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Executive Summary and Conclusions

Canada’s communications services market is increasingly driven by the competition between integrated communications services providers for subscribers across four communications services sectors – wireless, subscription TV, Internet and home phone. While Canadian homes were once served by multiple carriers (i.e. one for home phone and another for subscription television), they are increasingly receiving multiple bundled services from one provider. In fact, between 2006 and 2009, the number of Canadian communications subscribers receiving two or more services from their local phone company increased from 15% to 34%. Cable companies have enjoyed even greater success in bundling subscribers – more than 50% of Shaw’s cable subscribers now also receive Shaw’s home phone service; and 72% of Videotron’s subscribers receive two or more Videotron services.

Canada’s wireless sector is a segment of Canada’s broader communications services market and needs to be examined as such. While examining Canada’s wireless sector overall, and compared with other developed international wireless markets, is instructive and relevant, an analysis of Canada’s wireless sector and its competitors must ultimately return to the reality of the integrated communications service competition that exists in Canada. Such analysis reveals an industry with substantial wireless competition as well a number of competitors poised to exploit their financial and service strength to take advantage of opportunities in Canada’s wireless market.

Communications services competition

Communications services competition is no longer contained within specific sector silos. Two competitors don’t battle for home phone subscribers, Internet providers and TV providers, respectively. Rather, they pit collective bundle against bundle to capture full communications services subscribers to the greatest extent possible. This integrated communications services competition, however, is greatly impacted by the level of competition within each particular sector.

Across almost all competitive indices, wireless is the most competitive communications service sector in Canada. The average Canadian has more choice in wireless services than for any other communications service, which has resulted in declining wireless rates over the past four years. As Figure 1 below illustrates, wireless voice ARPU (average revenue per user) last increased in

2 Source: TD Newcrest, January 2011.
2007 and declined by nearly 10% in 2009. Blended (voice and data) wireless ARPU last posted a year-over-year increase in 2008. Industry-wide wireless voice ARPU has also not increased at a rate greater than the Consumer Price Index (CPI) since 2007.

Conversely, as Figure 1 demonstrates, subscription TV (cable and satellite) is Canada’s least competitive communications services sector. Subscription TV ARPU increased by at least 5% each year between 2006 and 2009, outpacing, on average, the annual ARPU growth for all other communications services, as well as the CPI. In fact, subscription TV as a product category posted the greatest annual average price increase of all consumer goods between 2004 and 2010, outpacing: tobacco products; cigarettes; fuel, water and electricity; food; and alcohol.

Figure 1: Annual ARPU growth versus CPI growth, 2006-2009

The nine-year total ARPU growth comparison below further pronounces the differences in price growth due to competition in the wireless and subscription TV sectors. During the nine-year period profiled, the total growth in TV ARPU (50.59%) was by far the most significant of all communications services.

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4 Source: CRTC, Communications Monitoring Report 2010; Statistics Canada; Nordicity Research.
Although broadcasting distribution rates were deregulated in Canada in large part due to the introduction of competition from satellite TV, the extreme ARPU growth in the subscription TV sector points to a complete lack of competition between the two subscription services – cable and satellite. As the red line in Figure 2 illustrates, the subscription TV sector experienced a roughly 10% ARPU decline between 2002 and 2003 due to the introduction of satellite TV service. However, TV ARPU recovered from that decline by 2005 and has increased by more than 30% since. This only ARPU decrease effectively illustrates the total, two-year impact of satellite TV on TV service pricing. Overall, TV ARPU outpaced CPI growth by 34% over the nine years between 2000 and 2009.

Blended wireless and wireless voice ARPU, on the other hand, both increased, cumulatively, at a rate below that of the CPI. Voice ARPU is now lower than it was in 2005 and is nearly at the same level it was in 2000. Blended ARPU is following a similar path to that of voice ARPU, only lagging by a year or two. Following the trend lines forward, subscription TV rates are likely to continue to increase, while high levels of competition in Canada’s wireless sector will continue pushing wireless ARPU down.

Overall, cable TV has proven to be the leading base service within the communication services bundle. The lack of competition to cable TV and the versatility of the coaxial cable infrastructure has afforded cable providers an unmatched ability to increase sector revenue, raise rates, and attract bundled subscribers over the past decade. In fact, revenues for services over cable increased by more than 69% between 2005 and 2009. Comparatively, wireless, still a relatively emerging service over that period, increased revenue by roughly 53%, while revenues for

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Figure 2: Accrued ARPU growth versus accrued CPI growth, 2000-2009

![Graph showing ARPU growth versus CPI growth from 2000 to 2009 for TV, CPI, Blended Wireless, and Wireless Voice.]

5 Source: CRTC Monitoring Reports; Statistics Canada; Nordicity Research.
Competition and New Entry in Canada’s Communications Services Market

services delivered over the telecommunications service provider infrastructure (twisted copper pair network) declined by 5.19%.

**Conclusion:** Canada’s wireless sector is as competitive, if not more competitive than any other Canadian communications services sector, particularly so relative to the subscription TV sector.

**Wireless competition**

The number of Canadian wireless subscribers has increased by more than seven million during the past five years, and competition for those subscribers has been fierce. Historically, wireless competition has been dominated by the five wireless providers that have offered service for more than a decade – TELUS, Bell, Rogers, SaskTel, and MTS. During the past two years, however, an additional four wireless carriers – Wind Mobile, Videotron, Public Mobile and Mobilicity – have launched and it is anticipated that two more – EastLink and Shaw – will launch service within the next year. Whether examined in terms of the five historical wireless competitors, or with regards to current and future competition from the 2008 AWS entrants, Canada’s wireless sector has significant competition at the national and regional levels.

As Figure 3 illustrates, Canada’s five historical wireless companies have experienced varying levels of success in increasing their respective subscriber bases over the past five years. During that time, corporate percentage subscriber growth has ranged from Bell’s 30%, to SaskTel’s 55%.
The increase in wireless competition is similarly pronounced over the past decade. TELUS’ emergence as a third national carrier over the past 10 years has decreased the gap between the percentage of subscribers held by the leading and third-largest providers from nearly 15% to 8.9%. As well, a snapshot of the percentage of net subscriber additions captured by the three national wireless carriers over the past three years shows a very competitive market share disbursement of 33.2% for TELUS, 29.4% for Rogers and 22.4% for Bell. Regional wireless competition has similarly increased during the last half decade.

6 Source: Annual Reports. SaskTel 2010 figure is estimated.
Specifically, the gaps in percentage subscriber share between the leading and third-largest carrier decreased by 18% in BC/Alberta, 18% in Quebec and 27% in the Maritime provinces between 2004 and 2009 (Figure 4 above). In Ontario, which was already the most competitive market, that gap increased by 2%, yet remained a competitive 27%. However, competition has remained relatively stagnant in three provinces – Saskatchewan, Manitoba and Newfoundland – where the gap between the first and third carriers has only decreased between 8% and 10% over the past five years.

The entry of new wireless carriers through the 2008 AWS auction has already added to sector competition. An average of 6.6 companies per province now hold spectrum and an average of 4.2 companies per province have launched service. These 2008 entrants (companies that first acquired wireless spectrum in 2008) are already realizing major subscriber gains. As Figure 5 illustrates, the 2008 entrants captured an estimated 23.2% of net subscriber additions for the full year 2010. In fact, forward-looking projections predict that 2010 will be the last year that any of the national wireless captures more net subscriber additions than the 2008 entrants combined.

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[Figure 4: Gap between subscriber shares (%) of leading and third-largest wireless carriers, 2004-2009]

Source: CRTC Monitoring Reports.
By the year end 2012, at roughly the time of Industry Canada’s anticipated 700 MHz auction, it is forecast that the 2008 entrants will be serving more than 6% of Canada’s wireless subscribers. At that time, the 2008 entrants will collectively hold 13% of national spectrum, and, on a percentage-of-spectrum to percentage-of-subscribers ratio, will remain the most spectrum rich carriers in the country. Not all providers, however, will be in a similar situation. In fact, Figure 6 displays that by 2012, only the 2008 entrants and Rogers will have positive spectrum-share-to-subscriber-share ratios – 2008 entrants at 2:1 and Rogers at 1.2:1. Bell will have a ratio slightly below 1:1.

Conversely, TELUS will have a spectrum-to-subscriber ratio of nearly 1:2, meaning the 2008 entrants would have to more than quadruple their projected 2012 subscriber levels to decline to the same negative spectrum-to-subscriber ratio as TELUS.

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Conclusion: Canada’s wireless sector has significant national and regional competition; and there are considerable differences in spectrum need amongst the wireless carriers.

International comparison

Past reports on international wireless services pricing have largely been critical of Canada’s wireless industry. However, they rarely consider or acknowledge the vast differences in average usage profiles from one country to another or the challenges presented to wireless carriers by Canada’s widely dispersed population. The facts are:

- Canadians talk on their cell phones for more minutes per month than residents of any other developed mobile market except the United States, and as a result Canada has the seventh-lowest average revenue per minute out of 21 developed wireless markets; and

- Due to Canada’s widely dispersed population, the average-revenue-per-square-kilometre (ARPK) within Canada’s wireless market is the second lowest of any wireless market in the world. At $675 per km²/month, Canada’s network generates eight times

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less than the global average and 25 times less than that of the Netherlands – the leading country.

Even without the above considerations, Canada’s wireless market compares favorably with other jurisdictions. For example, based on the methodology used by UK consultancy Teligen, Strategy Analytics Ltd. for comparing international wireless prices, Canada ranks as the 13th lowest out of 19 developed markets for a calling profile of 100 monthly calls – roughly 188 minutes of use – and eighth-lowest out of 19 markets for a calling profile of 300 monthly calls – roughly 589 minutes of use.

Canada ranks even more favourably among international wireless markets in terms of market structure. As Figure 7 shows, in every developed wireless market a majority (50% or more) of subscribers receive service from one of two carriers. In fact, the average percentage of subscribers shared by the top two carriers in developed wireless markets is 73.7%, indicating the global norm is a wireless industry with two dominant providers. Canada’s two leading carriers combine to hold 66.4% of all national wireless subscribers. Further, Canada’s 8.3% gap between subscriber shares of the leading and third-largest wireless carriers is the second-lowest of all developed markets, eliminating the possibility of the duopoly structure that is somewhat common in other international markets.

**Figure 7: Combined subscriber share (%) of two leading carriers per market**

Canada’s individual regions generally have market structures more similar to the international norms. As the black columns illustrate above, Canada’s regional markets have average to high combined market subscriber shares between the two leading carriers. Due to the impact of

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other regional communications services and consumer preferences for bundling, market structures are naturally somewhat less competitive on a regional basis. However, even the leading two carriers in Canada’s least competitive regions – Saskatchewan and Manitoba, and Atlantic Canada – have lower combined market shares than some entire countries.

Canada’s natural market structure of three strong competitors is further confirmed by the fact that most global wireless markets struggle to support more than four significant national competitors profitably. Based on international trends, it is highly unlikely Canada’s market will be able to support the five to six competitors per province that will be operational in 2012. Recognizing this fact, many of Canada’s 2008 entrants have already openly speculated about likely consolidation of spectrum assets and subscribers. Such consolidation would bring Canada’s wireless market structure even more in line with international norms.

