

Telecommunications and Cable

Canadian Wireless Myths and Facts

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- We've identified 10 common myths about the state of the Canadian wireless industry and countered them with supported facts. We also highlight and discuss the key regulatory issues facing carriers in the coming months.

Implications

- The facts support the view that Canada has a healthy wireless market with lower smartphone monthly price plans and higher smartphone penetration than the US, which benefits both Canadian consumers and carriers. We think it is time for the regulators to declare victory on the policies they adopted five years ago.
- We believe a CRTC national code is the appropriate way to address consumer issues. We believe limiting spectrum transfers by new entrants will not sustain competition and could even result in inefficient spectrum utilization in the future.
- Regulatory intervention could come in the form of retail rate regulation related to overage caps and roaming (addressed in the code). We do not see significant financial disruption for carriers with a \$50 usage cap, but we think carriers should be proactive to avoid unnecessary excessive regulations.

Recommendation

- Our ratings on Canadian wireless stocks are unchanged. We rate Rogers and TELUS Sector Outperform and BCE Sector Perform. We rate Quebec new wireless entrant Quebecor Inc. Sector Outperform.

Universe of Coverage

	Price	Rating	Risk	1-Yr	ROR
BA-T	C\$27.10	SP	Medium	\$26.00	3.0%
BCE-T	C\$47.16	SP	Medium	\$46.00	2.5%
CCA-T	C\$44.49	SO	Medium	\$43.00	-1.0%
CMCSA-Q	US\$40.85	SO	Medium	\$46.00	14.5%
GLN-T	C\$19.10	SO	High	\$18.50	-0.7%
MBT-T	C\$32.88	SP	Medium	\$33.00	5.5%
QBR.B-T	C\$45.49	SO	High	\$43.00	-5.0%
RCI.B-T	C\$49.62	SO	Medium	\$53.00	10.3%
SJR.B-T	C\$24.75	SO	Medium	\$26.00	9.2%
T-T	C\$71.41	SO	Medium	\$77.00	11.6%
T-N	US\$36.29	SU	Medium	\$34.00	-1.4%
TWC-N	US\$89.29	SP	Medium	\$96.00	10.4%
VZ-N	US\$47.28	SO	Medium	\$48.00	5.9%

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Canadian Wireless Myths (and Facts)

- Industry Canada is set to release the final rules for the 700MHz auction. As we get closer, the rhetoric has escalated once again with many critics pointing to the lack of competition in the Canadian wireless market. The noise seemed to have picked up since the announcement of the Shaw-Rogers AWS spectrum licence option agreement.
- Critics often cite high Canadian prices, three-year contracts, low penetration, high carrier margins, and under-investments as reasons for greater regulatory interventions.
- We highlight some of these common myths and reveal the facts. We believe the facts support that Canada has a healthy wireless industry that benefits both consumers and carriers. We think it is time for the regulators to declare victory on the policies they adopted five years ago.

Myth #1: Canadian wireless prices are more expensive than the US

- **Fact: Smartphone monthly plans are actually cheaper in Canada than the US.** As shown in Exhibit 1, we estimate that Canadian monthly smartphone plans are approximately 24%-27% cheaper than the US across all usage categories.

Myth #2: Three-year contracts make Canadian plans less attractive

- **Fact: Canadian smartphone plans are still cheaper than the US even after adjusting for the higher cost to the subscriber for the three-year contract.** After adjusting for the three-year contract (i.e., high cost for Canada due to lower subsidy/month for the carriers), Canadian smartphone monthly plans are still cheaper than the US by 21%-23% (see Exhibit 1). The main reason for the difference is the presence of the Canadian flanker brands (i.e., Fido, Koodo, and Virgin). We think the three-year contract has actually led to low handset prices that helped smartphone penetration in Canada.

Exhibit 1 – US/Canadian Smartphone Pricing

	As at 25 Feb 2013								US Premium	US Premium ⁷
	Bell ¹	Rogers ²	TELUS ³	Virgin ⁴	Fido ⁴	Koodo ⁴	Verizon ⁵	AT&T ⁶		
Plan cost - "Social Networking"	\$50	\$55		\$55						
Included usage (GB)	0.15	0.15		0.15						Adjusted for 3 yr contract in Canada
Voice (mins)	1000 Local	1000 Local		1000 Local						
Text, Picture & Video Messaging	Unlimited	Unlimited		Unlimited						
Plan cost - "Low"	\$75	\$80	\$80	\$60	\$60	\$60	\$90	\$85	27%	23%
Included usage (GB)	1	1	1	1	1	1	1	1		
Voice (mins)	Unlimited Nationwide	Unlimited Nationwide	Unlimited Nationwide	Unlimited Nationwide	Unlimited Nationwide	Unlimited Nationwide	Unlimited Nationwide	Unlimited Nationwide		
Text, Picture & Video Messaging	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited	Unlimited		
Plan cost - "Medium"	\$85	\$90	\$90	\$90			\$110	\$110	24%	21%
Included usage (GB)	3	3	3	3			4	4		
Voice (mins)	Unlimited Nationwide	Unlimited Nationwide	Unlimited Nationwide	Unlimited Nationwide			Unlimited Nationwide	Unlimited Nationwide		
Text, Picture & Video Messaging	Unlimited	Unlimited	Unlimited	Unlimited			Unlimited	Unlimited		
Plan cost - "High"	\$95	\$100	\$100	\$100			\$120	\$125	24%	21%
Included usage (GB)	5	5	5	5			6	6		
Voice (mins)	Unlimited Nationwide	Unlimited Nationwide	Unlimited Nationwide	Unlimited Nationwide			Unlimited Nationwide	Unlimited Nationwide		
Text, Picture & Video Messaging	Unlimited	Unlimited	Unlimited	Unlimited			Unlimited	Unlimited		

