sell 546-Day Bills
PO	09/19	05:30	Portugal to Sell 182-Day Bills
SP	09/20	04:30	Spain to Sell Bonds
FR	09/20	05:00	France to Sell Bonds/Notes (OAT/BTAN)
SW	09/20	05:03	Sweden to Sell SEK500 Mln 0.5% I/L 2017 Bonds
UK	09/20	05:30	U.K. to Sell GBP4.5 Bln 1% 2017 Bonds on Sept. 20

Asia Pacific

Country	Date	Time	Event
AU	09/17	21:00	Australia Plans to Treasury Indexed Bonds Due Sept. 2030
CH	09/17	22:00	China Development Bank to Sell CNY20 Bln 5-Year Floaters
JN	09/17	23:35	Japan to Sell 1-Year Bills
CH	09/18	23:00	China to Sell 10-Year Bonds
NZ	09/19	22:30	New Zealand Plans to Sell Bonds
JN	09/19	23:35	Japan to Sell 3-Month Bills
JN	09/20	04:00	Japan Auction for Enhanced-Liquidity
JN	09/20	23:35	Japan to Sell 2-Month Bills

Latin America

Country	Date	Time	Event
BZ	09/20	10:00	Brazil to Sell Bills due 4/1/2013 - LTN
BZ	09/20	10:00	Brazil to Sell Bills due 7/1/2014 - LTN
BZ	09/20	10:00	Brazil to Sell Bills due 1/1/2016 - LTN
BZ	09/20	10:00	Brazil to Sell Fixed-rate bonds due 1/1/2018 - NTN-F
BZ	09/20	10:00	Brazil to Sell Fixed-rate bonds due 1/1/2023 - NTN-F

Source: Bloomberg, Scotia Economics.

Events for the week of September 17 - 21

North America

Country	Date	Time	Event
MX	SEP 17-24		Mexican President-Elect Nieto's Latin America Tour
US	09/18	08:00	Fed's Evans Speaks on the Economy in Michigan
US	09/18	11:30	New York Fed President Dudley to Speak on Economy in NJ
US	09/18	16:30	New York Fed President Dudley to Speak on Economy in NJ
US	09/18	19:15	Fed's Lacker Speaks on Monetary Policy in New York
US	09/19	09:45	Fed's George to Give Opening Remarks at Jobs Conference
US	09/19	19:00	Fed's Fisher Speaks on Economy and Policy in New York
US	09/20	07:44	Fed's Rosengren Speaks on Economy in Massachusetts
US	09/20	09:30	Fed's Lockhart to Speak at Kansas City Fed Conference
US	09/20	12:00	Federal Reserve Flow of Funds Report
US	09/20	13:30	Fed's Kocherlakota Speaks to Business Leaders in Michigan
US	09/20	17:00	Fed's Pianalto Speaks in Ohio
US	09/20	18:30	Fed's Bullard to Give Economics Lecture at Notre Dame
US	09/21	12:40	Fed's Lockhart Speaks on Policy and Economy in Atlanta

Europe

Country	Date	Time	Event
CC	09/15	02:30	Euro-Area Finance Ministers, Central Bankers Meet in Cyprus
EC	09/15		EU's Barroso Attends Events in Paderborn, Germany
SW	09/17	07:00	Sweden parliament holds hearing with EU Commissioner Olli Rehn
EC	09/17	11:00	ECB's Coene Speaks in London
AS	09/17	12:00	ECB's Ewald Nowotny Speaks at Panel Discussion in Vienna
PO	09/18	04:00	Portugal's Passos Coelho, Sonae's Azevedo Speak at Conference
AS	09/18	12:00	ECB's Nowotny Speaks at Panel Discussion in Vienna
EC	09/18		EU-South Africa Summit in Brussels
SW	09/19	03:30	Riksbank Minutes from Rate Meeting Released
UK	09/19	04:30	Bank of England Releases Monetary Policy Committee Minutes
PO	09/19	05:30	Portugal Holds Auctions for Six-, 18-Month Bills
PO	09/19	05:30	Cushman & Wakefield Presents Study on Real-Estate Sector
SZ	09/19	12:00	Gruebel, Steinbrueck Speak in Zurich
EC	09/19	13:00	EU's Barroso Conducts Web Chat on Policy Issues
PO	09/19		Euronext Lisbon to Announce Results of REN Bond Offer
SW	09/20	02:00	Swedish Government Presents 2013 Budget
LX	09/20	03:30	EU Court Adviser Gives Opinion in Greek Betting Monopoly Case
EC	09/20	04:15	EU's Van Rompuy, Barroso, China's Wen at EU-China Summit
EC	09/20		EU, Chinese Officials Hold Summit in Brussels
GE	09/21	02:00	German Finance Ministry Publishes Monthly Report for September
FI	09/21	04:00	ECB's Erkki Liikanen Speaks in a Finnish Parliament Hearing
EC	09/21	04:30	EU Auditors Report on European Statistics
EC	09/21	07:15	Swedish Central Banker Ingves Speaks at Brussels Think Tank
PO	09/21	08:00	Bank of Portugal Releases Monthly Economic Indicators Report
GE	09/21	09:00	Schaeuble Speaks at Foreign Press Association Event, Berlin
GE	09/21	13:00	German, French Ministers Discuss Europe's Future: Ludwigsburg
IT	09/21		Spanish Prime Minister Rajoy, Italy's Monti Meet in Rome

Source: Bloomberg, Scotia Economics.

Events for the week of September 17 - 21

Asia Pacific

Country	Date	Time	Event
NZ	09/16	20:00	NZIER Publishes New Zealand Consensus Forecasts
IN	09/17	01:30	India REPO Cutoff Yld
IN	09/17	01:30	Cash Reserve Ratio
IN	09/17	01:30	Reverse Repo Rate
AU	09/17	21:30	Reserve Bank Board - September Minutes
AU	09/17	23:00	RBA's Debelle Speaks at FINSIA, CEDA and ICAA Luncheon
JN	SEP 17-19		Bank of Japan's Monetary Policy Meeting
AU	09/18	18:00	RBA/Treasury/IMF Co-Host Conference in Canberra on Asia's Rise
AU	09/18	20:50	RBA's Kent Speaks at IMF/Treasury Conference on Asia's Rise
JN	SEP 18-19		BOJ Target Rate
NZ	09/19	18:45	Statistics New Zealand on Gross Domestic Product
AU	09/19	21:30	RBA Foreign Exchange Transactn
JN	SEP 19-20		BOJ Governor Shirakawa Speaks at Event in Tokyo
JN	09/20	01:00	Bank of Japan Monthly Economic Report
EC	09/20	04:15	EU's Van Rompuy, Barroso, China's Wen at EU-China Summit
JN	SEP 20-21		Democratic Party of Japan's Leadership Vote

Source: Bloomberg, Scotia Economics.