Conclusion: Although Canadian cell phone usage patterns and the potential economic return from Canada’s wireless network differ greatly with most international jurisdictions, Canada’s wireless fees and market structure are comparable to other developed wireless sectors around the world.

Communications services incumbents and 2008 new entrants

Six companies entered – or are poised to enter – Canada’s wireless sector using spectrum acquired during the 2008 AWS auction – Videotron, Wind Mobile, Mobilicity, Public Mobile, EastLink and Shaw. Two additional companies that have each been offering wireless service for more than two decades – SaskTel and MTS – also acquired ‘set-aside’ AWS spectrum in 2008. Each of these eight companies possess varying degrees of advantage or motivations to compete openly in Canada’s wireless sector.

The majority of Canada’s more than $48 billion communications services revenue is captured by nine incumbent integrated communications companies. With the exception of TELUS, Rogers and Bell’s national wireless services, the leading communications companies largely provide services in specific regions, or contestable markets. These leading integrated communications incumbents enjoy relatively similar success in capturing revenue share within their contestable markets (Figure 8).

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11 EastLink data on contestable market share not relevantly calculable due to the nature of its presence in markets across the country.
In fact, outside of the unmatched success of two regional incumbents SaskTel and MTS — and Cogeco’s relatively smaller market share — the market shares of Canada’s leading communications services providers are comparable. In fact, there is only 14% separating the revenue shares of Videotron (35.7%) and Bell (49.7%).

Percentage subscriber share levels among the leading integrated communications incumbents are also similar, even when compared on a full national basis. Figure 9 illustrates share of national communications users by company, accounting for the reach of each type of service – assuming a reach of 2.5 users per TV, Internet and wireline phone account, and one user per wireless account.13

12 Source: Annual Reports; CRTC CMR, 2010; Nordicity Research.
13 Subscriber figures for EastLink are not available.
Due to its position as the largest subscription TV provider in Canada, Shaw reaches 14.5% of national communications services users, the third most of any communications services provider in Canada (Figure 9). Provincially-based Videotron also has a significant reach, serving 9.3% of the national market, only 5% less than national player TELUS. In fact, the gap between the subscriber shares of TELUS and Bell (9.5%) is almost twice as large as the gap between the shares held by Videotron and TELUS (5%), further demonstrating the overall reach and scope of the integrated communications services companies, particularly those that originated as cable TV providers.

Among the cable-based integrated communications services incumbents:

- Shaw is the largest cable and overall subscription TV provider in Canada, holds nearly 10% of all communications services and broadcasting industry revenue, serves 14.5% of all Canadian communications services subscribers (third most of any company) and has free cash flow in excess of $500 million;
- Videotron holds nearly 5% of all communications services and broadcasting industry revenue, serves nearly 10% of all communications services subscribers (fifth most of any company) and has free cash flow of roughly $467 million; and
- EastLink is the fifth largest cable company in Canada and the only company to offer cable services in all 10 provinces. By acquiring more than 15 other communications services providers across the country over the past few decades, EastLink has proven it has the resources to openly enter any Canadian communications services market.

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14 Based on the availability of four communications services per Canadian resident. TV, Internet and Wireline subscriber figures multiplied by 2.5 to reflect total reach.
Canada’s regional wireless incumbents – SaskTel and MTS – posses similar size and scope to the cable-based incumbents, particularly within their own region. As mentioned earlier in this section, Saskatchewan and Manitoba are two of the three least competitive wireless markets in Canada. SaskTel and MTS have been able to successfully leverage their more than 100-year serving histories to build provincial wireless subscriber shares of 76% and 55%, respectively, over the past 20 years. Advantaged by the 2008 AWS auction framework as ‘new entrants,’ neither carrier increased competitiveness in the national market by acquiring spectrum outside of its incumbent territory. Rather the companies invested a combined $105 million to secure additional spectrum covering their respective provinces.

Finally, three companies effectively entered Canada’s facilities-based communications market through spectrum acquired in the 2008 AWS auction – Wind Mobile, Mobility and Public Mobile. Since launching within the past two years, these three new entrants have captured nearly 400,000 wireless subscribers. Combined, the new entrants offer services in the major metropolitan areas in BC, Alberta, Ontario and Quebec, taking advantage of the country’s highest population densities to acquire early subscribers. In terms of future growth, the three new entrants hold spectrum covering all of Canada’s major cities.

Each of the three 2008 new entrants appears well-backed financially, receiving some level of financing from at least one foreign firm, including multiple private equity funds indicated in the Figure 10. Specifically, Public Mobile and Mobilicity are backed by private equity firms that follow mandates based on clear return and exit strategies, including entering markets with favourable conditions for investment and exiting via sale, merger or IPO.

Globalive’s Wind Mobile is part owned by Orascom of Egypt, which holds roughly 99% of Wind’s debt, 65.4% of the outstanding equity of Globalive and has 33.2% of the voting rights. Orascom is an international wireless giant, with operations in the Middle East, Africa and Asia, and 103 million subscribers worldwide. Confident in its deep pockets, Wind has led the speculation about consolidation among the new entrants. In August 2010, Orascom chairman Naguib Sawiris noted: “They [the other new entrants] will be dead on arrival. Wind should be the consolidator of all the smaller players here,” further demonstrating the financial ability of the new entrants to openly compete in Canada’s communication services industry.

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15 Wind Mobile is not technically a new entrant in Canada’s communications services industry as its owner, Globalive, is a competitive telecommunications carrier and long-distance provider. However, the scope of Globalive’s existing services and the nature of Wind’s ownership structure are more comparable to those of the other new entrants than the integrated cable-based incumbents or the regional wireless incumbents.

**Figure 10: Investors in 2008 pure-play new entrant wireless providers**

<table>
<thead>
<tr>
<th>New Entrant</th>
<th>Investor</th>
<th>Location(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind Mobile</td>
<td>Orascom Telecom Holding</td>
<td>Egypt</td>
</tr>
<tr>
<td></td>
<td>Charles River Ventures</td>
<td>United States</td>
</tr>
<tr>
<td></td>
<td>Columbia Capital</td>
<td>United States</td>
</tr>
<tr>
<td></td>
<td>M/C Venture Partners</td>
<td>United States; United Kingdom</td>
</tr>
<tr>
<td></td>
<td>OMERS Private Equity</td>
<td>Canada</td>
</tr>
<tr>
<td></td>
<td>Rho Ventures</td>
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<tr>
<td></td>
<td>Ignition Partners</td>
<td>United States</td>
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<tr>
<td></td>
<td>Kensington Capital Partners</td>
<td>Canada</td>
</tr>
<tr>
<td>Mobilicity</td>
<td>Quadrangle Group LLC</td>
<td>United States; Hong Kong</td>
</tr>
</tbody>
</table>

**Conclusion:** The companies permitted to bid on set-aside spectrum in the 2008 AWS auction all possess the resources – financial and/or bundling ability and market dominance – to compete openly in Canada’s communications services industry.

**Conclusions**

There is significant and increasing competition in Canada’s wireless services sector – overall, relative to other Canadian communications sectors and relative to other international markets. As well, there are multiple incumbent competitors in Canada’s communications services market with the financial resources and inherent operational advantages – through existing cable-based communications services offerings or near-monopoly regional wireless shares – to compete openly in Canada’s wireless sector. New entrant providers backed by private equity firms possess ample spectrum to handle reasonable subscriber growth as well as the financial resources to grow through acquisitions. The high likelihood of consolidation among the new entrant makes the prospect of multiple private equity firms being among the major beneficiaries very realistic – ultimately adding very little to competition in Canada’s communications services industry.

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17 Source: Company websites; news reports.
1. Introduction

1.1 Background: Canada’s wireless sector and spectrum auctions

Competition in Canada’s wireless services sector is subject to more scrutiny than that in any other segment of Canada’s communications services industry. Reports on international wireless services pricing, like those released annually by the OECD, are often critical of Canada’s wireless industry and provide annual ammunition for consumer groups and other agencies seeking to influence industry regulators.

International price comparisons of wireless consumer prices, however, are tenuous. The methodologies used in these studies to arrive at ‘average’ price levels don’t account for the difference in usage profiles from one country to another. Relatively speaking, Canadian consumers tend to have very high minutes per month usage levels, and therefore appear to pay higher than average prices in these comparisons. International comparisons additionally do not account for the geographic challenges in a country like Canada. The fact is, a network the size of Canada’s national wireless infrastructure deployed in the contiguous United States would reach more than twice the potential number of wireless services users based on average population density: nearly 73 million versus 34 million covered in Canada. In light of these circumstances Industry Canada itself has noted that in the communications services industry, “international comparisons should be treated with caution.”

In 2007, in response to the need for new spectrum to meet burgeoning demand for broadband services, Industry Canada announced the timing and framework in its 2008 Advanced Wireless Services (AWS) spectrum auction to help stimulate new entry into the wireless market. Specifically:

“A set-aside was used in the 2008 AWS auction where only new entrants, defined as participants holding less than 10% of the national wireless market, were permitted to bid on three (3) of the available eight (8) blocks of spectrum.”

Industry Canada provided the following rationale for implementing the framework:

“In reaching a decision on the auction policy framework, consideration was given to the comments received, the spectrum involved in the auction, the current state of the Canadian wireless market and the broader telecommunications market in which

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18 The United States excluding Alaska, Hawaii and all offshore US territories.
wireless is an increasingly important segment. The Department considered levels of competition and industry structure, barriers to entry, and the applicable legislation including the *Radiocommunication Act*, the *Telecommunications Act* and the *Competition Act* as they apply to the largely deregulated wireless market.”

However, prior to 2007, the Competition Bureau had examined the level of competition in Canada’s wireless sector and, like the CRTC, determined that levels of competition were adequate. Specifically, when reviewing the acquisition of Microcell by Rogers in 2005, the Competition Bureau noted:

“there would continue to be vigorous and effective competition remaining following the merger....This finding is consistent with several decisions involving forbearance from regulation in the mobile wireless market in Canada by the CRTC where it determined that these markets are competitive. For example, in Telecom Decision CRTC 98-4, it found that:

"the wireless services market has grown considerably during the past ten years, that it is dynamic and competitive (and becoming more competitive as new competing services such as PCS and ESMR are being rolled out), that there is significant rivalry among competitors as demonstrated by the media advertising blitzes and price rivalry, and that consumers are aware of alternate wireless service providers.”

“The Bureau found that the competitive history of Bell, TELUS and Rogers in the mobile telecommunications market also supported this conclusion.”

Since that review, wireless competition in Canada has increased. Canada’s three largest wireless carriers continue to aggressively battle for new subscribers, on both a national and regional basis. The dominant regional wireless carriers, MTS and SaskTel, have increased their subscriber levels by roughly 50% each since 2005. Four new wireless service providers have launched using spectrum acquired in the 2008 AWS auction (Wind Mobile, Videotron, Mobilicity and Public Mobile) and two more new entrants (Shaw and EastLink) are expected to launch wireless service within their cable footprints soon.