¹ "Low" & "Medium" Plan costs include \$10/month unlimited nationwide voice add-on for comparative purposes. Additional data is \$10/250MB for "Social Networking" Plan and \$10/GB on "Low", "Medium" and "High" Plans.

² "Low" & "Medium" Plan costs include \$10/month unlimited nationwide voice add-on for comparative purposes. Additional data is \$10/200MB for "Social Networking" Plan, \$15/GB on "Low" and "Medium" Plans and \$10/GB on "High" Plan.

³ "Low" & "Medium" Plan costs include \$10/month unlimited nationwide voice add-on for comparative purposes. Additional data is 2¢/MB up to a 10 GB overage limit. TELUS also offers 2-year plans on select smartphones but these have been excluded for comparative purposes.

⁴ Virgin, Fido and Koodo "Low" plans are advertised as limited time offers, however offer termination dates are not disclosed. Virgin "Medium" Plan includes \$10/month unlimited nationwide voice add-on for comparative purposes.

⁵ Verizon also offers 2 GB, 8 GB and 10 GB plans but these were excluded for comparative purposes. Plan costs include \$40/month smartphone access line fee. Additional data is \$15/GB.

⁶ AT&T also offers 10 GB, 15 GB and 20 GB plans but these were excluded for comparative purposes. Plan costs include smartphone access line fee which ranges from \$35-\$45/month on above plans. Additional data is \$15/GB. AT&T offers individual rate plans, however these plans are more expensive than their share plan equivalents.

⁷ Canadian plans are offered on 3-year service agreements while U.S. plans are on 2-year agreements. This can impact the price of monthly service plans as pricing for rate plans and subsidies are typically tied together. If we control for the component of the device subsidy that is tied to the monthly service plan and assume that U.S. and Canadian carriers purchase devices from OEMs at similar prices (we used the iPhone 5 as the control device), the U.S. premium falls by 3%-4% depending on plan type.

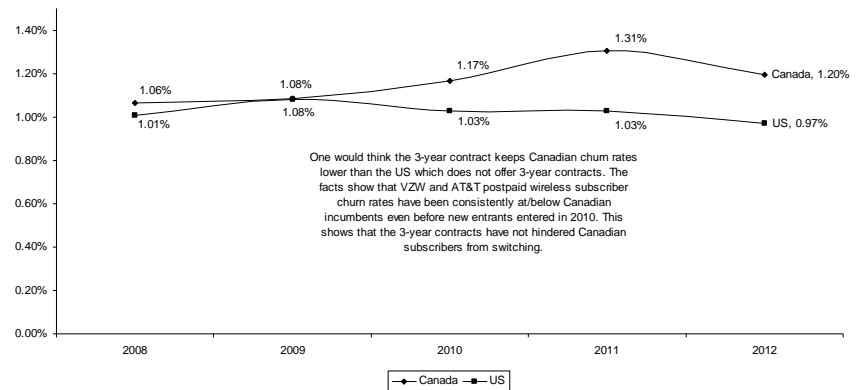
** T-Mobile and Sprint offer more attractively priced plans but these plans are less comparable due to network disadvantages.

Source: Company reports; Scotiabank GBM estimates.

Myth #3: Three-year contracts trap Canadians and should be banned

■ **Fact: Canadian incumbent postpaid churn rates are similar to the US postpaid churn rates of AT&T and Verizon Wireless even though the US does not have three-year contracts.** If the US does not have three-year contracts then one would expect US churn rates to be higher than Canada where there are three-year contracts. We think the churn rates dispel the notion that Canadian wireless subscribers are trapped in three-year plans (see Exhibit 2).

Exhibit 2 - US/Canadian Postpaid Churn

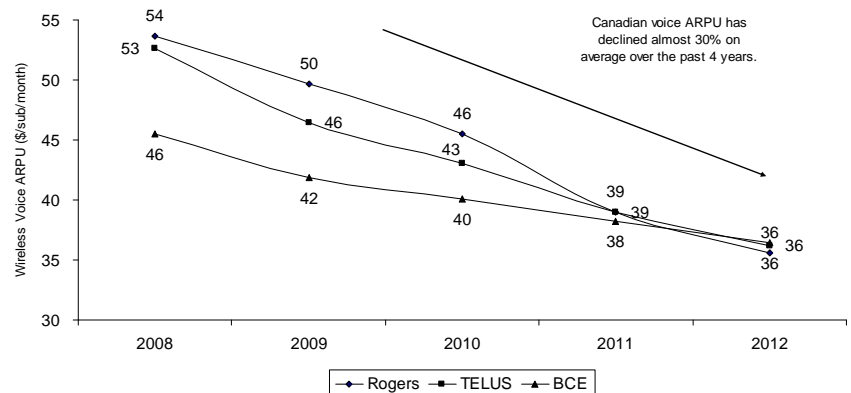


Source: Company reports; Scotiabank GBM estimates.