Global Central Bank Watch

North America

Rate	Current Rate	Next Meeting	Scotia's Forecasts	Consensus Forecasts
Bank of Canada – Overnight Target Rate	1.00	October 23, 2012	1.00	--
Federal Reserve – Federal Funds Target Rate	0.25	October 24, 2012	0.25	--
Banco de México – Overnight Rate	4.50	October 26, 2012	4.50	--

Fed: The FOMC extended its forward rate guidance through mid-2015 and committed to an open-ended program of MBS purchases (US$40bn/month) at its September 13 meeting. Whether the asset purchases will need to be matched with further purchases of Treasury notes above those that the Fed is undertaking as part of its Maturity Extension Program ('Operation Twist') will depend on the strength of the US economy at year-end when the Maturity Extension Program ends. BoC: a) Weak incoming economic data, b) a slowing housing market, and c) the strong easing measures undertaken by the Fed imply that the BoC will need to remain on hold for an extended period and should cause it to moderate the hawkish bias in its communications.

Europe

Rate	Current Rate	Next Meeting	Scotia's Forecasts	Consensus Forecasts
European Central Bank – Refinancing Rate	0.75	October 4, 2012	0.50	--
Bank of England – Bank Rate	0.50	October 4, 2012	0.50	0.50
Swiss National Bank – Libor Target Rate	0.00	December 13, 2012	0.00	--
Central Bank of Russia – Refinancing Rate	8.25	October 31, 2012	8.25	--
Hungarian National Bank – Base Rate	6.75	September 25, 2012	6.75	6.75
Central Bank of the Republic of Turkey – 1 Wk Repo Rate	5.75	September 18, 2012	5.75	5.75
Sweden Riksbank – Repo Rate	1.25	October 25, 2012	1.50	--
Norges Bank – Deposit Rate	1.50	October 31, 2012	1.50	--

With inflation holding steady in single-digit territory for four straight months (at 8.9% y/y in August), firm evidence of economic rebalancing and slowing credit and output growth (GDP advanced 2.9% y/y in the second quarter, down from 3.3% in the prior three months), and additional policy easing by certain global central banks, the central bank of Turkey will likely opt for a lower ceiling for the interest-rate corridor (currently set at 11.5%) when it meets next Tuesday. The lower end of the corridor and the benchmark one-week repo rate will be left at 5.0% and 5.75%, respectively.

Asia Pacific

Rate	Current Rate	Next Meeting	Scotia's Forecasts	Consensus Forecasts
Bank of Japan – Target Rate	0.10	September 19, 2012	0.10	0.10
Reserve Bank of Australia – Cash Target Rate	3.50	October 2, 2012	3.50	--
Reserve Bank of New Zealand – Cash Rate	2.50	October 24, 2012	2.50	--
People's Bank of China – Lending Rate	6.00	TBA	--	--
Reserve Bank of India – Repo Rate	8.00	September 17, 2012	8.00	8.00
Bank of Korea – Bank Rate	3.00	October 10, 2012	2.75	--
Bank of Thailand – Repo Rate	3.00	October 17, 2012	3.00	--
Bank Indonesia – Reference Interest Rate	5.75	October 11, 2012	5.75	--

Latin America

Rate	Current Rate	Next Meeting	Scotia's Forecasts	Consensus Forecasts
Banco Central do Brasil – Selic Rate	7.50	October 10, 2012	7.25	7.50
Banco Central de Chile – Overnight Rate	5.00	October 18, 2012	5.00	--
Banco de la República de Colombia – Lending Rate	4.75	September 28, 2012	4.50	4.75
Banco Central de Reserva del Perú – Reference Rate	4.25	October 11, 2012	4.25	--

Africa

Rate	Current Rate	Next Meeting	Scotia's Forecasts	Consensus Forecasts
South African Reserve Bank – Repo Rate	5.00	September 20, 2012	5.00	5.00

The South African Reserve Bank (SARB) surprised markets at its last meeting in July by cutting the reference repo rate by 50 basis points to a record-low 5.0%. For two months prior to and since that decision the rand has fluctuated in a broad range between 8.1 and 8.6 per US dollar, reflecting domestic social unrest and ongoing international financial uncertainty. Inflation slowed to 4.9% y/y in July (from 5.5%), but will likely accelerate again in the coming months on the back of rising food and fuel costs. We do not expect any policy changes after the next meeting on Thursday, though it is possible that further easing is forthcoming later this year or early in 2013.

Forecasts at time of publication.
Source: Bloomberg, Scotia Economics.

Forecasts as at August 30, 2012*	2000-10	2011	2012f	2013f	2000-10	2011	2012f	2013f
Output and Inflation (annual % change)		Real GDP				Consumer Prices[2]		
World[1]	3.7	4.0	3.1	3.4				
Canada	2.2	2.4	1.9	1.8	2.1	2.9	1.7	2.0
United States	1.8	1.8	2.2	1.9	2.5	3.1	2.0	2.2
Mexico	2.1	4.2	3.9	3.6	4.9	3.8	4.2	4.0
United Kingdom	2.0	0.7	-0.4	1.2	2.1	4.2	2.2	3.0
Euro Zone	1.4	1.5	-0.7	0.2	2.1	2.7	1.9	1.9
Japan	0.9	-0.7	2.3	1.5	-0.3	-0.2	0.1	0.3
Australia	3.1	2.1	3.2	3.1	3.1	3.1	2.3	2.8
China	9.4	9.3	7.8	8.2	2.3	4.1	4.0	4.4
India	7.5	10.0	6.0	6.3	6.4	7.7	6.5	6.8
South Korea	4.6	3.6	3.0	3.8	3.1	4.8	3.3	3.0
Thailand	4.4	0.1	5.0	4.0	2.7	3.5	3.0	2.8
Brazil	3.7	2.7	2.0	4.0	6.6	6.5	5.0	5.5
Chile	4.6	6.1	5.2	5.2	3.4	4.4	2.1	2.9
Peru	5.5	7.0	6.3	5.6	2.4	4.7	3.0	3.0

Central Bank Rates (%, end of period)	12Q1	12Q2f	12Q3f	12Q4f	13Q1f	13Q2f	13Q3f	13Q4f
Bank of Canada	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Federal Reserve	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
European Central Bank	1.00	1.00	0.50	0.50	0.50	0.50	0.50	0.50
Bank of England	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Swiss National Bank	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Bank of Japan	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Reserve Bank of Australia	3.75	3.50	3.25	3.25	3.25	3.25	3.50	3.50
Exchange Rates (end of period)								
Canadian Dollar (USDCAD)	1.00	1.02	1.02	0.99	0.98	0.97	0.97	0.97
Canadian Dollar (CADUSD)	1.00	0.98	0.98	1.01	1.02	1.03	1.03	1.03
Euro (EURUSD)	1.33	1.27	1.21	1.23	1.22	1.22	1.21	1.21
Sterling (GBPUSD)	1.60	1.57	1.55	1.59	1.62	1.63	1.64	1.64
Yen (USDJPY)	83	80	78	80	84	85	86	87
Australian Dollar (AUDUSD)	1.03	1.02	1.02	1.02	1.04	1.04	1.05	1.05
Chinese Yuan (USDCNY)	6.3	6.4	6.3	6.3	6.3	6.2	6.2	6.1
Mexican Peso (USDMXN)	12.8	13.4	13.3	13.1	13.2	13.1	13.2	13.4
Brazilian Real (USDBRL)	1.83	2.01	2.02	1.95	1.92	1.87	1.88	1.90