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23 Source: *CWTA, Industry Facts and Figures*.
With another spectrum auction on the horizon, Industry Canada is again examining: the current and anticipated state of competition in the national wireless industry; and whether specific measures are needed in the upcoming auction to increase competition.

As Industry Canada again reviews the necessity of measures to benefit a subset of wireless providers through an auction, it must consider two variables:

1. The level of competition within Canada’s communications services industry and the place of the wireless sector within that industry; and
2. The current state (size, scope and holdings) of those communications services providers that could benefit from any such measures.

1.2 Methodology

Wireless communications services represent one segment of Canada’s broader communications market, which includes landline telephony, Internet and subscription television.

There are compelling reasons for considering the wider communications market in licensing and regulatory oversight:

- Every major, facilities-based communications services provider in Canada offers three or more of the four main communications services.
- The distribution technologies used and the services offered by each provider have a major impact on that provider’s ability to compete across multiple segments – particularly their ability to maintain, attract and bundle subscribers.

As such, any review of the level of competition in Canada’s wireless sector must account for the sector’s place within the broader communications services market and compare levels of wireless competition relative to those in the other services’ sectors.

Naturally, in its [February 28th] call for comments Industry Canada itself recognizes the linkages that exist among the various communications services sectors and thus seeks:

“comments on the current state of competition and its anticipated evolution, including the impact on consumers in the Canadian wireless services market:

- in general;
- in terms of its contributions and interaction to the broader Canadian
telecommunications service market;

• in comparison with the wireless markets of other jurisdictions."

“In light of the current conditions in the Canadian wireless service market(s), is there a need for specific measures in the 700 MHz and/or 2500 MHz auction to increase or sustain competition?” And:

“If the Department determines that there is a need for measures to promote competition ... [and] If the Department were to implement a set-aside in the 700 MHz auction:

• Who should be entitled to bid in the set-aside block(s)?”

This study analyzes competition within Canada’s wireless sector in the context of Industry Canada’s above consultation questions. Nordicity first determined the level of competition in Canada’s wireless sector by examining the sector in the following three ways:

1. Wireless competition relative to the rest of Canada’s communications services sectors, analyzed along multiple indices, including:
   a. The availability of competing facilities-based services;
   b. Sector revenue and growth;
   c. Service fees and growth; and
   d. Communications services market share by distribution technology.

2. Competition in Canada’s wireless sector, examined based on:
   a. Market structure;
   b. Competition for new subscribers; and
   c. Regional competition.

3. Competition in Canada’s wireless industry relative to that in other international jurisdictions, accounting for variances in international usage trends and based on:
   a. Average revenue per user, per minute;
   b. Average revenue per square kilometer of network coverage;
   c. Subscriber fees; and
   d. Market structures.

Finally, to provide information on which specific corporations should be entitled to take advantage of specific measures designed to increase or sustain competition, if Industry Canada implemented such measures in the 700 MHz auction, Nordicity examined the size, scope and
ability to compete on an level playing field of the 2008 ‘new entrants.’ These competitors were grouped into the following three natural categories:

1. Integrated cable-based communications services incumbents, including:
   a. Shaw Communications;
   b. Videotron; and
   c. EastLink.
2. Regional wireless incumbents, including:
   a. SaskTel; and
   b. MTS.
3. 2008 Pure-play new entrants, including:
   a. Wind Mobile;  
   b. Mobilicity; and
   c. Public Mobile.

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24 New entrants based on the definition used by Industry Canada for the 2008 AWS auction: “participants holding less than 10% of the national wireless market” [by revenue].

25 Wind Mobile is not technically a new entrant in Canada’s communications services industry as its owner, Globalive, is a competitive telecommunications carrier and long-distance provider. However, the scope of Globalive’s existing services and the nature of Wind’s ownership structure are more comparable to those of the other new entrants than the integrated cable-based incumbents or the regional wireless incumbents.
2. Competition in Canada’s Communications Services Industry

This section demonstrates that: Canada’s wireless sector is as competitive, if not more competitive than all other Canadian communications services sectors, particularly so relative to the subscription TV sector. Wireless competition relative to the rest of Canada’s communications services sectors is therefore analyzed along multiple indices, including:

- The availability of competing facilities-based services;
- Sector revenue and growth;
- Service fees and growth; and
- Communications services market share by distribution technology.

When measuring competition levels in the communications services industry it is most accurate and relevant to focus on the competition between actual facilities-based providers given the differences in cost structures between facilities-based and non facilities-based service providers. As such, this section’s review of competition indicators across all of Canada’s communications services sectors (subscription TV, landline telephony, Internet and wireless) focuses on those Canadian operators that provide services using their own facilities.

2.1 Availability of competing facilities-based services

One of the most apparent and straightforward indicators of competition per communications services sector is the actual availability of multiple facilities-based provider services for each communications service for any given customer.

Figure 11: Communication services options per average customer, per province

<table>
<thead>
<tr>
<th></th>
<th>Wireless</th>
<th>TV</th>
<th>Home Phone</th>
<th>Internet Fixed</th>
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26 Source: CRTC CMR 2010; Annual Reports; Company websites; Nordicity Research.
Figure 11 illustrates service availability per average consumer per province (i.e. how many subscription TV, wireless, Internet and landline phone options does any given subscriber have). The numbers in the table above reflect the presence of competing services in the same market from the same company (i.e. cable and satellite TV and fixed an wireless Internet), and do not double count the same service provider. For example, where a customer can receive both Shaw cable and satellite, only one service is counted. Similarly, where customers can receive both TELUS fixed and wireless Internet service, only one service is counted. This methodology therefore better reflects the presence of unique service providers.

Based on this breakdown, it is clear that wireless is the most competitive of any of Canada’s communications services sectors. Virtually every Canadian has at least three options for wireless voice services. This number climbs to as high as six options for residents of the Greater Toronto Area, five in Vancouver, Edmonton, Ottawa and Montreal. The average resident in six of the ten provinces has access four wireless services options. In fact, when accounting for total population covered by the current wireless networks, the average Canadian has access to four different wireless voice options.

Ranking immediately behind wireless is Internet service. Again, due to the expansion of 3G networks across Canada, the average Canadian has more than three choices of Internet service. Generally, a customer can choose between their local landline telephony provider, cable company and one or more wireless Internet providers. As well, because Internet resale is also regulated, customers additionally have the choice of myriad Internet resellers, which is not reflected in the table above.

Like Internet service, landline home phone service resale is regulated, leading to additional telephony options over and above facilities-based providers. Generally, most households are served by two home phone providers: the local telephone company; and the local cable provider. However, landline home phone service is increasingly being replaced by wireless service, which is not reflected above. It’s estimated that close to 10% of Canadian homes use only wireless for voice and long distance service. Close to 25% of US homes are wireless only, providing a glimpse of likely future trends in Canada.

Unlike for the telecommunications services, there are limited substitutes for subscription TV service. In some cases, a household has the option of one cable and two satellite TV options. However, those options decline where a household’s cable provider is also a satellite provider, as is the case for Shaw cable customers. Historical pricing trends demonstrate that satellite TV providers do not price their satellite offering such that it competes with their own cable service. As well, although both Canadian satellite TV services are available nation-wide, subscription
figures indicate customers are much less likely to subscribe to satellite TV from a provider that has no other services in their region. For instance, 70% of Shaw’s satellite customers are in British Columbia and Alberta, and 84% of Bell’s satellite customer are east of Alberta.\textsuperscript{27}

Beyond the availability of satellite TV, most Canadians currently have the choice of only one cable TV service due to the limited overlap of wired TV service (cable and IPTV) networks.

It is clear from the table above that when it comes to competition in terms of services availability, not all communications services are created equal. The wireless services sector has by far the greatest competition on a per-consumer basis, and carriers’ ability to price services is largely impacted by this fact. The mixed competition in the subscription TV sector has had a far more limited impact on the ability of broadcast distributors to raise prices.

2.2 Revenue and growth

Sector revenue and the ability to grow industry revenue provide indications of competition in the various communications industry market sectors and a basis for comparison amongst those sectors. However, because the four major communications services industries are at varying levels of maturity (i.e. the wireless sector continues to add subscribers at a much higher rate than the other sectors), revenue and the ability to grow revenue is best compared on a per user basis.

In terms of total monthly average revenue per user (ARPU), wireless voice services currently generate less revenue per user ($40.35) than all other Canadian communications services with the exception of Internet access ($36.06).

\textsuperscript{27} Source: TELUS Market Intelligence.
It should be noted that the wireless voice figures presented below also include all revenue from calling features, such as call waiting, call display and voicemail. In spite of the increase in available features, wireless voice ARPU continues to decline. Blended wireless ARPU (voice and data) on the other hand, increased from $53.36 to $58.31 between 2005 and 2009. What the illustration above does not show, however, (and will be shown later in this section) is that blended wireless ARPU peaked in 2008, decreased in 2009 and continued to decline through three quarters of 2010.

At the other end of the spectrum from wireless voice service is subscription TV service, which generated ARPU of $56.14. What’s additionally noticeable about TV ARPU is that it increased nearly $12 between 2005 and 2009, while voice ARPU declined by almost $3 and total wireless ARPU increased by less than $5.

As illustrated in the figure above, and detailed in Figure 12 presented below, some communications services industries generate greater ARPU and are able to increase that ARPU at a greater rate than others. Clearly, subscription TV services are able to consistently increase prices to generate greater ARPU at a much greater rate than any other service. This ability to increase prices speaks directly to the lack of competition within this sectors. Conversely, as the figure below illustrates, wireless ARPU has declined for the past two years. Television service ARPU, meanwhile, has increased almost linearly over the period.
The figure below additionally compares annual ARPU growth against annual increases in the consumer price index (CPI), represented by the orange line. While ARPU in the wireless sector was able to increase at a greater rate than that of the CPI in 2006 and 2007, it has fallen off substantially in the past two years. Subscription television ARPU, on the other hand, outpaced CPI growth substantially every year for the last four years.

The ARPU associated with the most mature of all communications services industries, residential landline voice, has declined every year since 2006 – although that decline, on a percentage basis, has slowed in recent years. Internet service ARPU remains an anomaly in that it has grown at a greater rate than the CPI only every second year.

**Figure 12: Annual ARPU growth versus CPI growth, 2006-2009**

![Graph showing annual ARPU growth versus CPI growth](image)

While Figure 12 shows the increasing gap in year-over-year ARPU growth between wireless services and subscription TV services, Figure 13 illustrates that total percentage growth over a nine-year period (2000-2009), focusing solely on the wireless and subscription television sectors. Again, the total growth in TV ARPU (50.59%) is by far the most significant of all communications services. Indeed, although rates in the broadcasting distribution industry were deregulated in large part due to the introduction of competition from satellite TV, the extreme ARPU growth in the subscription TV sector points to a complete lack of competition between the two services. In the figure below, the blue line, representing subscription TV ARPU growth, shows a roughly 10% decline between 2002 and 2003. As the line continues, it illustrates how TV ARPU recovered from that decline by 2005 and has increased by more than 30% since then.