Myth #4: Canadian incumbents have not been affected by the new entrants

■ **Fact: Since 2008, Canadian wireless voice ARPU has declined almost 30% on average for the incumbents from \$46-\$54 in 2008 to \$36 in 2012 or -8% CAGR (see Exhibit 3).** We believe this was largely due to competition and data/text substitution. Looking ahead, we do not expect voice ARPU decline to slow in dollar terms due to substitution from voice to text and data, and we expect it will continue to converge to the US level below \$30.

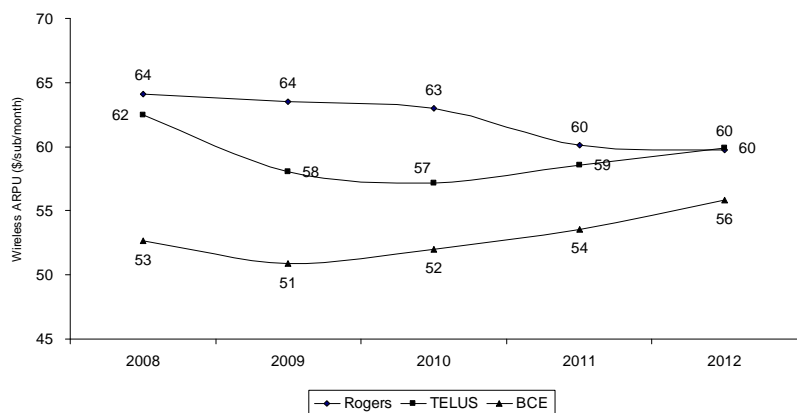
Exhibit 3 - Canadian Wireless Voice ARPU (\$)



Source: Company reports; Scotiabank GBM estimates.

■ **Fact: Since 2008, total Canadian wireless ARPU for the three national incumbents has been flat because data ARPU growth has essentially offset the voice ARPU decline.** As shown in Exhibit 4, Canadian incumbent total ARPUs have been relatively steady from 2008 to 2012 at approximately \$59-\$60 even as competition intensified. Over the past four years, the total data growth was approximately \$12-\$14, largely offsetting the voice ARPU decline over the same period (see Exhibit 6 on page 4).

Exhibit 4 - Canadian Wireless Total ARPU (\$)



Source: Company reports; Scotiabank GBM estimates.

■ **Fact: All three incumbents' wireless service margins fell from 2007 to 2012 by a range of 200 bps to 480 bps.** Exhibit 5 shows Rogers' wireless margins declined from 50.4% in 2007 to 45.6% in 2012. BCE's wireless margins declined from 43.9% to 41.5% and TELUS wireless margins declined from 48.2% to 46.2%.

Myth #5: Higher data ARPU is due to higher prices

■ **Fact: Data ARPU growth has been driven solely by smartphone penetration and not pricing.** We would argue that data

ARPU growth driven by smartphone penetration growth is the sign of a healthy wireless industry. As shown in Exhibit 6, data ARPU has increased from \$7-\$10 to \$19-\$24 from 2008 to 2012. The growth has been driven solely by the increase in smartphone penetration. From 2008 to 2012, smartphone penetration as a percentage of postpaid subscribers increased from 15% to 67% (see Exhibit 7). Based on the assumption that smartphone ARPU is 1.8x of non-smartphone ARPU (incremental due to data plans), we estimate smartphone penetration growth contributed \$14 or all of the data ARPU growth for the Canadian incumbents (see Exhibit 8 on page 5).

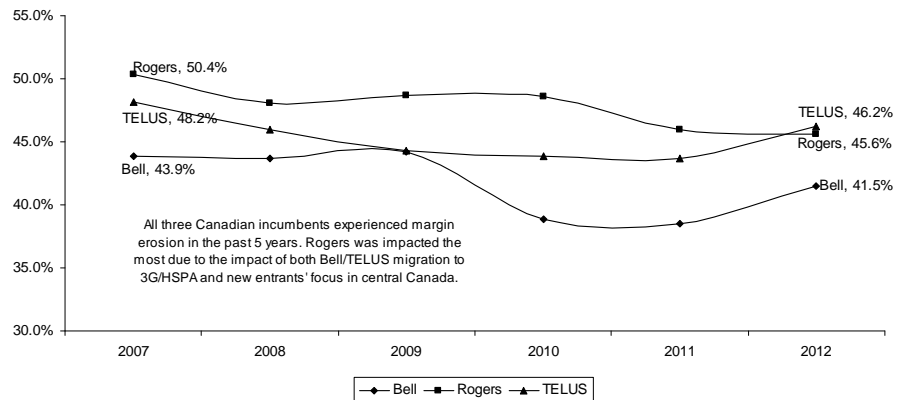
Myth #6: Canadian carriers charge more for data than the US