Commodities (annual average)	2000-10	2011	2012f	2013f
WTI Oil (US$/bbl)	54	95	95	100
Brent Oil (US$/bbl)	52	112	112	112
Nymex Natural Gas (US$/mmbtu)	5.81	4.03	2.75	3.00
Copper (US$/lb)	1.93	4.00	3.65	3.45
Zinc (US$/lb)	0.75	0.99	0.89	1.02
Nickel (US$/lb)	7.36	10.38	7.85	7.80
Gold, London PM Fix (US$/oz)	586	1,569	1,665	1,650
Pulp (US$/tonne)	694	977	880	900
Newsprint (US$/tonne)	575	640	640	660
Lumber (US$/mfbm)	273	255	280	315

[1] World GDP for 2000-10 are IMF PPP estimates; 2011-13f are Scotia Economics' estimates based on a 2010 PPP-weighted sample of 38 countries.
[2] CPI for Canada and the United States are annual averages. For other countries, CPI are year-end rates.

* See Scotia Economics 'Global Forecast Update' (http://www.gbm.scotiabank.com/English/bns_econ/forecast.pdf) for additional forecasts & commentary.

North America

Canada	2011	12Q1	12Q2	Latest	
Real GDP (annual rates)	2.4	1.8	1.8		
Current Acc. Bal. (C$B, ar)	-48.4	-40.6	-64.1		
Merch. Trade Bal. (C$B, ar)	2.3	8.4	-13.9	-28.0	(Jul)
Industrial Production	3.5	1.0	2.9	3.5	(Jun)
Housing Starts (000s)	193	206	230	225	(Aug)
Employment	1.6	0.9	1.2	1.0	(Aug)
Unemployment Rate (%)	7.5	7.4	7.3	7.3	(Aug)
Retail Sales	4.1	4.3	2.6	1.7	(Jun)
Auto Sales (000s)	1589	1702	1672	1689	(Jun)
CPI	2.9	2.3	1.6	1.3	(Jul)
IPPI	4.6	1.8	0.6	-0.3	(Jul)
Pre-tax Corp. Profits	15.4	4.2	0.4		

United States	2011	12Q1	12Q2	Latest	
Real GDP (annual rates)	1.8	2.0	1.7		
Current Acc. Bal. (US$B, ar)	-466	-549			
Merch. Trade Bal. (US$B, ar)	-738	-777	-743	-687	(Jul)
Industrial Production	4.1	4.0	4.9	3.1	(Aug)
Housing Starts (millions)	0.61	0.71	0.74	0.75	(Jul)
Employment	1.1	1.6	1.3	1.4	(Aug)
Unemployment Rate (%)	9.0	8.3	8.2	8.1	(Aug)
Retail Sales	8.3	6.4	4.3	4.4	(Aug)
Auto Sales (millions)	12.7	14.1	14.1	14.5	(Aug)
CPI	3.2	2.8	1.9	1.7	(Aug)
PPI	6.0	3.4	1.1	2.0	(Aug)
Pre-tax Corp. Profits	2.1	18.0	14.0		

Mexico	2011	12Q1	12Q2	Latest	
Real GDP	3.9	4.5	4.1		
Current Acc. Bal. (US$B, ar)	-11.1	4.7	1.8		
Merch. Trade Bal. (US$B, ar)	-1.5	7.1	6.1	-5.1	(Jul)
Industrial Production	4.0	4.4	3.7	4.9	(Jul)
CPI	3.4	3.9	3.9	4.6	(Aug)

Europe

Euro Zone	2011	12Q1	12Q2	Latest	
Real GDP	1.4	-0.1	-0.5		
Current Acc. Bal. (US$B, ar)	-3	-32	71	236	(Jun)
Merch. Trade Bal. (US$B, ar)	6.9	28.0	128.8	213.7	(Jun)
Industrial Production	3.5	-1.7	-2.4	-2.6	(Jul)
Unemployment Rate (%)	10.1	10.8	11.2	11.3	(Jul)
CPI	2.7	2.7	2.5	2.6	(Aug)

Germany	2011	12Q1	12Q2	Latest	
Real GDP	3.1	1.2	1.0		
Current Acc. Bal. (US$B, ar)	202.6	215.8	192.1	189.3	(Jul)
Merch. Trade Bal. (US$B, ar)	216.2	223.3	245.3	237.3	(Jul)
Industrial Production	8.0	0.7	-0.3	-1.4	(Jul)
Unemployment Rate (%)	7.1	6.8	6.8	6.8	(Aug)
CPI	2.3	2.2	1.9	2.1	(Aug)

France	2011	12Q1	12Q2	Latest	
Real GDP	1.7	0.3	0.3		
Current Acc. Bal. (US$B, ar)	-54.5	-50.6	-77.0	-6.1	(Jul)
Merch. Trade Bal. (US$B, ar)	-51.9	-54.4	-55.8	-41.7	(Jul)
Industrial Production	1.9	-1.8	-2.1	-3.1	(Jul)
Unemployment Rate (%)	9.6	10.0	10.1	10.3	(Jul)
CPI	2.1	2.3	2.0	2.1	(Aug)

United Kingdom	2011	12Q1	12Q2	Latest	
Real GDP	0.8	-0.2	-0.5		
Current Acc. Bal. (US$B, ar)	-46.5	-76.4			
Merch. Trade Bal. (US$B, ar)	-160.3	-159.8	-177.6	-133.7	(Jul)
Industrial Production	-0.7	-2.8	-2.5	-0.8	(Jul)
Unemployment Rate (%)	8.1	8.2	8.1	8.1	(Jun)
CPI	4.5	3.5	2.7	2.6	(Jul)

Italy	2011	12Q1	12Q2	Latest	
Real GDP	0.5	-1.5	-2.6		
Current Acc. Bal. (US$B, ar)	-0.07	-0.07	-0.01	0.02	(Jul)
Merch. Trade Bal. (US$B, ar)	-34.2	-17.5	16.7	37.8	(Jun)
Industrial Production	0.3	-5.4	-7.8	-7.0	(Jul)
CPI	2.8	3.4	3.3	3.2	(Aug)

Russia	2011	12Q1	12Q2	Latest	
Real GDP	4.3	4.9	4.0		
Current Acc. Bal. (US$B, ar)	98.8	39.3	19.2		
Merch. Trade Bal. (US$B, ar)	16.5	19.7	16.7	11.1	(Jul)
Industrial Production	4.8	4.1	2.3	3.4	(Jul)
CPI	8.4	3.9	3.8	5.9	(Aug)

All data expressed as year-over-year % change unless otherwise noted.