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28 Source: CRTC, *Communications Monitoring Report* 2010; Statistics Canada; Nordicity Research.
This only ARPU drop effectively illustrates the total impact of satellite TV on BDU service pricing; an impact that essentially lasted for two years.

Wireless voice ARPU, on the other hand, which grew slowly between 2000 and 2007 (less than 3% per year), and has since dropped below 2005 levels by nearly 10% and almost returned all the way to where it was in 2000. Blended wireless ARPU is following a similar path to that of voice ARPU, only a year or two behind. Blended ARPU peaked in 2008, and is now starting to decline. Over the full 9-year period tracked below, wireless voice ARPU increased by an average of 0.65% per year, and blended ARPU increased by an average of 1.62% per year. These slight annual increases are contrasted by the 5.6% average annual increase experienced by the subscription TV sector.

Figure 13: Accrued ARPU growth versus accrued CPI growth, 2000-2009

Finally, as the red line representing the consumer price index indicates, over the nine-year period both wireless voice and blended wireless ARPU grew by rates below average consumer prices. Subscription TV ARPU, on the other hand, outpaced CPI growth by more than 34% over nine years.

2.3 Service fees

The variety of service packages offered to customers for the various communications services makes straight price comparisons difficult. However, ARPU is directly related to fees and can

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29 Source: CRTC Monitoring Reports; Statistics Canada; Nordicity Research.
again be used to provide an indication of a sector’s (or service provider’s) ability to increase prices.

A nine-year look at Canadian wireless voice and blended wireless ARPU has already been presented in this section. However, it is useful to examine ARPU trends on a quarterly basis as well. Quarterly figures more accurately reflect the ongoing fluctuation in wireless carriers’ subscriber additions and revenue growth. Quarterly figures also provide a more accurate indication of when a service sector has matured enough that future ARPU growth is unlikely.

The trend lines in Figure 14 below illustrate accrued percentage quarterly growth in TELUS\(^{30}\) wireless voice and blended wireless ARPU beginning in the first quarter of 2005 and ending in the third quarter of 2010. From this figure we can see that TELUS’ wireless voice ARPU first returned to Q1 2005 levels in Q1 2006. However, after some quarterly fluctuations, voice ARPU started its permanent decline in Q3 2007.

*Figure 14: TELUS wireless voice and blended wireless [voice and data] accrued quarterly growth (%), Q1 2005-Q4 2010\(^{31}\)*

Blended wireless [voice and data] ARPU has followed a similar growth pattern to that of voice, only lagging by few years. TELUS’ blended ARPU growth remained relatively static between 2006 and 2008, first dropping back to 2005 levels in Q1 2009. Blended ARPU experienced negative quarterly growth in 2009 and early 2010, returning to positive growth briefly in Q3 2010.

\(^{30}\) Bell does not report wireless voice revenue separately so a full industry trend line could not be developed. Therefore only TELUS data was used to illustrate this trend.

\(^{31}\) Source: TELUS data.
2010. Based on the wireless voice trend line, it should be expected that blended ARPU will begin a permanent decline within the next 12 months.

The increase in consumer preferences for the anytime information and entertainment services available using smart phones such as the iPhone and BlackBerry has greatly impacted data usage. Similarly, the availability of wireless Internet service using data ‘dongles’ has also increased overall data consumption. However, even wireless data revenue is increasing significantly due to the overall increase in data use, the increase in data ARPU no longer consistently offsets the continuing declines in voice ARPU, as illustrated below. Due to the competition in the sector, carriers will have to continue to reduce voice and data prices, resulting in static, or declining wireless services ARPU.

In terms of real prices, wireless services rates, particularly for basic services such as talk and text, continue to drop rapidly. All three national service providers have discount brands (two in the case of Rogers and Bell) that offer unlimited talk and text plans, ranging from $25-$40. Most discount brands have dropped the near-$10 System Access Fee, meaning the advertised prices are actually what customers pay.

In addition, some of Canada’s new entrant providers, particularly the pure-play wireless providers, are also offering unlimited talk and text plans in the $25-$40 range as a competitive tactic to establish an early market share. It remains to be seen how sustainable this level of pricing will be. International trends suggest not all new players would be able become profitable, particularly if they are offering substantial service discounts. However, the discounting by new entrants has already further advanced the already increasingly competitive unlimited wireless voice and text segment.

In sharp contrast to declining base wireless prices, subscription TV rates, including cable, have grown almost exponentially over the past decade. In addition to looking at cable ARPU growth (as presented earlier in this section), basic cable rate increases show the unmatched ability of cable companies to increase rates, even for the most basic service. For example, Figure 15 below shows an average of 2002 basic cable rates for Shaw and Videotron compared with an average of their current listed basic cable rates.

*Figure 15: Average basic cable rates, Shaw and Videotron, 2002 and 2010*

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<th>2002</th>
<th>2010</th>
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<tr>
<td>Basic Cable</td>
<td>$18.53</td>
<td>$32.85</td>
<td>77.28%</td>
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</table>

Clearly, cable companies enjoy an unparalleled ability to raise rates. For instance, Rogers raised

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32 Source: CRTC data; Company websites.
basic cable rates by 5.2% in March 2009, and by an additional 5% in July 2010. Due to the lack of competition in the sector, cable companies can continue to overtly raise rates with no loss of customers. In addition, total wired TV subscriber numbers increased by nearly 18% between 2005 and 2009.

Overall, annual cable ARPU grew on average by 5.38% between 2005 and 2009. Beyond merely demonstrating the presence of much less competition in the cable sector versus the wireless or other telecommunications sectors, this ability to increase prices by 5% or more over a one-year period is evidence of monopoly power. The hypothetical monopolist SSNIP (small but significant non-transitory increase in price) test typically cites a 5% increase in price over a one-year period. The cable sector, as well as the satellite TV sector (8.25% CAGR from 2005-2009), consistently raise prices above this level. This ability to raise prices at such a high rate not only confirms that there is little competition between cable and satellite, but also that there is virtually no competition within either sector.

As explained in Section 2.1, competition in the subscription TV sector is impacted by a number of factors, including the ownership of cable and satellite services by Shaw – and to a lesser extent Bell with its IPTV service. Shaw has no incentive to price its satellite service to compete with cable because it would largely be cannibalizing its own subscriber base. Therefore, it makes sense to charge higher prices for satellite service and focus on capturing subscribers in rural areas where there is no cable option, effectively limiting customer options. The result of this pricing philosophy is evidenced by the fact that roughly 66% of Shaw’s satellite customers are from rural areas. Overall, however, more than 50% of Canadian satellite subscribers are in rural markets, indicating that satellite service is generally not ubiquitously competitive across all markets. The lack of competition faced by Canadian cable companies has also led to higher than average cable penetration rates when compared to their US counterparts. As the Figure 16 illustrates, Canadian cable companies have four of the five highest penetration rates of homes passed in North America.

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35 Source: TELUS Market Intelligence.
In fact, the average penetration of homes passed for Canada’s five major cable companies is 62%, a full 15% greater than the average for the five leading US cable companies listed in the figure above.

The ability of providers in Canada’s subscription TV sector to significantly raise prices on a consistent basis also stands out when compared to all consumer goods. Figure 17 below ranks the percentage price increases of various consumer goods between 2004 and 2010.

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36 Source: Rogers Cable, At a Glance Highlights presentation, 2Q10.
In terms of annual increases, the subscription TV services category had the highest price increase of any category in 2009 and 2010, and the second highest price increase in 2007 and 2008. On the wireless side, blended wireless experienced the second-highest price increase in 2006 and the highest increase in 2009, but has had two consecutive years of price declines. Wireless voice similarly outpaced all other product categories in 2005, but also had the greatest price declines in 2008 and 2009.

### 2.4 Revenue share by distribution technology

Cable’s ability to consistently increase ARPU (and prices) at a rate higher than the consumer price index is a clear indication of the lack of competition in that sector. Indeed, broadcast distribution (both cable and satellite) is Canada’s only communications services sector that has been able to increase ARPU at a greater rate than the CPI for each of the last five years.

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37 Source: Statistics Canada; CRTC Monitoring Reports; TELUS data. 2010 wireless voice ARPU growth based on TELUS data only due to lack of segmented reporting by other carriers.
Competition in the wireless sector, on the other hand, has reached the point where providers can no longer increase ARPU at all, let alone more quickly than the CPI.

The lack of competition for cable, however, impacts more than just the subscription television sector. Since the introduction of Internet service in the late 1990’s and cable telephony service around 2005, Canadian communications services providers have been competing for shares of the total communications services market, not just individual segments. Of the two primary wired communications services platforms – cable and telecommunications service provider (TSP) infrastructures – coaxial cable plant has emerged as the more advantageous base infrastructure from a service perspective.

As of 2009, cable BDUs received 66.5% of their revenues from telecommunications services (Internet and landline phone). Conversely, ILEC’s (incumbent local exchange carriers) received only 5.8% of their revenues from broadcasting services. The emergence of cable as the preferred base wired infrastructure is further illustrated in Figure 18.

**Figure 18: Share of total Canadian communications services revenue (%), 2005-2009**

Essentially, the cable infrastructure has proven robust and flexible enough to carry both voice and Internet telecommunications services while the TSP (telecommunications service provider) infrastructure only had the flexibility to add Internet service in the short term, and has struggled to support a subscription TV offering. While this limited flexibility of the TSP infrastructure has resulted in competition and moderate price increases (or decreases) in telecommunications services, cable TV remains unbound by competition.

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39 Source: CRTC Monitoring Reports.
Clearly, wireless is now the leading telecommunications infrastructure in terms of revenue, due to a number of factors, including: portability; anytime availability; ability to replicate some voice and data services; and role as a personal service, not a household service. However, the emergence of wireless has not impacted the growth of cable. As illustrated in the graph above, cable as a distribution technology increased its share of the national communications services revenue by 5.3% between 2005 and 2007, compared to 5.15% for wireless and -11.2% for the telecommunications infrastructure.

In terms of total revenue, cable grew by more than 69% between 2005 and 2009, while wireless revenues increased by roughly 53% and TSP revenues declined by 5.19%. If the trend illustrated above were to continue – cable’s market share in all likelihood has already passed that of the telecommunications infrastructure – the communications services market would be primarily controlled by cable and wireless providers, or those providers that offer both services. Indeed, those companies that offer wired TV have an inherent advantage when it comes to capturing and maintaining wireless subscribers. In its 2010 outlook, MTS Allstream noted that it experiences 0.3% wireless churn from customers in a 4-service bundle. This churn rate is more than 80% lower than the industry average.

The difficulty to date of the existing TSP twisted copper pair network or wireless services to substitute in any way for subscription TV service provided a natural market safeguard for cable companies. Even though the large cable companies (particularly Videotron and Shaw) easily had the financial resources to enter the wireless market, they elected not to do so until the government provided significantly favourable conditions. Conversely, communications service providers that originated with a telecommunications services infrastructure are currently building new fibre networks to add a subscription TV offering, and bearing the full cost to do so.