Fact: Canadian incumbent data ARPU is similar to US data ARPU. Canadian data ARPUs range from \$19 to \$24 while the US range from \$21 to \$23 (see Exhibit 9 on page 5). The slight differences between the US and Canadian operators is mainly due to the difference in smartphone penetration. The difference in total ARPU between Canada and the US is due to higher Canadian voice ARPU. But as we mentioned above, with data/text substitution, we expect voice ARPU will continue to decline in Canada and converge to the US level of below \$30.

Myth #7: Canada is behind because of low wireless penetration

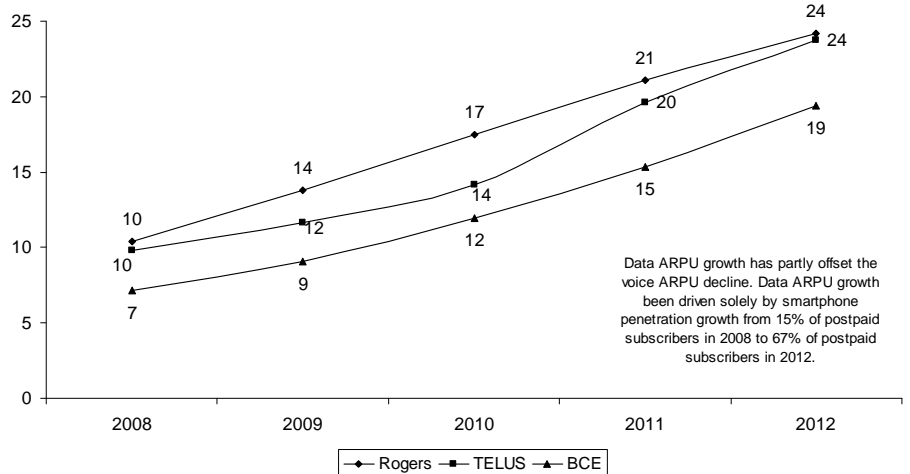
Fact: Canada has higher smartphone penetration than the US and Canada's penetration growth has outpaced the US in the past two years. Canadian smartphone penetration (of postpaid subscribers) ended 2012 at 67% compared to 62% in the US. As shown in Exhibit 7, Canadian smartphone penetration growth exceeded the US in the past two years, after being even in 2009 and 2010. We believe the even positions prior to 2010 dispels the notion that Canada is ahead simply because of its history with Blackberries. Proponents of increased regulatory interventions often point to Canada's lagging wireless penetration compared to the rest of the world. But we think the more relevant penetration statistic is smartphone penetration.

Exhibit 5 - Wireless EBITDA Service Margin



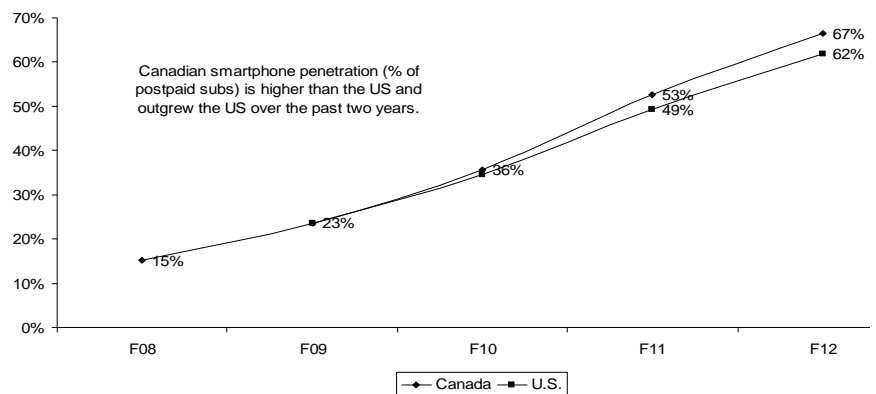
Source: Company reports; Scotiabank GBM estimates.

Exhibit 6 - Canadian Wireless Data ARPU (\$)



Source: Company reports; Scotiabank GBM estimates.

Exhibit 7 - US/Canadian Smartphone Penetration (% of Postpaid)



Source: Company reports; Scotiabank GBM estimates.

Myth #8: Canadian wireless margins are the highest in the world

■ **Fact: Contrary to conventional belief, Canadian wireless operators are actually not more profitable than the US.** In 2012, VZW generated a wireless EBITDA service margin of 47%, which was above Rogers and TELUS margins at 46% (see Exhibit 10).

Myth #9: Canada lags in wireless technology adoption

■ **Fact: Canada has higher cumulative 4GLTE coverage than the US. Canada has higher cumulative 4GLTE coverage at 194% vs. the US at 144% because there are three healthy operators (see Exhibit 11 on page 6).** This was achieved despite not having access to 700MHz spectrum, which is currently being utilized for 4GLTE deployment in the US. On a weighted basis, Canada is slightly below at 65% vs. US at 72%. However, with 700MHz auction later in 2013, we suspect Canada will catch up to the US as Canadian carriers deploy 4GLTE using 700MHz licenses in rural areas in 2014.