Source: Bloomberg, Global Insight, Scotia Economics.

Asia Pacific

Australia	2011	12Q1	12Q2	Latest
Real GDP	2.1	4.4	3.7	
Current Acc. Bal. (US$B, ar)	-33.1	-61.6	-32.9	
Merch. Trade Bal. (US$B, ar)	35.7	1.4	28.4	19.7 (Jul)
Industrial Production	-1.2	3.9	0.5	
Unemployment Rate (%)	5.1	5.2	5.1	5.1 (Aug)
CPI	3.4	1.6	1.2	

Japan	2011	12Q1	12Q2	Latest
Real GDP	-0.7	2.8	3.3	
Current Acc. Bal. (US$B, ar)	119.2	101.1	49.0	95.0 (Jul)
Merch. Trade Bal. (US$B, ar)	-33.3	-72.6	-71.0	-49.5 (Jul)
Industrial Production	-2.3	2.7	5.1	-2.2 (Jul)
Unemployment Rate (%)	4.6	4.5	4.4	4.3 (Jul)
CPI	-0.3	0.3	0.2	-0.4 (Jul)

South Korea	2011	12Q1	12Q2	Latest
Real GDP	3.6	2.8	2.3	
Current Acc. Bal. (US$B, ar)	26.5	10.2	44.8	73.2 (Jul)
Merch. Trade Bal. (US$B, ar)	30.8	5.7	37.4	24.5 (Aug)
Industrial Production	6.9	2.9	2.3	0.1 (Jul)
CPI	4.0	3.0	2.4	1.2 (Aug)

China	2011	12Q1	12Q2	Latest
Real GDP	10.4	8.1	7.6	
Current Acc. Bal. (US$B, ar)	201.7			
Merch. Trade Bal. (US$B, ar)	155.0	1.7	274.1	319.9 (Aug)
Industrial Production	12.8	21.3	9.6	8.9 (Sep)
CPI	4.1	3.6	2.2	1.8 (Jul)

Thailand	2011	12Q1	12Q2	Latest
Real GDP	0.1	0.4	4.2	
Current Acc. Bal. (US$B, ar)	5.3	0.6	-2.5	
Merch. Trade Bal. (US$B, ar)	1.4	0.4	0.5	0.5 (Jul)
Industrial Production	-9.5	-7.1	-1.5	-5.9 (Jul)
CPI	3.8	3.4	2.5	2.7 (Aug)

India	2011	12Q1	12Q2	Latest
Real GDP	7.5	5.3	5.5	
Current Acc. Bal. (US$B, ar)	-62.8	-21.7		
Merch. Trade Bal. (US$B, ar)	-13.4	-15.9	-13.4	-15.5 (Jul)
Industrial Production	4.8	0.6	-0.2	0.1 (Jul)
WPI	9.5	7.3	7.5	7.6 (Aug)

Indonesia	2011	12Q1	12Q2	Latest
Real GDP	6.5	6.3	6.4	
Current Acc. Bal. (US$B, ar)	1.7	-3.2	-6.9	
Merch. Trade Bal. (US$B, ar)	2.2	0.9	-0.8	-0.2 (Jul)
Industrial Production	4.1	5.4		3.0 (May)
CPI	5.4	3.7	4.5	4.6 (Aug)

Latin America

Brazil	2011	12Q1	12Q2	Latest
Real GDP	2.5	0.6	0.4	
Current Acc. Bal. (US$B, ar)	-52.5	-48.3	-53.1	
Merch. Trade Bal. (US$B, ar)	29.8	9.8	18.6	38.7 (Aug)
Industrial Production	0.4	-3.5	-4.5	-4.3 (Jul)
CPI	6.6	5.8	5.0	5.2 (Aug)

Chile	2011	12Q1	12Q2	Latest
Real GDP	6.0	5.3	5.5	
Current Acc. Bal. (US$B, ar)	0.0	-0.5	-9.8	
Merch. Trade Bal. (US$B, ar)	10.0	10.2	5.1	-10.1 (Aug)
Industrial Production	6.9	3.9	2.8	0.6 (Jul)
CPI	3.3	4.1	3.1	2.6 (Aug)

Peru	2011	12Q1	12Q2	Latest
Real GDP	6.9	6.0		
Current Acc. Bal. (US$B, ar)	-3.3	-1.0		
Merch. Trade Bal. (US$B, ar)	0.9	0.8	0.2	-0.2 (Jul)
Unemployment Rate (%)	7.7	8.3	7.2	6.2 (Jul)
CPI	3.4	4.2	4.1	3.5 (Aug)

Colombia	2011	12Q1	12Q2	Latest
Real GDP	5.9	4.7		
Current Acc. Bal. (US$B, ar)	-10.0	-1.8		
Merch. Trade Bal. (US$B, ar)	0.4	0.7	0.2	-0.2 (Jul)
Industrial Production	4.8	1.9	-0.1	2.8 (Jun)
CPI	3.4	3.5	3.4	3.1 (Aug)

All data expressed as year-over-year % change unless otherwise noted.

Source: Bloomberg, Global Insight, Scotia Economics.

Interest Rates (%, end of period)

Canada	12Q1	12Q2	Sep/07	Sep/14*	United States	12Q1	12Q2	Sep/07	Sep/14*
BoC Overnight Rate	1.00	1.00	1.00	1.00	Fed Funds Target Rate	0.25	0.25	0.25	0.25
3-mo. T-bill	0.91	0.88	1.01	0.99	3-mo. T-bill	0.07	0.08	0.10	0.10
10-yr Gov't Bond	2.11	1.74	1.86	1.98	10-yr Gov't Bond	2.21	1.64	1.67	1.85
30-yr Gov't Bond	2.66	2.33	2.43	2.55	30-yr Gov't Bond	3.34	2.75	2.82	3.06
Prime	3.00	3.00	3.00	3.00	Prime	3.25	3.25	3.25	3.25
FX Reserves (US$B)	69.2	66.0	66.1	(Jul)	FX Reserves (US$B)	138.0	138.8	138.3	(Jul)
Germany					**France**				
3-mo. Interbank	0.71	0.53	0.11	0.11	3-mo. T-bill	0.07	0.04	-0.02	-0.01
10-yr Gov't Bond	1.79	1.58	1.52	1.70	10-yr Gov't Bond	2.89	2.69	2.21	2.26
FX Reserves (US$B)	67.9	68.2	67.8	(Jul)	FX Reserves (US$B)	49.2	49.6	50.1	(Jul)
Euro Zone					**United Kingdom**				
Refinancing Rate	1.00	1.00	0.75	0.75	Repo Rate	0.50	0.50	0.50	0.50
Overnight Rate	0.39	0.38	0.11	0.10	3-mo. T-bill	0.37	0.37	0.35	0.36
FX Reserves (US$B)	319.8	328.7	327.9	(Jul)	10-yr Gov't Bond	2.20	1.73	1.68	1.95
					FX Reserves (US$B)	82.4	84.4	86.0	(Jul)
Japan					**Australia**				
Discount Rate	0.30	0.30	0.30	0.30	Cash Rate	4.25	3.50	3.50	3.50
3-mo. Libor	0.13	0.13	0.13	0.13	10-yr Gov't Bond	3.98	3.04	3.20	3.28
10-yr Gov't Bond	0.99	0.84	0.82	0.80	FX Reserves (US$B)	47.7	44.1	45.1	(Jul)
FX Reserves (US$B)	1247.8	1231.2	1232.8	(Jul)					