2.5 Conclusions

Canada’s wireless sector is as competitive, if not more competitive than any other Canadian communications services sector. This fact is made evident by a number competitive indicators, including:

- The average Canadian has more choice in facilities-based wireless services than for any other communications service;

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40 The only offset to this trend is the very expensive rollout of FTTH by TSPs.
42 Source: CRTC, CMR, 2010
Wireless voice ARPU has not experienced a year-over-year percentage increase greater than that of the consumer price index since 2007, and voice ARPU has increasingly declined since 2008. In addition, wireless voice ARPU declined by 2.03% on an average annual basis between 2005 and 2009, well below the average CPI increase of 1.63%;

Blended wireless ARPU last experienced a year-over-year percentage increase greater than that of the consumer price index in 2008, meaning the growth in data ARPU is no longer covering the loss in voice ARPU;

Wireless voice ARPU experienced the greatest year-over-year percentage decline in 2009 of any communications service, followed next by blended wireless ARPU;

Wireless voice ARPU increased by an average of 0.65% per year from 2000 to 2009; and

Blended ARPU increased by an average of 1.62% per year from 2000 to 2009;

Competition in Canada’s wireless sector relative to other communications services sectors is most pronounced when compared to the lack of competition in the subscription TV sector. Virtually every competition indicator cited above for the wireless sector can be reversed to highlight the extreme lack of competition in the subscription TV sector. Namely, cable and satellite services ARPU have increased at a far greater rate than that of any other communications services sector;

Conversely to wireless ARPU, TV growth has greatly outpaced that of the CPI, increasing in a way that suggests a de facto monopoly. As mentioned earlier in this section, the hypothetical monopolist SSNIP (small but significant non-transitory increase in price) test typically cites a 5% increase in price over a one-year period. The cable and satellite TV sectors both pass this monopoly test, posting ARPU growth above 5% per year over the past nine years and consistently implementing single price increase above 5%.

Cable continues to increase its share of national landline communications services revenue, and in all likelihood has now passed the traditional telecommunications services network as the leading landline platform. This growth continues in spite of the fact that three of the four largest cable companies in the country (Shaw, Videotron and Cogeco) had no wireless offering in their bundle until recent months. Conversely, the operators of the four largest telecommunications infrastructures in the country (TELUS, Bell, MTS and SaskTel) have offered wireless services for more than two decades, yet continue to lose overall landline market share to cable, demonstrating cable TV unmatched strength as the anchor of a service bundle.
3. Competition in Canada’s Wireless Sector

This section demonstrates: the significant national and regional competition in Canada’s wireless sector, as well as the considerable differences in spectrum need amongst existing wireless carriers. Competition in Canada’s wireless sector is analyzed on the basis of:

- Market structure;
- Competition for new subscribers; and
- Regional competition.

Prior to 2009, there were essentially five competitors in Canada’s wireless sector: Rogers; Bell; TELUS; SaskTel; and MTS. Over the past two years, four more carriers have entered the wireless market, realizing major subscriber gains in the most recent fiscal quarters. However, the impact of the new entrants on the wireless market is limited to the relatively small window of the past year. Therefore, this section examines competition in Canada’s wireless sector first in terms of the five competitors that were in the market before the 2008 auction, and subsequently with regards to competition from the new entrant players.

As noted in Section 2, this report focuses solely on facilities-based competitors. Therefore, this section does not additionally examine the numerous mobile virtual network operator brand choices enabled by the presence of Canada’s facilities-based wireless providers.

3.1 Market structure

Presently, there are nine facilities-based wireless services providers in Canada. Two more providers (Shaw and EastLink) are expected to enter the market in 2011. Prior to 2009, however, there were five competitors in Canada’s wireless market, with three offering national service and SaskTel and MTS limited primarily to their incumbent telephone territories of Saskatchewan and Manitoba.

Over the past five years, the number of Canadian wireless subscribers has increased by more than seven million, and competition for those subscribers has been fierce. The majority of new subscribers, particularly prior to 2010, were generally captured by the five wireless providers that have offered service for more than a decade. As Figure 19 illustrates, while all competitors added substantially to their respective subscriber bases, they enjoyed varying levels of success on a percentage increase basis. Of the five competitors, SaskTel enjoyed the largest percentage growth in its subscriber base, followed by TELUS and MTS. Rogers gained the most subscribers overall of any wireless carrier, but only outpaced Bell in terms of a percentage increase.
While SaskTel and MTS are by far the most dominant wireless carriers in Canada in terms of subscriber penetration relative to the size of their networks, they capture only roughly 5% of the overall national market. National competition is primarily shared relatively evenly between Rogers, Bell and TELUS. However, this was not always the case. The trend lines in Figure 20 display how the structure of Canada’s wireless market in terms of subscriber shares has changed drastically over the past decade.

Source: Annual Reports. SaskTel 2010 figure is estimated.
As recently as 2000 there was a substantial gap (nearly 15%) in the subscriber share between Canada’s largest wireless provider Rogers (including Microcell subscriber from 2000-2003), and the third-largest provider, TELUS. In addition, the two largest providers held a dominant 75.2% of the market. Since that time, TELUS has emerged as a stronger national player to greatly increase the overall competitiveness of the Canadian market, narrowing the gap between its subscriber share and Bell’s to just 1.2% and between its subscriber share and Rogers’ to 8.9%.

The national wireless landscape when TELUS built its national network was vastly different than today’s. There were no towers to share, no backhaul to lease and no networks to roam on. TELUS, along with the other historical competitors, invested $25 billion in building the national wireless. While TELUS and the other telecommunications incumbents Bell, MTS and SaskTel were granted spectrum within their incumbent serving territory in 1985 and 1995, there was no option at that time to compete openly for spectrum in an auction. Instead of spectrum fees, the wireless incumbents have paid annual licence fees of approximately $145 million annually for that spectrum. Finally, to expand its wireless offering outside of Alberta and BC, TELUS had to buy its way into the national market by investing more than $6 billion to acquire Clearnet Communications Inc. in 2000, adding a third national player to Canada’s wireless market.

As discussed Section 3.3, TELUS has essentially been a new entrant itself in all markets outside of Alberta and BC since becoming a national wireless provider. The company has had to gain subscriber share in markets where it offers no other services, at all times competing on a level regulatory playing field with its main competitors.

\[\text{As recently as 2000 there was a substantial gap (nearly 15%) in the subscriber share between Canada’s largest wireless provider Rogers (including Microcell subscriber from 2000-2003), and the third-largest provider, TELUS. In addition, the two largest providers held a dominant 75.2% of the market. Since that time, TELUS has emerged as a stronger national player to greatly increase the overall competitiveness of the Canadian market, narrowing the gap between its subscriber share and Bell’s to just 1.2% and between its subscriber share and Rogers’ to 8.9%).}\]

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That level of competition between Canada’s three largest providers is further evidenced by their respective ability to capture new subscribers over the past three years. From the period 2007 Q1 to Q3 2010, the number of Canadians subscribing to mobile wireless services grew by almost 30% (from 18.5 million subscribers to 24 million), with Bell, Rogers and TELUS capturing 85% of the subscriber growth.

With each carrier competing fiercely to grow their national market share, the percentage of the subscriber growth captured by the three largest carriers did not mirror their individual total subscriber share numbers. In fact, TELUS led by capturing 33.2% of the subscriber growth, followed by Rogers at 29.4% and Bell at 22.4%.

The level of competition in Canada’s national wireless market is also evident in the trends in wireless pricing. As detailed in the previous section of this report, wireless voice and blended wireless ARPU are declining. As further evidence, Figure 21 provides the voice ARPU and blended ARPU for Canada’s three largest wireless providers over the first three to four quarters of 2010. Relative to the ARPU figures from the first three quarters of the previous year, only Bell reports growth, and even then only 0.1%.

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<th>Q4</th>
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**Figure 21: Wireless voice and blended ARPU growth (%), quarter over quarter, 2009-2010**

3.2 **Competition for new subscribers**

New entrant wireless carriers currently hold an estimated 513,000 subscribers, or roughly 2% of the Canadian market. However, as most new entrants have been offering wireless services for less than two years (and in some cases less than one), measuring new entrant share of the total subscriber market at this point is not a relevant metric. Rather, the impact of new entrants on

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45 Only blended ARPU is provided for Bell as Bell does not report voice and data separately.
46 Source: Annual Reports.
47 Based on three quarter average; voice ARPU not available for Q4.
the competition in Canada’s wireless market is more appropriately measured in terms of its impact over the last year.

Figure 22 illustrates the estimated percentage of Q4 2010 net wireless subscriber additions captured by each Canadian facilities based carrier. The greatest number of new subscribers was captured by Bell, followed by Rogers, then TELUS. However, Wind Mobile captured 13.6% of all new subscribers, only 5.2% less than TELUS, and 8% less than the average of the three national carriers. The recently launched Mobilicity is expected to add 60,000 new subscribers in the final quarter of 2010, or 9.6% of all net adds. Mobilicity is followed by Videotron at 6.4%, and Public Mobile at 4.0% share of all new subscribers.

Figure 22: Share of national net subscriber additions (%), Q4 2010

In terms of full-year results for 2010, the dispersion of net subscriber additions is less even than on the quarterly basis, which is largely due to the fact that Mobilicity and Public Mobile were not offering service for all of 2010. The three national wireless providers captured 78.2% of the net subscriber additions, roughly 7% less than their three year average from 2007 to 2010. Furthermore, the percentage of net additions captured by the national wireless providers is projected to decline by roughly 15% in the coming years.

49 Source: RBC Capital Markets.
Competition and New Entry in Canada’s Communications Services Market

Figure 23: Share of national net subscriber additions (%), full year 2010\(^{50}\)

![Pie chart showing national net subscriber additions for various carriers in 2010.]

Figure 21 reflects the entry of four new Carriers into the Canadian wireless market, treating all wireless individually. As will be discussed later in this report, based on strong historical trends from wireless industries around the world, it is unlikely that the Canadian market will be able to support the roughly 4-5 per providers that will be in each provincial market once Shaw and EastLink launch services, over the long term. Indeed, already there are rumours throughout Canada’s telecommunications industry that there will be mergers and acquisitions among the pool of new entrant providers.

Figure 24: Share of national net subscriber additions (%), Q4 2010\(^{51}\)

![Pie chart showing national net subscriber additions for various carriers in Q4 2010.]

Because such consolidation can only occur between the new entrants,\(^{52}\) it is also appropriate to examine the division of new wireless subscriber additions over the past year in terms of the new

\(^{50}\) Source: Ibid.

\(^{51}\) Source: RBC Capital Markets.

\(^{52}\) Industry Canada’s framework for the 2008 AWS auction will not allow any of Rogers, Bell or TELUS to acquire the spectrum of one of the 2008 new entrants for five years (i.e. until the summer of 2013).
entrant grouping versus the incumbent carriers. Thus, as Figure 24 illustrates, the new entrant carriers combined to capture a leading 33.7% of the net subscriber additions in the fourth quarter of 2010. This percentage share was 10% greater than that of the next closest provider, Bell, at 23.7%.