Myth #10: Canadian wireless incumbents under-invest

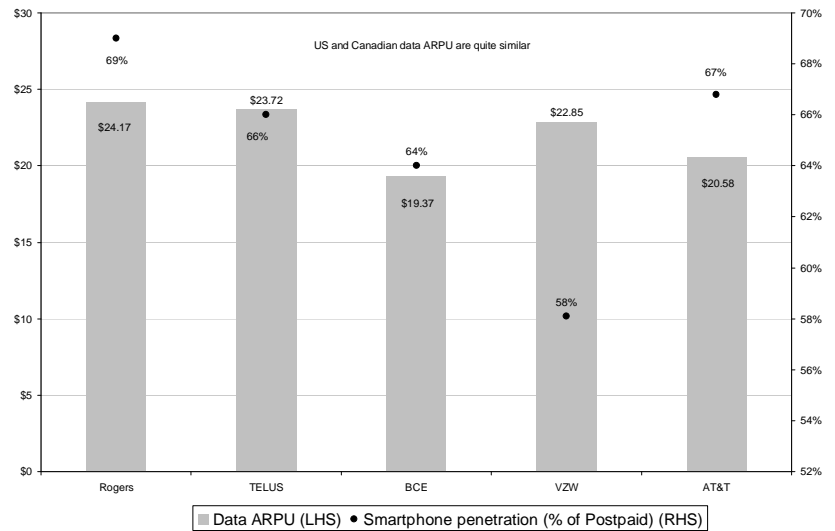
■ **Fact: Over the past five years, Canadian wireless incumbents have invested just as much as the US carriers.** As shown in Exhibit 12 on the following page, over the past five years, Canadian operators have invested approximately 13% of their wireless revenues in capital expenditures, which is similar to the US.

Exhibit 8 – Smartphone Incremental Data ARPU Calculation

Canadian smartphone subs in 2012 (M)	12.5
Canadian smartphone subs in 2008 (M)	2.4
Smartphone sub growth (2008 to 2012)	10.1
Incremental ARPU per smartphone sub (\$)*	\$ 35
Incremental annual data revenue (\$M)	4,181
Incremental data ARPU (\$)	\$ 14

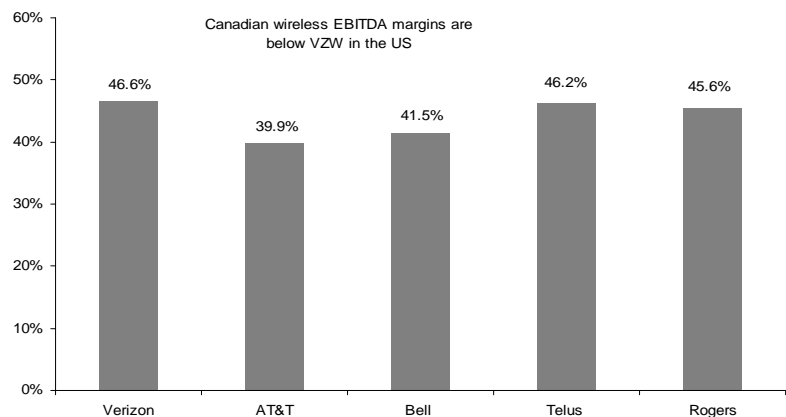
*Based on our estimate that smartphone subscriber ARPU in 2012 is 1.8x non-smartphone subscriber ARPU.
Source: Company reports; Scotiabank GBM estimates.

Exhibit 9 – F12 Wireless Data ARPU and Smartphone Penetration (% of Postpaid)



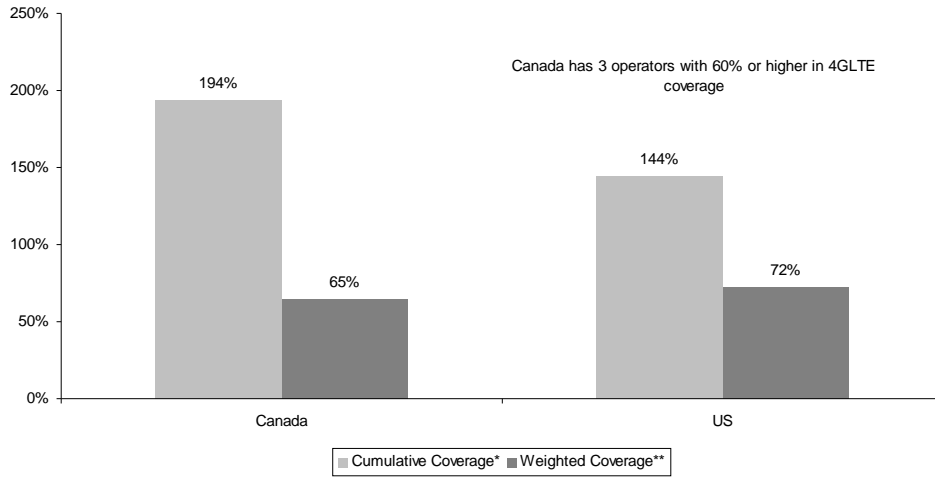
Source: Company reports; Scotiabank GBM estimates.