Exchange Rates (end of period)

USDCAD	1.00	1.02	0.98	0.97	¥/US$	82.87	79.79	78.24	78.22
CADUSD	1.00	0.98	1.02	1.03	US¢/Australian$	1.03	1.02	1.04	1.06
GBPUSD	1.601	1.571	1.601	1.624	Chinese Yuan/US$	6.30	6.35	6.34	6.32
EURUSD	1.334	1.267	1.282	1.314	South Korean Won/US$	1133	1145	1130	1117
JPYEUR	0.90	0.99	1.00	0.97	Mexican Peso/US$	12.811	13.361	12.981	12.739
USDCHF	0.90	0.95	0.94	0.93	Brazilian Real/US$	1.827	2.009	#N/A	2.014

Equity Markets (index, end of period)

United States (DJIA)	13212	12880	13307	13595	U.K. (FT100)	5768	5571	5795	5903
United States (S&P500)	1408	1362	1438	1469	Germany (Dax)	6947	6416	7215	7407
Canada (S&P/TSX)	12392	11597	12268	12514	France (CAC40)	3424	3197	3519	3572
Mexico (IPC)	39521	40200	40044	40890	Japan (Nikkei)	10084	9007	8872	9159
Brazil (Bovespa)	64511	54355	58321	62583	Hong Kong (Hang Seng)	20556	19441	19802	20630
Italy (BCI)	859	761	859	865	South Korea (Composite)	2014	1854	1930	2008

Commodity Prices (end of period)

Pulp (US$/tonne)	870	900	850	850	Copper (US$/lb)	3.85	3.45	3.56	3.81
Newsprint (US$/tonne)	640	640	640	640	Zinc (US$/lb)	0.91	0.84	0.87	0.94
Lumber (US$/mfbm)	279	283	308	298	Gold (US$/oz)	1662.50	1598.50	1728.00	1775.50
WTI Oil (US$/bbl)	103.02	84.96	96.42	99.55	Silver (US$/oz)	32.43	27.08	32.22	34.71
Natural Gas (US$/mmbtu)	2.13	2.82	2.68	2.95	CRB (index)	308.46	284.19	311.67	320.42

** Latest observation taken at time of writing.*
Source: Bloomberg, Scotia Economics.

Corporate Bond Research

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UNDERTAKING

Undertaking

To update SEC IR No. 4 (c) and VECC 8 (c) using the Board's latest ROE calculation

Response

Review of Capital Cost parameters is something that is only done at a Cost of Service proceeding. In an IRM/ICM proceeding there exists no mechanism to allow for a change in revenue to account for changes in capital costs. Nevertheless, we have provided an estimate of the change in Revenue Requirement below:

	Final Rate Order	Update ROE	Difference
($ millions)	2011	2011	2011
OM&A	525.0	525.0	-
Depreciation	283.7	283.7	-
Capital Tax	-	-	-
Return on Debt	161.3	161.3	-
Return on Equity	192.7	178.1	(14.6)
Income Tax	34.2	26.0	(8.3)
Green Energy Rate Riders/Adders	20.6	20.6	-
Base Revenue Requirement	**1,217.5**	**1,194.7**	**(22.8)**
Deduct: External Revenue	48.1	48.1	-
Deduct: Green Energy Rate Riders/Adders	20.6	20.6	-
Rates Revenue Requirement	**1,148.9**	**1,126.1**	**(22.8)**
Rate Base	4,986.6	4,986.6	
Capital Structure			
Short Term Debt	4%	4%	
Long-Term Debt	56%	56%	
Common Equity	40%	40%	
Rate of Returns			
Short Term Debt	2.43%	2.43%	
Long-Term Debt	5.60%	5.60%	
Common Equity	9.66%	8.93%	
Returns			
Short Term Debt	4.8	4.8	
Long-Term Debt	156.5	156.5	
Common Equity	192.7	178.1	
Taxes			
Return on Equity	192.7	178.1	
Regulatory Income Tax	34.2	26.0	
Regulatory Net Income (before tax)	226.9	204.1	
Timing Differences (Note 1)	(100.8)	(100.8)	
Taxable Income	126.1	103.3	
Tax Rate	28.25%	26.50%	
Income Tax	35.6	27.4	
less: Income Tax Credits (R&D, Education)	(1.4)	(1.4)	
Regulatory Income Tax	34.2	26.0	

To yield a (GAAP) ROE of 8.93% (2013 current) the revenue included in the business plan would be reduced by $119.5 million.

UNDERTAKING

Undertaking

To provide actual or forecasted actual Regulatory ROE for 2011, 2012 and 2013.

Response

The Deemed ROE calculated using the formula from Attachment 5 of the RRR Filing Guide is included on the following page for 2011. The same calculation is also done for 2012 and 2013 using the forecast variables for those years.

Calculation of ROE on a Deemed Basis - 2011

($Mn)			
Regulated Net Income per OEB Trial Balance		236.00	A
Adjustment to Interest Expense for deemed debt		-31.8	B
Adjusted regulated Income		204.2	C
Rate Base:			
Cost of Power		2,285.00	
Operating Expenses		555.00	
Total		2840.0	
Working Capital Allowance %		11.9%	
Total Working Capital Allowance		338.0	
Fixed Assets			
Opening Balance	5,157.36		
Closing Balance	5,502.76		
Average	5,330.06	5,330.06	
Total Rate Base - 2011		5,668.02	D
Regulated Deemed Equity (40%)		2,267.21	E
Regulated Deemed Debt (60%)		3,400.81	F
Regulated Rate of Return on Deemed Equity		9.0%	G = C/E
ROE% from most Recent Cost of Service application	2009-0096	9.66%	
Difference (3% Maximum)		-0.7%	
Interest Adjustment on Deemed Debt	3,400.81		
Weighted Average Interest rate	5.39%		
	183.3		
Interest Expense per OEB Trial Balance	140.0		
	43.3		
Utility Tax Rate	26.5%		
Tax Effect on Interest Expense	-11.5		
	31.8	B	