For the full year 2010, combining the new entrant subscriber additions reveals an extremely even distribution of nearly one quarter of all net additions.

**Figure 25: Share of national net subscriber additions (%), full year 2010**

<table>
<thead>
<tr>
<th>Carrier</th>
<th>2008 Entrants</th>
<th>Telus</th>
<th>MTS/Sask</th>
<th>Rogers</th>
<th>Bell</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008 Entrants</td>
<td>29.6%</td>
<td>28.5%</td>
<td>6.4%</td>
<td>29.6%</td>
<td>24.4%</td>
</tr>
</tbody>
</table>

Forward-looking estimates predict that 2010 will be the last year that any of the national wireless carriers adds more subscribers than the new entrants combined as the new entrants combined will make significant traction in the market. Figure 26 below projects the percentage of industry subscribers by carrier (new entrants grouped) for 2012.

**Figure 26: National subscriber share (%), 2012 projected**

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53 Source: Ibid.
54 Projections not provided for SaskTel and MTS.
55 Source: Bank of America Merrill Lynch, *Canada’s wireless new entrants gain momentum*. 
By 2012, new entrant providers will have roughly 6.4% of Canada’s wireless market with roughly 1.8 million subscribers. Overall, for the period 2010 to 2012, it is estimated that the new entrant providers will capture rough 33% of net wireless subscriber additions, 9% more than the projected leading national carrier during that time (TELUS, 24%). Figure 27 provides estimated spectrum holdings on a percentage of national spectrum basis, weighted by population, for Canada’s wireless providers.

Figure 27: Summary of Holdings for Cellular, PCS, AWS and BRS spectrum (Weighted by Population)\textsuperscript{56}

The current spectrum holdings will not change before 2012, meaning projected wireless market share can be compared against the spectrum share to provide some indication of spectrum need for all carriers. The figure below makes this comparison by illustrating projected 2012 subscriber share, spectrum share, and the gap between subscriber and spectrum share.

\textsuperscript{56} Source: Industry Canada.
Figure 28 above clearly illustrates there is major variation among Canada’s wireless providers in terms of the difference between share of national subscribers and national spectrum. Based on 2012 projections, the 2008 new entrant providers will have the largest overhang of spectrum versus subscriber share at 6.6%. The new entrant excess is followed closely by that of Rogers at 5.5%. Bell, on the other hand, is projected to have 0.6% less national spectrum share than national subscriber share. Finally, TELUS will have the lowest spectrum to subscriber ratio of all carriers in 2012—a -13.5% difference in terms of national spectrum share to national subscriber share.

Another way to compare the carriers in Figure 28 is on a straight percentage-of-spectrum to percentage-of-subscribers ratio, where the industry average is the absolute 1:1 (100% to 100%). In 2012, the 2008 entrants will have a spectrum to customer ratio of more than 2:1. Conversely, TELUS’ ratio will be nearly the opposite at 1:2. Rogers will be at approximately 1.2:1, with Bell effectively at the industry average of 1:1.

What the analysis thus shows is that at the time of the 2012 auctions, the 2008 entrants could buy no spectrum and would still have to double their 2012 subscriber bases before they reached the industry average spectrum utilization level. Doubling their subscriber bases would take many, many years. Beyond that, the 2008 entrants would have to more than quadruple their projected 2012 subscriber levels to drop to the same spectrum-to-subscriber ratio as TELUS. Therefore, advantaging AWS entrants in 2012 auctions would have no impact on

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competitive intensity in the Canadian wireless industry. Conversely, restricting the ability of national challenger TELUS to rectify its spectrum deficit could have a serious negative impact on overall competition in the national wireless market.

3.3 Regional competition

In Canada and other countries wireless service has proven to be both a national and regional service offering for providers. For example, Canada has historically had three national wireless providers and two regional providers. As well, based on the spectrum acquired by the new entrant providers in the 2008 AWS auction, the new entrants bring a mix of strictly regional (Videotron, Shaw, EastLink and Public Mobile) and semi-national (Wind Mobile and Mobilicity) service. As such, any analysis of competition in Canada’s wireless sector must also consider competition on a regional level.

As noted in Section 2, virtually every Canadian has at least three wireless voice and data options. This number reaches as high as six (with a possibility for a seventh) in the Greater Toronto Area, and is four on a national average. As the new entrants that acquired AWS spectrum in 2008 continue to roll out, service options will continue to increase across the country.

Figure 29: Spectrum holders and wireless services providers per province

<table>
<thead>
<tr>
<th></th>
<th>BC</th>
<th>AB</th>
<th>SK</th>
<th>MN</th>
<th>ON</th>
<th>QC</th>
<th>NB</th>
<th>NS</th>
<th>PEI</th>
<th>NF</th>
<th>CAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spectrum</td>
<td>8</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td>11</td>
<td>5</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>5</td>
<td>14</td>
</tr>
<tr>
<td>Service</td>
<td>5</td>
<td>5</td>
<td>4</td>
<td>4</td>
<td>8</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>9</td>
</tr>
</tbody>
</table>

Figure 29 lists the number of commercial spectrum holders per province, which is an indication of potential regional service options. The table also lists the current number of providers offering wireless services in at least some part of each province. Each province has at least five commercial spectrum holders, climbing to as high as 11 in Ontario and a national average of 6.6 per province. Given international norms for number of wireless competitors (discussed below), Canada generally has a reasonable number of spectrum holders per province.

Historically, Canada’s wireless industry has been accused of being a series of regional duopolies, rather than an industry with three strong national competitors. This perception simply is not true. Canada’s wireless did originally sector lack substantial competition at the regional level, but this was to be expected. The country’s largest wireless providers were also regional communications services providers, who at the outset were able to capture larger subscriber numbers within their home territories. This is still true to some extent. TELUS, for instance still

enjoys its largest percentage subscriber shares in its home provinces of BC and Alberta, while Rogers’ largest percentage provincial subscriber share is in Ontario, where it also has most of its cable customers.

Nevertheless, the gap in subscriber share between the leading wireless provider and its competitors (particularly the third largest provider) that once existed at the regional level has narrowed substantially, even in just the past five years, illustrated below.

Figure 30: Gap between subscriber shares (%) of leading and third-largest wireless carriers, by region, 2004-2009

![Graph showing subscriber share gap between leading and third-largest wireless carriers by region from 2004 to 2009.]

This leveling of the competitive landscape is evident in Figure 30, which shows the percentage subscriber share gap between the leading and the third largest provider. Clearly, competition exists to varying degrees depending on the region. For instance, the gap between the leading carrier and the third largest carrier in BC and Alberta has decreased by nearly 20% over the past five years. In fact, as of 2009, Rogers had more subscribers in BC than TELUS.

Competition is even more robust in Quebec, where the leading and third largest providers are separated by only 13%. Ontario is the only region where the gap has increased in the recent five years (from 25% to 27%), due to an increase in subscriber share by the market leader, Rogers.

Three provinces – Saskatchewan, Manitoba, and Newfoundland – remain less competitive. This fact is due in part to the lower populations and population densities in those regions, which are less able to support multiple providers, and have lower service adoption levels. However, it is also evidence of the dominant power of the regional communications services providers, particularly in the case of Saskatchewan and Manitoba. For instance, in 2004 only two provinces

59 Source: CRTC Monitoring Reports.
– Ontario and Quebec – had a third wireless carrier with at least 15% of subscribers. By 2009, seven provinces had a third provider with at least 15% of subscribers. The only provinces where this wasn’t the case were Manitoba, Saskatchewan and Newfoundland. TELUS, for instance, has been able to increase its subscriber shares in Nova Scotia and Prince Edward Island to 20% and 18%, respectively, but still only holds 11% and 4% of subscribers in the Manitoba and Saskatchewan markets.

Allowing the most dominant wireless providers from the least competitive wireless markets in the country to take part in a spectrum set-aside seems to run counter to the goals of stimulating wireless competition, but such was the case in 2008 when MTS and SaskTel were both classified as new entrants for the purposes of the AWS auction framework.

However, it 2008 it seemed likely that MTS was interested in bidding on spectrum outside of its incumbent territory and challenging as another competitor possibly on a national scale. In the consultations for the 2008 auction, MTS lobbied for a specific new entrant framework. Wrote MTS:

“MTS Allstream submits that in any auction of AWS spectrum the public interest is best served by embracing the Minister’s stated public policy goals of promoting competition and with it innovation and customer choice...The first step in achieving these goals is for the Government to establish a set of auction rules that will facilitate market entry by new national and regional wireless operators.”

MTS provided other indication it would challenge for national spectrum. The company initially secured financial backing to develop a national wireless network and even submitted a deposit for the 2008 auction that suggested it would be bidding on spectrum at a national-coverage scale. In fact, MTS deposit for the 2008 auction secured the company the third most eligibility points of all bidders. However, MTS’s financial consortium dissolved before the auction began and MTS shed nearly 60% of its eligibility points following the first round of the auction, immediately forgoing any attempt at becoming a national wireless provider. By the end of the auction MTS only acquired 30 MHz of the 105 MHz available in the auction covering Manitoba.

MTS’s intentions to become a fourth national wireless provider through AWS spectrum acquired in the 2008 auction could be considered a logical reason for giving MTS access to set aside spectrum in that auction in spite of MTS’s dominant 55% subscriber share in Manitoba. Had MTS acquired spectrum outside of Manitoba, it could currently be increasing competition in other Canadian markets. However, in 2008 MTS only acquired spectrum that will help it sustain

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or increase its dominant position in Manitoba’s wireless market and did nothing to increase wireless competition.

TELUS, however, provides one of the best examples of a wireless entrant competing to become a national carrier. Since becoming a national wireless carrier, TELUS has essentially been a new entrant in eight of Canada’s 10 provinces. Over the past five years, TELUS has increased its subscriber share in these out-of-territory provinces by an average of seven percent, including highs of 11% in New Brunswick, Nova Scotia and Newfoundland. Figure 31 illustrates this five-year increase.

**Figure 31: TELUS’ subscriber share (%) in out of territory markets, 2004 and 2009**

Even without the addition of new entrant subscribers, Canada’s wireless industry has significant, and increasing, regional competition, particularly in BC, Alberta, Ontario and Quebec. The growth of subscriber shares in out-of-territory regions, such as those of Rogers in BC and TELUS in the Atlantic provinces provides clear evidence that as the wireless market matures, competition will continue to increase at the regional level. What’s more, TELUS achieved its subscriber growth in the provinces profiled above almost entirely without any low band – sub 1 GHz – spectrum, demonstrating that major subscriber additions are more than possible without low-band spectrum.