Exhibit 10 – F12 Wireless EBITDA Service Margin



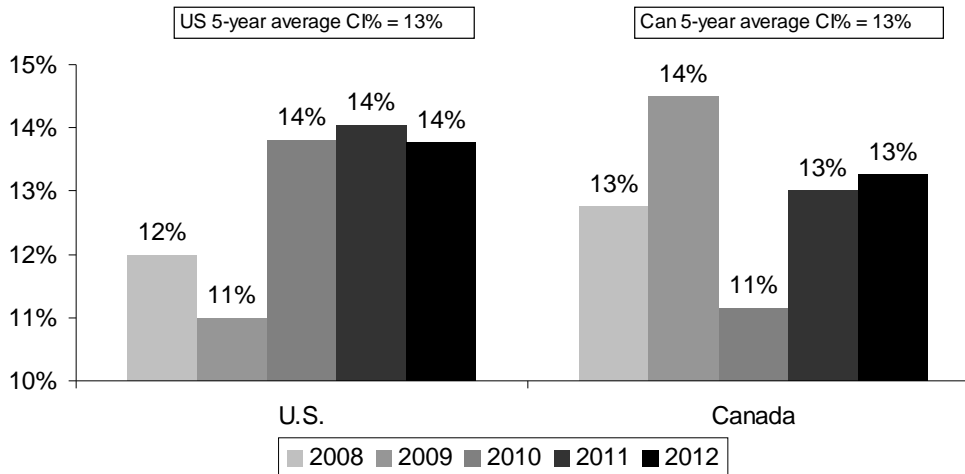
Source: Company reports; Scotiabank GBM estimates.

Exhibit 11 - 4GLTE Population Coverage



Source: Company reports; Scotiabank GBM estimates.

Exhibit 12 - Wireless Capex Intensity



Source: Company reports; Scotiabank GBM estimates.

Canadian Wireless Regulatory Issues

■ We believe wireless regulation will be a recurring topic for the industry over the next few months. We thought it would be helpful to address the following key questions:

1. How will Industry Canada (IC) address the proposed spectrum license transfer (or the option agreement) between Shaw and Rogers?
2. How will IC address the (inevitable) license transfer by Wind and Mobilicity to the incumbents when the transfer limit expires in March 2014?
3. Will the regulators introduce price regulation?
4. What will be the impact of the CRTC wireless code?

Exhibit 13 - Regulatory Timeline

Wireless Regulatory Event	Expected Timing
700MHz final auction rules; final rules on roaming and tower sharing	Late March after the Federal budget
CRTC Wireless Code	Late Q2/2013
700MHz spectrum auction	Q4/2013
Wind and Mobilicity AWS licenses become transferable to incumbents	March 2014
Shaw AWS licenses transferable to Rogers	September 2014
2500MHz spectrum auction	Late 2014

Source: Company reports; Scotiabank GBM estimates.

Shaw/Rogers Transfer

■ In recent media interviews, Industry Minister Christian Paradis has been asked about the wireless industry and pointedly about the proposed Rogers/Shaw spectrum transaction. **The impression we got from his response was that he will review that transaction when the transfer actually happens (i.e., in Sept 2014) and will not rule on the option arrangement.** This is consistent with our expectation. We believe that if the Minister had denied Shaw's transfer (or the option agreement), it would have set a precedent for future potential transactions for Wind/Mobility. It is important to remember that in the US, FCC APPROVED Spectrumco's (a cable JV that includes Comcast, Time Warner Cable, and Bright House) transfer of AWS licenses to Verizon Wireless. Spectrumco had no intention of using the spectrum. It was exactly the same set of circumstances as the Shaw/Rogers proposed transfer.

Other New Entrants' (Inevitable) Transfer in March 2014

■ Also in recent media interviews, the Minister said "stay tuned" and said he is "committed to a 4th player". Our read is IC/Minister may see Wind/Mobilicity differently than Shaw because Shaw is not an active wireless operator (i.e., not a "4th player"). **Therefore, if and when Wind and Mobilicity try to sell their licenses to the incumbents, they may face tougher regulatory scrutiny.** We see regulatory risk on Wind/Mobilicity consolidation with the incumbents if it materialized.

■ **What if the regulators (IC or Competition Bureau) denied the transfer of Wind/Mobilicity licenses to the incumbents and/or the consolidation of Wind/Mobilicity by the incumbents? Will it sustain competition? We believe it will not.**

■ First, we believe Wind/Mobilicity will be very disappointed if they were not allowed to sell their licenses to the incumbents because such denial would effectively take away the exit strategy and ability to recover some of their capital. This also would not help invite future investors given the regulatory uncertainty such a denial would create. It would leave Wind and Mobilicity with no choice but to merge. This would seem very similar to the Metro PCS and T-Mobile combination, and we believe the combination of two weaker subscale operators does not necessarily result in a stronger competitor.