Forecasted ROE on a Deemed Basis - 2012

($Mn)			
Regulated Net Income per OEB Trial Balance		259.80	A
Adjustment to Interest Expense for deemed debt		-35.0	B
Adjusted regulated Income		224.8	C
Rate Base:			
Cost of Power		2,421.20	
Operating Expenses		565.80	
Total		2987.0	
Working Capital Allowance %		11.9%	
Total Working Capital Allowance		355.5	
Fixed Assets			
Opening Balance	5,502.76		
Closing Balance	5,596.40		
Average	5,549.58	5,721.55	
Total Rate Base - 2011		6,077.00	D
Regulated Deemed Equity (40%)		2,430.80	E
Regulated Deemed Debt (60%)		3,646.20	F
Regulated Rate of Return on Deemed Equity		9.2%	G = C/E
ROE% from most Recent Cost of Service application	2009-0096	9.66%	
Difference (3% Maximum)		-0.4%	
Interest Adjustment on Deemed Debt	3,646.20		
Weighted Average Interest rate	5.20%		
	189.6		
Interest Expense per OEB Trial Balance	142.0		
	47.6		
Utility Tax Rate	26.5%		
Tax Effect on Interest Expense	-12.6		
	35.0	B	

Forecasted ROE on a Deemed Basis - 2013

($Mn)				
Regulated Net Income per OEB Trial Balance			289.30	A
Adjustment to Interest Expense for deemed debt			-34.6	B
Adjusted regulated Income			254.7	C
Rate Base:				
Cost of Power			2,405.90	
Operating Expenses			581.60	
Total			2987.5	
Working Capital Allowance %			11.9%	
Total Working Capital Allowance			355.5	
Fixed Assets				
Opening Balance	5,596.40			
Closing Balance	6,090.00			
Average	5,843.20		6,135.49	
Total Rate Base - 2011			6,491.00	D
Regulated Deemed Equity (40%)			2,596.40	E
Regulated Deemed Debt (60%)			3,894.60	F
Regulated Rate of Return on Deemed Equity			9.8%	G = C/E
ROE% from most Recent Cost of Service application	2009-0096		9.66%	
Difference (3% Maximum)			0.2%	
Interest Adjustment on Deemed Debt	3,894.60			
Weighted Average Interest rate	4.90%			
	190.8			
Interest Expense per OEB Trial Balance	143.8			
	47.0			
Utility Tax Rate	26.5%			
Tax Effect on Interest Expense	-12.5			
	34.6	B		

UNDERTAKING

Undertaking

To provide fleet risk information from EB-2009-0096.

Response

In EB-2009-0096, the establishment of the Station Refurbishments and the Transformer Spares and Replacements investments are explained in Exhibit D1, Tab 3 Schedule 2. Transformer Spares and Replacements are explained in Section 2.1.1.1 on pages 6 to 8 of that exhibit, and Station Refurbishments are explained in Section 2.1.2 on page 10 of the exhibit. These pages are attached as Attachment 1 to this undertaking.

EB-2009-0096 – EXHIBIT D1, TAB 3, SCHEDULE 2, PAGES 6-8, 10.

customers supplied from that station. Since service to customers cannot be restored until the function of the distributing station is restored, in many instances mobile substations are dispatched to the affected station to provide service restoration. The mobile substation remains in place until such time as a spare transformer can be brought in to replace the failed unit. The extent to which spare transformers are available will influence the reliance on mobile stations for extended periods. Alternatives to this approach include having a spare a transformer at every distributing station or adding supply lines to provide a redundant supply. These alternatives have been assessed to be cost prohibitive on a system wide basis.

Mobile substations also facilitate maintenance at distributing stations by carrying the station load while the station is isolated for planned maintenance work. This approach permits the cost effective bundling of work while mitigating power disruptions to customers. The extent to which mobile substations are in-service for an extended period of time, due to unavailability of spare transformers, will limit the ability to complete the required planned maintenance and capital work at distributing stations.

Details of the programs used to manage strategic spare transformers and mobile substations are provided below.

2.1.1.1 Strategic Spare Transformers

Hydro One Distribution has 1,328 station transformers and 139 regulators in service. As discussed in Exhibit D1, Tab 2, Schedule 1, Asset Condition Assessment & Analysis, Hydro One's distribution stations have experienced an average of 23 transformer failures a year over the last 3 years. In a number of instances, station failures require removing the transformer off site and subsequent replacement from the strategic spare transformer inventory. The strategic spare inventory is maintained by purchasing new transformers if required and by refurbishing existing, unserviceable units (i.e. transformers that failed or were required to be removed from service based on poor condition as determined through the ACA process).

The majority of distribution transformers that fail, or that are found to be unserviceable based on ACA results, can be refurbished economically. Repair costs can vary significantly, from $15,000 to $150,000 per transformer, depending on the nature of the failure and whether the damage results from external or internal faults. Before a transformer is refurbished, Hydro One Distribution first determines whether the transformer is needed as a spare, and estimates the refurbishment costs by dismantling the transformer and assessing the extent of damage. If refurbishing the transformer versus buying a new transformer is economically justified and is technically acceptable, the existing transformer is refurbished and added to the pool of strategic spare transformers.

Due to the importance of these system elements to customer reliability, Hydro One Distribution maintains a spares inventory of transformers and regulators that is based on the number and type of transformers and regulators in-service, reliability of equipment in use and the availability of mobile substations. Historically, a number of spare station transformers are put into service and cannot be returned to the spares inventory. In these cases, the complement of spare transformers is reduced unless replacement transformers are purchased, or transformers become available through system reinforcement projects (i.e. transformer replaced in response to an increase in customer load is freed-up for another use). This program funds the purchase of transformers to maintain a spares compliment that meets system needs and ensures reliability.

Funding of this program enhances customer reliability by reducing the reliance placed on mobile substations for extended periods, making them available to respond to emergencies and to assist in carrying out the planned maintenance on distributing stations, thereby ensuring equipment performance.

The 2010 and 2011 spending requirements for this program are $3.6 million and $4.1 million respectively. Historically expenditures have fluctuated from year to year based on the number of failed transformers that are beyond repair and replaced by transformers from the spares pool. Those transformers removed from the spares pool that become permanent field installations need to be replaced in the spares inventory to maintain adequate spares coverage. In addition, system conditions and failures are monitored and if there is an appreciable increase in the failure rate of a specific class of transformer, there may be a need to increase the number of spares within the subject group to manage reliability to acceptable levels.

The 2010 spending covers the purchase of 4 new spare transformers. The 2011 spending involves the purchase of 4 new spare transformers and 1 regulator.

Funding reductions in this program would result in an increased utilization of mobile substations at failed transformer locations thereby negatively impacting planned maintenance and jeopardizing reliability at a number of distribution stations.

For additional details refer to the Investment Summary Document (ISD) in Exhibit D2, Tab 2, Schedule 3.

2.1.1.2 <u>Mobile Substation Refurbishment</u>

A mobile substation ("MUS") is essentially a distribution station mounted on a trailer suitable for traveling on public roads. These mobile units consist of a transformer, high voltage and low voltage switches, high voltage and low voltage fuses, and connecting

For additional details refer to the ISD in Exhibit D2, Tab 2, Schedule 3.