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61 Source: CRTC Monitoring Reports.
62 Outside of BC and Alberta, TELUS only has 850 MHz spectrum in Quebec, covering roughly 75% of Quebec’s population.
3.4 Conclusions

Canada’s wireless sector has significant national and regional competition, and there are considerable differences in spectrum need amongst the wireless carriers. A number of indices illustrate the high level of competition in the sector, including:

- Rather than equitably sharing the growth in the national wireless market, Canada’s five historical wireless providers have competed vigorously for new subscriber additions over the past five years, with corporate percentage subscriber growth ranging from 55% to 30% over that time;
- TELUS’ emergence as a third national carrier over the past decade has continually increased competition in the national wireless sector, decreasing the gap between the percentage of subscribers held by the leading and third largest provider from nearly 15% to 8.9%. As well, a snapshot of the percentage of net subscriber additions captured by the three national carriers over the past three years shows a very competitive market share disbursement of 33.2% for TELUS, 29.4% for Rogers and 22.4% for Bell;
- Individually, the 2008 wireless entrants providers were estimated to have each captured 13.6% (Wind), 9.6% (Mobilicity), 6.4% (Videotron) and 4% (Public Mobile) of net subscriber additions in the fourth quarter of 2010;
- Collectively, the new entrants captured 33.7% of the net additions in Q4 2010, and 23.2% of the net additions overall for the full year 2010;
- It is estimated that by 2012, new entrant providers will have roughly 6.4% of national wireless subscribers;
- With 13% of all national spectrum, new entrant providers will still have the largest spectrum/subscriber ratio in 2012. Conversely, with an estimated 28.5% of national subscribers and only 15% of national spectrum, TELUS will continue to have the worst spectrum/subscriber ratio through 2012;
- With an average of 6.6 spectrum holders per province, and a minimum of five per province, spectrum is currently shared between a significant number of providers on provincial level;
- On a regional basis, the gap in subscriber share between the leading wireless provider and its competitors (particularly the third largest provider) has narrowed substantially, even in just the past five years. For instance, the gap in BC and Alberta has decreased by nearly 20% over the past five years. Competition is even more robust in Quebec, where the leading and third largest providers are separated by only 13%.
- In 2004 only two provinces – Ontario and Quebec – had a third wireless carrier with at least 15% of subscribers. By 2009, seven provinces had a third provider with at least
15% of subscribers. The only provinces where this wasn’t the case are Manitoba, Saskatchewan and Newfoundland.

- Acting as a de facto new entrant in its out-of-territory markets (all provinces other than BC, Alberta and part of Quebec), TELUS increased its average provincial subscriber share from 10% to 17% between 2004 and 2009, without any sub-1 GHz spectrum in all provinces other than Quebec. Outside of Saskatchewan and Manitoba (the two most difficult provincial markets in which to increase subscriber share), TELUS increased its average provincial subscriber shares from 11% to 20% between 2004 and 2009.

4. Comparison of International Wireless Sectors

This section demonstrates that: **competition in Canada’s wireless industry compares favourably to that in other international jurisdictions.** The analysis accounts for variances in international usage trends, and compares Canada to other jurisdictions based on:

- Average revenue per user, per minute;
- Average revenue per square kilometre of network coverage;
- Subscriber fees; and
- Market structures.

Past reports on international wireless services pricing have largely been critical of Canada’s wireless industry. Perhaps chief among those reports is the OECD’s annual review of international telecommunications services prices. These international price comparisons, however, can be tenuous. The methodologies used in these studies and the results highlighted by consumers and the media rarely account for the difference in usage profiles from one country to another. For instance, Canadian consumers tend to have very high minutes-per-month usage levels, and therefore appear to pay higher than average prices in these comparisons. In fact, of the 21 developed wireless markets in the world, only the United States has a higher average minutes-per-month usage rate than Canada.

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63 As defined by Bank of America Merrill Lynch.
At 388 minutes per month, Canadians use cell phones on average more than 40% more than the users in the countries profiled below. Any accurate comparison of international wireless fees must consider this fact.

International comparisons additionally do not account for the geographic challenges in a country like Canada. The fact is, a network the size of Canada’s national wireless infrastructure deployed in the United States (based on average population density) would reach more than twice the number of potential wireless users: 67 million versus 34 million covered in Canada.

In light of the tenuousness of international comparisons, Industry Canada itself has noted that in the communications services industry, “international comparisons should be treated with caution.”

By applying appropriate analytical frameworks, however, relevant comparisons can be made between Canada’s wireless sector and those in other jurisdictions. Specifically, recognizing the variances in international usage trends as mentioned above when comparing international prices, and comparing trends in overall market structures in multiple jurisdictions generates significant results.

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64 Source: Bank of America Merrill Lynch, Global Wireless Matrix, Q3 10.

65 Some jurisdictions, including Canada and the US, count ingoing and outgoing minutes of use to reflect total individual use patterns. Not all jurisdictions record minutes of use the same way, which may result in some variations in data.

Additionally, the firm that provides the wireless price estimates used by the OECD, Teligen, refined its methodology for calculating average wireless prices, particularly for how it calculates per-call billing. Under the old methodology, a 75-second call could have been calculated as a 120-second call based on 60-second billing. Under the new methodology, a 75-second call is calculated as an 84-second call based on 60-second billing. The increased accuracy in this updated methodology is reflected in the figures provided in this section.

4.1 ARPM

Other than Americans, Canadians talk on their cell phones for more minutes per month than residents of any other developed mobile market. As mentioned above, at an average of 388 minutes per month, Canadians use cell phones more than 40% more than the global average. Naturally, this increased usage is evident when comparing international wireless services prices on cost-per-usage basis.

As Figure 33 illustrates, Canada has the seventh lowest average-revenue-per-minute (ARPM) out of the 21 developed wireless markets. In terms of actual rates, Canada’s $0.10 ARPM is 23% below the international average of $0.13.

Figure 33: Average wireless revenue per minute ($US)\(^67\)

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\(^{67}\) Source: Bank of America Merrill Lynch.
4.2 ARPkm²

The Canadian wireless carriers willing to expand their networks outside of the major metropolitan markets face the challenges presented by Canada’s widely dispersed population. The revenue-generating potential of the Canadian market on a per-area basis – that is, the potential return per squared kilometre of deployed wireless network – is among the least attractive in the world.

Consider that even though only 20% of Canada’s geographic area needs to be covered to provide wireless service to more than 99% of Canadians, the population density within the wireless network – 16.9 people/km² – would still rank as the 200th lowest in the world, ahead of only 38 other countries. In terms of wireless subscribers, there are currently roughly 12 wireless subscribers per square kilometre of network in Canada. The wireless markets with which Canada is most often compared – the US and the UK – currently have 30 and 331 subscribers per square kilometre, respectively.

Population density has a major impact on the ability to generate revenue from a given segment of a wireless network. Figure 34 illustrates this impact by displaying average monthly revenue per square kilometre of wireless network.⁶⁸ The figure clearly conveys the vast differences between international wireless markets. At an average of $674.70 in total wireless revenue and $509.40 in voice revenue, Canada only ranks ahead of Australia in revenue per square kilometre. The US market generates nearly 3 times as much revenue per square kilometre than Canada, and the UK market nearly 14 times more.

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⁶⁸ Canada, Australia, New Zealand and the US were adjusted to account for the geographic coverage of the wireless networks: Canada – 20% of geographic area; New Zealand – 40%; Australia 25%; Contiguous United States.
In fact, average-revenue-per-square-kilometre in Canada is more than eight times less than the average of the developed wireless market, and nearly 25 times less than the leading country (Netherlands). Although the market in the Netherlands generates more than $16,000 more per square kilometre than Canada’s, the Netherlands is only served by five carriers. Evidently the economics of global wireless markets vary widely, which is reflected in prices, revenue and profitability.

### 4.3 Fees

UK firm Teligen compares wireless rates among global jurisdictions based on various monthly calling frequency patterns, which Teligen refers to as “call baskets.” The Teligen baskets are based on 30, 100, 400 and 900 calls per month. The characteristics of the baskets are listed in the table below.

**Figure 35: Teligen wireless baskets, minutes and SMS messages per month**

<table>
<thead>
<tr>
<th>Calls Basket</th>
<th>Minutes</th>
<th>SMS Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 Calls Basket</td>
<td>49.8</td>
<td>100</td>
</tr>
<tr>
<td>100 Calls Basket</td>
<td>187.9</td>
<td>140</td>
</tr>
<tr>
<td>300 Calls Basket</td>
<td>568.8</td>
<td>225</td>
</tr>
<tr>
<td>900 Calls Basket</td>
<td>1787.4</td>
<td>350</td>
</tr>
</tbody>
</table>

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69 Bank of America Merrill Lynch; Nordicity Research.
While no basket is perfect in terms of the average Canadian wireless user profile, based on the national average of 388 minutes of use per month, the most relevant baskets when comparing Canadian wireless prices with those in other developed markets are the 100 and 300 calls baskets. At only 49.8 minutes, the 30 calls basket is so different than typical Canadian mobile use that it would be inappropriate to compare prices based on that calling frequency. The same is true for the 900 calls basket. Therefore, the international rankings for the 100 calls basket and 300 calls basket are presented below.

Figure 36: International wireless price comparison ($US) for 100 call basket

For a calling profile of 100 monthly calls and roughly 188 minutes of use, Canada ranks 13th out of 19 developed markets. At the quoted price of $41.73 per month, Canadian rates are $8.63, or roughly 20%, above the international average. However, the Canadian rate is also $7.71 less than the US rate.

It should be noted, that the Teligen calculations are based on a snapshot of one provider’s rates, from one particular plan. In the case of the 100 calls basket the rate comes from Bell Mobility’s ‘Talk & More 30 Local Calling + Messaging’ package. The figures are from November 2010 and therefore would not reflect the recent price declines, particularly for unlimited talk packages, that have occurred in the Canadian market.

Source: Results from Teligen T-Basket. Copyright Teligen, UK. Canada data based on Bell Mobility calling plan.
The Canadian profile for the 300 hundred calls basket (Figure 37) is also based on the same Bell package. In this case, Canada ranks as having the eighth lowest price of the 19 developed markets profiled. At an average of $48.63, Canada’s rate is $13.72, or 22%, below the international average for this calling profile.

Figure 37: International wireless price comparison ($US) for 300 call basket

It is clear that, based on the Teligen methodology, Canada’s wireless pricing is based, in part, on the common, high-usage Canadian profile. As a result, Canadian wireless prices compared more favourably internationally for high usage, and pay incrementally less for increased minutes of use.

Source: Results from Teligen T-Basket. Copyright Teligen, UK. Canada data based on Bell Mobility calling plan.
Figure 38: International comparison of price increases (%) between 100 call and 300 call basket

Figure 38 indicates the extent to which international pricing schemes accommodate increased minutes of use by comparing the percentage price change between the 100 and 300 calls baskets. Based on the Teligen data, Canadian mobile users can only expect to pay a 16.5% premium for tripling call volume from 100 calls to 300 calls per month, which ranks fourth among all profiled markets. What’s evident from the figure above, is that the majority of cell phone pricing schemes globally do not account for, or accommodate, this increase in calling volume. In fact, the average price from the 100 calls basket to the 300 calls basket increases 86%.