■ **Second, without sufficient spectrum and capital, we really do not see them playing an active role as a "4th player" in Canada.** We believe they would be relegated to the lower tier of the market similar to Sprint, T-Mobile, Metro PCS, and Leap in the US over the past few years. Their subscribers would be a pool for the incumbents to draw from over time. In the US, even though AT&T failed to acquire T-Mobile USA in 2011, neither AT&T nor Verizon Wireless were affected and continued to post very strong results in 2012. In the US, Softbank is investing in Sprint. **Unless we see a Softbank-like investor enter Canada, we believe keeping the new entrants independent will not impact competition.**

Price Regulation (Retail and Wholesale)

- **We believe wholesale price regulation is highly unlikely.** Wholesale price regulation is effectively the regulators forcing the incumbents to provide wholesale access to their networks at mandated attractive prices to foster non-facility-based competition. We do not see this developing in Canada, which focuses on facility-based competition. Industry Canada DOES NOT have jurisdiction over telecom price regulation. It is up to the CRTC, which is focused on establishing a wireless consumer code. Industry Canada also has an outstanding telecom policy direction to the CRTC that states it must rely on market forces where possible. In order for the CRTC to alter its policy stand, Industry Canada would have to revise its policy direction to the CRTC, which we believe will have other unintended consequences. Wholesale price regulation would also require extensive costing analysis where there is limited historical data in the wireless segment.
- **We believe retail pricing regulation is possible but would be very manageable for the carriers.** In particular, retail price regulation could arise around international roaming. We believe regulators would like to see more reasonable prices for Canadians using their wireless devices abroad. If such a policy were implemented, we believe the key for carriers would be to drive greater usage to offset the pricing impact. We believe international roaming usage is quite low for Canadians today (less than 5% of revenue today), and we believe there is room for carriers to leverage the demand elasticity to drive higher total international roaming revenue. We also believe this is an area where the industry can be more proactive to avoid unnecessarily harsh regulatory intervention.

CRTC Wireless Code

- **We believe a consistent national wireless code of conduct is the appropriate way to protect Canadian consumers at this stage of the wireless industry in Canada.** To us, the proposed code includes many sensible suggestions that we believe would help consumers. They include providing consumers with more clarity on advertised prices of services including data and roaming charges, the ability to unlock wireless devices after a reasonable time frame, tools to monitor usage against the limits of their capped or metered plans, and rate plan discounts for unsubsidized devices.
- **We expect the code would keep three-year contracts as an option.** We believe the CRTC would ensure that the three-year contract remains an option for Canadians to help finance their upfront handset purchase costs. As we noted earlier in the note, three-year contracts have not resulted in lower churn for Canadian carriers and does not result in monthly plans being less attractive for consumers when compared to the US, which does not have three-year contracts.
- **A dollar cap on usage/overage charge (e.g., international roaming or data usage) is possible and may ultimately be incorporated into retail price regulation cited above.** If this were the case, we expect a follow-on proceeding to address the cap specifically with implementation likely in 2014. In the proposed code, the CRTC identified \$50 overage as a starting point. While this may create back-end system issues for the carriers to implement, and may limit usage upside over the long term, we do not believe it would be disruptive to the economics in the short to medium term. **We estimate average overage revenue per user in Canada, including international roaming, is only a fraction of the proposed \$50 per month overage cap.**

Pertinent Data

Rating	Risk	1-Yr Target	Key Data			Valuation
			Year 1	Year 2	Year 3	
Bell Aliant Inc. (BA-T)						
Valuation: 7.2x NTM EBITDA one year forward						
Key Risks to Price Target: Ownership structure (Bell take-out at a premium); Market interest rate risk						
BCE Inc. (BCE-T)						
Valuation: 7.1x NTM EBITDA 1-yr fwd						
Key Risks to Price Target: Faster acceleration in access line loss and higher wireline capex to compete on broadband.						
Cogeco Cable Inc. (CCA-T)						
Valuation: 5.5x NTM (est.) EBITDA 1-yr fwd, p.f. Atlantic Broadband						
Key Risks to Price Target: Cdn. IPTV and fiber expansion and content costs; acquisitions						
Comcast Corporation (CMCSA-Q)						
Valuation: 16x NTM EPS 1-year forward						
Key Risks to Price Target: U.S. economic slowdown; OTT cord-cutting; content costs; telco/satellite competition						
Glentel Inc. (GLN-T)						
Valuation: 10.5x NTM P/E p.f. AMT + \$2.50/shr for Target deal						
Key Risks to Price Target: Slowing wireless market growth, increasing retail competition						
Manitoba Telecom Services Inc. (MBT-T)						
Valuation: 5.8x NTM EBITDA 1-yr fwd						
Key Risks to Price Target: Allstream execution; pension funding; potential Allstream divestiture.						
Quebecor Inc. (QBR.B-T)						
Valuation: 5.7x NTM EBITDA 1-yr fwd						
Key Risks to Price Target: Wireless execution; IPTV competition; Newspaper/TV cyclicality						
Rogers Communications Inc. (RCI.B-T)						
Valuation: 7.3x NTM EBITDA 1-yr fwd						
Key Risks to Price Target: Wireless competition (from both incumbents and new entrants)						
Shaw Communications Inc. (SJR.B-T)						
Valuation: 8x est. NTM EV/EBITDA 1-yr fwd						
Key Risks to Price Target: Irrational competitive behaviour by Shaw or TELUS.						
TELUS Corporation (T-T)						
Valuation: 7.3x NTM EBITDA 1-yr fwd						
Key Risks to Price Target: Wireless competition; Wireline business deterioration						
AT&T Inc. (T-N)						
Valuation: 14x NTM EPS 1-year forward						
Key Risks to Price Target: Cable/wireless competitive intensity; pension funding; U.S. economy						
Time Warner Cable Inc. (TWC-N)						
Valuation: 13x NTM EPS 1-year forward						
Key Risks to Price Target: U.S. economy; cord-cutting; programming costs						