2.1.2 Stations Projects and Demand (Unplanned)

Station Refurbishment Projects

The level of investment required to refurbish a station will vary as a function of the condition of the station. Some stations will require replacement of frost-heaved structures, power equipment components, or security fence replacements. In other cases, the work required may be more significant, such as transformer refurbishment or the complete rebuild of a station on an existing or a new site. The latter may be the case particularly for the older wood pole and timber structure station styles.

Station condition is determined using the ACA process as discussed in Exhibit D1, Tab 2, Schedule 1. Up to about 10 stations may be refurbished annually based on condition, utilization, criticality, and environmental risks. The number of stations scheduled for refurbishment on an annual basis at this time is currently less than 1% of all Hydro One distributing stations. Considering the age of these assets, (i.e. 30 to 40 years) this is a relatively low number of annual refurbishments, largely attributable to Hydro One Distribution's comprehensive maintenance program and the proactive management of transformer spares, as discussed in this Schedule and in Exhibit C1, Tab 2, Schedule 2.

Funding levels of this program will impact the amount of breakdown maintenance in future years and negatively impact customer reliability. The 2010 and 2011 spending for station refurbishment work is $3.2 million and $3.4 million respectively. These amounts are slightly greater than historic expenditures as larger station refurbishment projects are being undertaken, which contributes to the efficient bundling work. For additional details refer to the ISD in Exhibit D2, Tab 2, Schedule 3.

UNDERTAKING

Undertaking

To provide forecast for in-service additions by category, such as lines or transformers, and reconcile this with VECC questions 5 and 8 in terms of 414, forecast for 2013, and also with capital

Response

Tables 1 to 5 provide a breakdown of Hydro One's Typical Capital In Service Additions for 2013 by Sustaining, Development, Operations and Shared Services & Other Capital.

Table 1
Typical Capital In-Service Additions in 2013
($ Million)

Description	In-Service Additions
Sustaining	192.2
Development	157.0
Operations	3.5
Shared Services & Other Capital	61.6
TOTAL	**414.3**

Table 2
Typical Sustaining Capital In Service Additions in 2013
($ Millions)

Description	In-Service Additions
Stations	17.7
Lines	169.1
Meters	5.4
TOTAL SUSTAINING	**192.2**

Table 3
Typical Development Capital In Service Additions in 2013
($ Millions)

Description	In-Service Additions
Connections, Upgrades and Meters	106.9
System Capability Reinforcement	46.5
Wholesale Revenue Meters	3.7
TOTAL DEVELOPMENT	**157.0**

Table 4
Typical Operations Capital In Service Additions in 2013
($ Millions)

Description	In-Service Additions
TOTAL OPERATIONS	**3.5**

Table 5
Typical Shared Services Capital In Service Additions in 2013
($ Millions)

Description	In-Service Additions
Transport & Work Equipment	32.0
Other Shared Services Capital	29.6
TOTAL SHARED SERVICES CAPITAL	**61.6**

In response to TC Response VECC 5 pa rt a) the System Capability Reinforcement included in Typical Capital is shown in Table 3 above as $46.5 million.
In response to part c) the System Capability Reinforcement spending for 2008 to 2013 is shown in Table 6.

Table 6
System Capability Reinforcement
Capital Expenditures ($ Millions)

	2008	2009	2010	2011	2012	2013 Typical	2013 Escalated	2013 Total
System Capability Reinforcement	36.7	57.8	49.3	45.9	56.3	48.9	9.2	58.1

UNDERTAKING

Undertaking

To explain how the 32 projects were established and on what metrics.

Response

As outlined in Exhibit B, Tab 2, Schedule 2, Section 2.0 the Station Refurbishment Program addresses assets that are beyond their expected service life and exhibit conditions or design deficiencies that result in safety and customer supply reliability risks. The refurbishment decision is based on a number of factors such as: demographics, asset condition, safety, customer, reliability, environmental, operability, and/or obsolescence. The table below explains how the 32 stations planned for station refurbishment in 2013 were established, in no particular order.

	Station	Reason For investment
1	Meaford DS # 2	Condition: Station Structures and Transformer in Poor/Very Poor Condition. Demographic: Transformer beyond the expected service life (i.e. 54 years old). Reliability: No back-up capability in event of failure, resulting in lengthy customer outages. Operability: No MUS facility, resulting in operational constraints for planned maintenance or failure event.
2	Nestor Falls DS	Condition: Station Structures in Poor/Very Poor Condition. Environmental: Regulator leaking oil. Reliability: No back-up capability in event of failure, resulting in lengthy customer outages. Operability: No MUS facility, resulting in operational constraints for planned maintenance or failure event.
3	Crow River DS	Condition: Transformers in Poor/Very Poor Condition. Demographic: Transformers beyond the expected service life (i.e. 62 years old). Environmental: Grounding Transformers leaking oil. Reliability: Station not readily accessible all year due to its remote location, which could result in lengthy customer outages. Station will be standardized to current distribution standards.

	Station	Reason For investment
4	Oxley DS	Condition: Station Structures and Transformer in Poor/Very Poor Condition. Demographic: Transformer beyond expected service life (i.e. 58 years old). Reliability: Transformer condition presents a high risk of failure, which would impact customer supply.
5	Currie DS	Condition: Station Structures and Transformer in Poor/Very Poor Condition. Demographic: Transformer beyond expected service life (i.e. 64 years old) and is a Single phase transformer line-up. Reliability: Transformer condition presents a high risk of failure, which would impact customer supply.
6	Carleton Place Edmund DS	Condition: Transformer in Poor/Very Poor Condition. Security: New security fence is required due to high frequency of vandalism. Reliability: Transformer condition presents a high risk of failure, which would impact customer supply.
7	Barwick DS	Condition: Transformer in Poor/Very Poor Condition. Demographic: Transformer beyond the expected service life (i.e. 60 years old) and is a Single phase transformer line-up. Reliability: Station not readily accessible all year due to its remote location, which could result in lengthy customer outages.
8	Wilsonville DS	Condition: Station Structures and Transformer in Poor/Very Poor Condition. Demographic: Transformer beyond the expected service life (i.e. 59 years old) and is a Single phase transformer line-up. Environmental: Regulator leaking oil. Reliability: No back-up capability in event of failure, resulting in lengthy customer outages. Operability: No MUS facility, resulting in operational constraints for planned maintenance or failure event. Station will be standardized to current distribution standards.
9	Longlac West DS	Condition: Transformers in Poor/Very Poor Condition. Demographic: Transformers beyond the expected service life (i.e. 60 and 66 years old) and are a Single phase transformer line-up. Transformer upgrade will provide for load relief of Longlac East DS.