Pertinent Data

Rating	Risk	1-Yr Target	Key Data			Valuation
			Year 1	Year 2	Year 3	

Verizon Communications Inc. (VZ-N)

Valuation: 16x NTM EPS 1-year forward

Key Risks to Price Target: U.S. economy; potential buy-out of Vodafone's VZW stake; pension funding; VZW cash to support dividend

Source: Scotiabank GBM estimates.

[ScotiaView Analyst Link](#)

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Company	Ticker	Disclosures (see legend below)*
BCE Inc.	BCE	B26, B8, G, I, S, T, U, V39
Bell Aliant Inc.	BA	G, I, T, U
Cogeco Cable Inc.	CCA	I, T
Manitoba Telecom Services Inc.	MBT	B9, I, S, T
Quebecor Inc.	QBR.B	I, N1, T
Rogers Communications Inc.	RCI.B	G, I, S, T, U
Shaw Communications Inc.	SJR.B	I, S, T
TELUS Corporation	T	G, I, J, T, U, U63

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We have a four-tiered rating system, with ratings of Focus Stock, Sector Outperform, Sector Perform, and Sector Underperform. Each analyst assigns a rating that is relative to his or her coverage universe or an index identified by the analyst that includes, but is not limited to, stocks covered by the analyst.

Our risk ranking system provides transparency as to the underlying financial and operational risk of each stock covered. Statistical and judgmental factors considered are: historical financial results, share price volatility, liquidity of the shares, credit ratings, analyst forecasts, consistency and predictability of earnings, EPS growth, dividends, cash flow from operations, and strength of balance sheet. The Director of Research and the Supervisory Analyst jointly make the final determination of all risk rankings.

The rating assigned to each security covered in this report is based on the Scotiabank, Global Banking and Markets research analyst's 12-month view on the security. Analysts may sometimes express to traders, salespeople and certain clients their shorter-term views on these securities that differ from their 12-month view due to several factors, including but not limited to the inherent volatility of the marketplace.

Ratings

Focus Stock (FS)

The stock represents an analyst's best idea(s); stocks in this category are expected to significantly outperform the average 12-month total return of the analyst's coverage universe or an index identified by the analyst that includes, but is not limited to, stocks covered by the analyst.

Sector Outperform (SO)

The stock is expected to outperform the average 12-month total return of the analyst's coverage universe or an index identified by the analyst that includes, but is not limited to, stocks covered by the analyst.

Sector Perform (SP)

The stock is expected to perform approximately in line with the average 12-month total return of the analyst's coverage universe or an index identified by the analyst that includes, but is not limited to, stocks covered by the analyst.

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The stock is expected to underperform the average 12-month total return of the analyst's coverage universe or an index identified by the analyst that includes, but is not limited to, stocks covered by the analyst.

Other Ratings

Tender – Investors are guided to tender to the terms of the takeover offer.

Under Review – The rating has been temporarily placed under review, until sufficient information has been received and assessed by the analyst.

Risk Rankings

Low

Low financial and operational risk, high predictability of financial results, low stock volatility.

Medium

Moderate financial and operational risk, moderate predictability of financial results, moderate stock volatility.

High

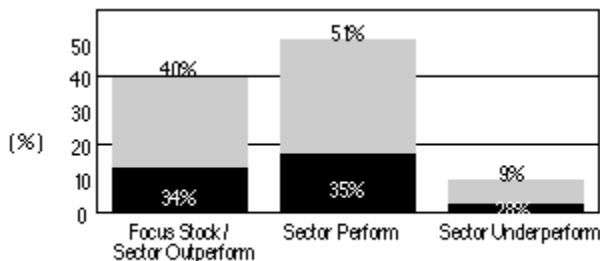
High financial and/or operational risk, low predictability of financial results, high stock volatility.

Speculative

Exceptionally high financial and/or operational risk, exceptionally low predictability of financial results, exceptionally high stock volatility. For risk-tolerant investors only.

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Source: Scotiabank GBM.

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