	Station	Reason For investment
10	Bobcaygeon Duke DS	Condition: Transformer in Poor/Very Poor Condition. Demographic: Transformer beyond the expected service life (i.e. 55 years old). Environmental: Transformer leaking oil. Reliability: Station currently does not have reclosers, resulting in lengthy customer outages. Station will be standardized to current distribution standards.
11	Bobcaygeon Boyd DS	Condition: Transformer in Poor/Very Poor Condition. Demographic: Transformer beyond the expected service life (i.e. 60 years old). Reliability: Transformer condition presents a high risk of failure, which would impact customer supply.
12	Chesley Hawkins DS	Security: No fence around MUS facilities, open access to the public. Safety: Lack of ground grid and gravel around the MUS facilities pose safety risk to Hydro One staff and the public.
13	Elginfield RS	Condition: Station Structures in Poor/Very Poor Condition. Reliability: Regulator by-pass switch is in-operable, which could result in lengthy customer outages.
14	Cache Bay DS	Condition: Line Regulators in Poor/Very Poor Condition. Demographic: Line Regulators beyond the expected service life. Station will be standardized to current distribution standards.
15	Post Creek DS	Condition: Station Fence in Poor/Very Poor Condition. Demographic: Station Structures and Transformer beyond the expected service life (i.e. 51 years old). Reliability: No back-up capability in event of failure, resulting in lengthy customer outages. Operability: No MUS facility, resulting in operational constraints for planned maintenance or failure event. Safety: Grounding at this station requires upgrades.

	Station	Reason For investment
16	Brockville Parkdale DS	Condition: Station Batteries and Fence in Poor/Very Poor Condition. Obsolescence: Metalclad breakers are technically obsolete and cannot be safely maintained. Station will be standardized to current distribution standards.
17	Campbellford Industrial DS	Condition: Station Structures and Transformer in Poor/Very Poor Condition. Demographic: Transformers and Reclosers beyond the expected service life (i.e. Transformers 58 and 60 years old).
18	Havelock Industrial DS	Condition: Transformer in Poor/Very Poor Condition (transformer failed and was non-repairable). Obsolescence: Metalclad breakers are technically obsolete and cannot be safely maintained. Station provides offloading capability for Preneveau DS.
19	Trenton Frankford DS	Condition: Transformer and Station Batteries in Poor/Very Poor Condition. Demographic: Transformer and Station Batteries beyond expected service life (i.e. Transformer 56 years old). Obsolescence: Metalclad breakers are technically obsolete and cannot be safely maintained.
20	Mountain Chute DS	Condition: Station Structures and Transformer in Poor/Very Poor Condition. Demographic: Transformer beyond the expected service life (i.e. 62 years old) and is a Single phase transformer line-up. Reliability: No back-up capability in event of failure, resulting in lengthy customer outages. Operability: No MUS facility, resulting in operational constraints for planned maintenance or failure event.
21	Lindsay Eglinton DS	Condition: Station Structures in Poor/Very Poor Condition. Demographic: Transformer beyond the expected service life (i.e. 60 years old). Environmental: Station is very close to Scugog River and does not contain spill containment. Reliability: Transformers do not meet loading requirements. Obsolescence: Metalclad breakers are technically obsolete and cannot be safely maintained.

	Station	Reason For investment
22	Little Current DS	Condition: Station Structures in Poor/Very Poor Condition (i.e. tube & clamp structures). Demographic: Station Structure beyond the expected service life. Station will be standardized to current distribution standards.
23	Maxville George DS	Condition: Transformers, Fence and MUS facilities in Poor/Very Poor Condition. Demographic: Transformers beyond the expected service life (i.e. 72 years old) and are a Single phase transformer line-up.
24	Brockville Water DS	Condition: Metalclad breakers in Poor/Very Poor condition. Demographic: Transformer and Metalclad breakers beyond the expected service life (i.e. 51 years old). Obsolescence: Metalclad breakers are technically obsolete and cannot be safely maintained.
25	Emsdale DS	Condition: Transformer, MUS facilities and Station Structure in Poor/Very Poor Condition. Demographic: Station Structure beyond the expected service life (i.e. tube & clamp structures).
26	Kirkland Lake Goodfish DS	Condition: Station Structure in Poor/Very Poor Condition. Reliability: No back-up capability in event of failure, resulting in lengthy customer outages. Operability: No MUS facility, resulting in operational constraints for planned maintenance or failure event. Obsolescence: Metalclad breakers are technically obsolete and cannot be safely maintained.
27	Haliburton DS	Condition: Station Structure in Poor/Very Poor Condition. Demographic: Station Structure beyond the expected service life (i.e. tube & clamp structures). Environmental: Station is located in close proximity to a waterway and does not contain spill containment.
28	Geraldton South DS	Condition: Station Structure in Poor/Very Poor Condition. Demographic: Transformer beyond the expected service life (i.e. 61 years old) and is a Single phase transformer line-up. Environmental: Station has major drainage issues and does not contain spill containment. Station is partially located on town property and will be relocated.

	Station	Reason For investment
29	Elora Union DS	Condition: Station Structure and Fence in Poor/Very Poor Condition. Demographic: Station Structure beyond the expected service life. Reliability: No back-up capability in event of failure, resulting in lengthy customer outages. Operability: No MUS facility, resulting in operational constraints for planned maintenance or failure event. Safety: Sinkholes located around structure footings and grounds/rods have heaved due to frost.
30	Athens DS	Condition: Station Fence in Poor/Very Poor Condition. Demographic: Station Structure is at the expected service life. Safety: Grounding at this station requires upgrades.
31	Tara DS	Condition: Station Structure and Transformer in Poor/Very Poor Condition. Demographic: Station Structure and Transformer are at the expected service life. Reliability: No back-up capability in event of failure, resulting in lengthy customer outages. Operability: No MUS facility, resulting in operational constraints for planned maintenance or failure event. Station is encroaching on two adjacent properties. Property purchase is underway.
32	Kirkland Lake Woods DS	Condition: Station Structure and Footings in Poor/Very Poor Condition. Environmental: Transformer leaking oil. Reliability: No back-up capability in event of failure, resulting in lengthy customer outages. Operability: No MUS facility, resulting in operational constraints for planned maintenance or failure event. Obsolescence: Metalclad breakers are technically obsolete and cannot be safely maintained.

UNDERTAKING

Undertaking

TO PROVIDE THE REVENUE REQUIREMENT ASSOCIATED WITH THE NET BOOK VALUES OF ASSETS ALLOCATED TO EACH OF THE CUSTOMER CLASSES IN TERMS OF DEPRECIATION, INTEREST, AND NET INCOME; REFERENCE VECC TCQ NO. 32

Response

The Depreciation, Interest and Net Income costs associated with the customer related fixed asset costs identified in the response to VECC TCQ #32 are provided in the table below.

Customer Related Portion of:	UR	R1	R2	Seasonal	GSe	GSd	UGe	UGd	St Lgt	Sen Lgt	Dgen	ST	Total
Depreciation	6,076,722	24,943,341	34,246,286	12,033,394	7,460,599	978,783	379,520	110,980	353,523	210,561	4,317	1,008,093	87,806,119
Interest	4,336,968	19,611,856	29,064,095	9,910,060	6,121,383	669,407	240,722	65,173	319,224	190,473	2,535	596,394	71,128,291
Net Income	4,330,178	19,581,151	29,018,591	9,894,544	6,111,799	668,359	240,345	65,071	318,724	190,175	2,531	595,461	71,016,931