4.4 Market structure

The analysis in the section above demonstrates the vast differences between international wireless markets, in terms of typical user patterns, subscriber densities and pricing schemes. However, in spite of these differences, there are significant similarities in the overall structure of most global wireless sectors, particularly with respect to the percentage of subscribers shared between the leading carriers. As Figure 39 below illustrates, in every developed wireless market a majority (50% or more) of subscribers receive service from one of two carriers. In fact, the average percentage of subscribers shared by the top two carriers in developed wireless markets is 73.7%, indicating the global norm is a wireless industry with two dominant providers.

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72 Source: Results from Teligen T-Basket. Copyright Teligen, UK; Nordicity Research.
Canada actually trails the international trend in this respect as its two leading carriers combine to hold 66.4% of all national wireless subscribers. Bell and Rogers’ combined percentage subscriber share ranks them ahead of only Vodafone and O2 in the UK (50.8%) and Verizon and AT&T in the US (62.8%).

Figure 39: Combined subscriber share (%) of two leading carriers per market

Overall, there is minimal variance among most wireless sectors in terms of the percentage of subscribers captured by the two leading carriers. In fact, 16 of the 20 developed markets fall within a 14% range (US at 62.8% to France at 76.8%), further enforcing how common this type of market structure is worldwide.

In actuality, Canada’s individual regions have market structures more similar to the international norms. As the black columns illustrate above, Canada’s regional markets have average to high combined market subscriber shares between the two leading carriers. Due to the impact of other regional communications services and consumer preferences for bundling, market structures are naturally somewhat less competitive on a regional basis. However, even the leading two carriers in Canada’s least competitive regions – Saskatchewan and Manitoba, and Atlantic Canada – have lower combined market shares than some complete international jurisdictions.

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Although every developed wireless market has two carriers that, combined, hold more than half of all national wireless subscribers, there is more variation in terms of how much additional competition the two leading providers face. Essentially, most international wireless markets either have a structure of: one or two very dominant providers, with no strong third carrier to disrupt the market leaders; or there is a strong third provider that brings more balanced competition to the industry. With three strong national providers Canada’s wireless industry is clearly one of the latter. The extent to which other international wireless markets have at least three significant competitors is illustrated in Figure 40, which plots both the difference in percentage subscriber shares between the leading and third-largest providers and the subscriber share of the third largest carrier in the market.

Figure 40: Difference in subscriber share (%) between first and third-largest carrier; subscriber share (%) of third largest carrier

In those countries listed in Figure 40, limited competition exists where the gap between the percentage market share of the first and third carriers (blue column) is larger than the percentage market share held by the third largest carrier (red column). For example, in Norway on one end of the scale, the leading provider has a 55.6% subscriber share, compared to an 8.7% share for the third place carrier, resulting in a nearly 47% gap.

Even the countries placed in the middle of the above graph lack competitive balance. For instance, there is a gap of 22.4% between the subscriber shares of Portugal’s leading carrier (43.3%) and the country’s third-place carrier (20.9%). Even in the Netherlands, which has the

74 Source: Bank of America Merrill Lynch; Nordicity Research.
highest average revenue per square kilometre as well as five wireless competitors, the gap between the first- (51.4%) and third-place (23.4%) carriers is 28%.

At the extreme right of the figure are Canada, Finland, Belgium, Germany, the UK and Australia, countries where there are at least three competitors of relatively even strength. Carriers in some countries have worked hard to achieve this balanced competition. For instance, as recently as 2008 Australia’s wireless sector had a 23% gap between the subscriber shares of its leading and third largest provider. The graph below illustrates that until 2009 the Australian market was dominated by two carriers, Telstra and Optus. Then in 2009, the third and fourth largest carriers, Vodafone and Hutchinson merged to bring a strong third competitor to the market. As of 2010, the gap between the leading and third-place carrier in Australia had narrowed to 11.5%.

Figure 41: Annual wireless subscriber share (%) Australia, 2004-2010

The restructuring of the Australian wireless market through the Vodafone and Hutchinson merger underscores the difficulty of any wireless market to sustain four strong competitors. In fact, the only developed wireless market in the world with four competitors with relatively even subscriber shares is the UK, where the leading carrier holds 27.3% of subscribers and the fourth largest holds 21.1%. This structure, however, is a global anomaly. That a fifth UK provider, Hutchinson, has 7% of all subscribers is even more rare.

The majority of international wireless markets have three or four carriers. Essentially, national wireless markets are unable to support a profitable fifth or sixth provider. For instance, the US has four carriers with more than 10% of wireless subscribers: Verizon (31.4%); AT&T (31.4%);

75 Source: Bank of America Merrill Lynch; Nordicity Research.
Sprint (16%); and T-Mobile (11.2%). Two additional carriers have at least 1% of US wireless subscribers: MetroPCS (2.7%); and Leap Wireless (1.8%). However, only the top four of these six wireless carriers are profitable. As the figure below illustrates, MetroPCS and Leap Wireless have continued to lose money over the past decade, and are now both roughly $2.5 and $3.5 billion away from accruing positive cash flow from their wireless operations.

MetroPCS and Leap Wireless are not new entrants. Metro was founded in 1994 and Leap in 1998. Also, Metro has 8.9 million subscribers, and Leap has roughly 5.5 million subscribers, similar to the number of subscribers held by Canada’s three national carriers. Yet neither is profitable.

**Figure 42: Cash flow ($US) from wireless operations, 2000-2009**

![Cash flow ($US) from wireless operations, 2000-2009](image)

At some point in 2012 Canada may have as many as 11 wireless carriers overall, and at least five competing in each region. Based then on the common market structure seen around the world of three or four carriers, and considering the difficulty of the fifth- and sixth-largest carriers in the US to turn a profit, will Canada’s market be able to support five to six competitors per province? The answer is certainly no, and many new entrants already recognize this fact.

Almost since they first acquired spectrum in the 2008 AWS auction, many new entrant providers have speculated about pending industry consolidation. For instance, in mid 2009, Alex Krstajic, CEO of Public Mobile said at an industry event:

“‘Take a look at the three of us up here,’ he said on stage during a panel discussion where he was joined by the heads of Wind Mobile and Mobilicity, two rival new

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76 Source: Public data.
entrants. ‘Two will not be here next year, or will be here but have different business cards.’” 77

More recently, Krstajic has renewed his view on what is the optimal market structure for Canada’s wireless sector. In December 2010, he said:

“I don’t think there is any question in my mind that it would be good for all parties concerned that the new entrants consolidate.” 78

Wind Mobile has been bolder in that it has predicted who will lead the consolidation efforts. Naguib Sawiris, chairman of Orascom, the Egyptian wireless giant providing financial backing for Wind in Canada, noted in August 2010:

“They [the other new entrants] will be dead on arrival. Wind should be the consolidator of all the smaller players here. We are going to be open to that. We are not interested in smaller players that are only coming with cash, or the licenses they paid cash for. We want them to succeed and have some subscribers. Because we can’t do the job alone.” 79

Similarly, TD reported in January 2011 that Shaw indicated that new entrant acquisitions and partnerships will become attractive growth options as time passes.

It is clear that consolidation within Canada’s wireless sector is highly likely. Looking at the struggles of the US’s fifth- and six-largest wireless carriers to turn a profit, as well as the market structures of most international jurisdictions, it’s natural to assume a sector with a more streamlined number of competitors.

4.5 Conclusions

Canada’s wireless fees and market structure compare favourably with other developed wireless sectors around the world. In fact, when accounting for the common usage characteristics in Canada – Canadians use wireless phones for more minutes per month than users in all other jurisdictions except the US – Canada’s wireless sector compares very favourably. Consider:

- Canada has the seventh lowest average revenue per minute out of the 21 developed wireless markets profiled. In terms of actual rates, Canada’s $0.10 ARPM is 23% below the international average of $0.13;

77 Source: http://www.financialpost.com/news/Public-Mobile-fights-hold/4010412/story.html#ixzz1DgN3265t
78 Source: Ibid.
At an average of $674.70 in total wireless revenue and $509.40 in voice revenue, Canada only ranks ahead of Australia in revenue per square kilometre within the wireless network. The US market generates nearly 2.3 times as much revenue per square kilometre than Canada, and the UK market nearly 14 times more. Average revenue per square kilometre in Canada is more than eight times less than the average of the developed wireless market, and nearly 25 times less than the Netherlands – the leading country;

Based on the Teligen methodology for comparing international wireless prices:
- For a calling profile of 100 monthly calls and roughly 188 minutes of use, Canada ranks 13th out of 19 developed markets;
- For a calling profile of 300 monthly calls and roughly 589 minutes of use, Canada ranks as having the eighth-lowest price of the 19 developed markets profiled;
- Canadian mobile users can expect to pay only a 16.5% premium for tripling call volume from 100 calls to 300 calls per month, which ranks fourth among all profiled markets.

Canada’s wireless market is structured very similarly to that of other international markets, particularly in terms of combined subscriber share between the two leading carriers. At 66.4% subscriber share between Bell and Rogers, Canada’s market structure falls within the international trend that sees the two leading carriers in 16 of 20 developed markets combine for between 63% and 77% subscriber share;

At 8.3%, the gap in subscriber shares between Canada’s leading and third-largest wireless carrier is the second lowest of all developed markets, eliminating any possibility of the duopoly structures that are common in other international wireless sectors;

Markets such as the US, which has ten times more wireless subscribers and more than double the density of subscribers as Canada, struggle to support more than four wireless carriers, further confirming the natural structure of Canada’s wireless market. In fact, in Australia, a market very similar in terms of population and geography to Canada’s, the third- and fourth-largest carriers merged in 2009 to create a market structure almost identical to Canada’s.
5. Communications Incumbents and 2008 New Entrants

This section demonstrates that: The companies permitted to bid on set-aside spectrum in the 2008 AWS auction all possess the resources to compete openly in Canada’s communications services industry. To do so, this section examines the size, scope and ability to compete on a level playing field of those companies that took advantage of the 2008 AWS auction framework to acquire set-aside spectrum. These competitors are examined in the following three natural groupings:

1. Integrated communications services providers, including:
   a. Shaw Communications;
   b. Videotron; and
   c. EastLink.
2. Regional wireless incumbents, including:
   a. SaskTel; and
   b. MTS.
3. 2008 pure-play new entrants, including:
   a. Wind Mobile;
   b. Mobilicity; and
   c. Public Mobile.

5.1 Integrated cable-based communications services incumbents

The majority of Canada’s communications services industry has historically been controlled by a relatively small number of players, and this trend continues today. In fact, due to the ability of communications services providers to leverage their existing networks in offering new services, communications companies have relationships with more customers than ever before. The combination of distribution and content assets by a number of communications services providers has resulted in additional vertical integration.

Overall, virtually no major communications services provider in Canada offers fewer than three communications services. The ability to bundle multiple services has resulted in better customer attraction and retention rates, increasing a company’s ability to compete. Therefore, determining a company’s ability to compete openly in Canada’s wireless sector should not be based solely on that company’s wireless assets. Rather, all communications services need to be

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80 New entrants based on the definition used by Industry Canada for the 2008 AWS auction: “participants holding less than 10% of the national wireless market.”
Competition and New Entry in Canada’s Communications Services Market

5.1.1 Revenue

Canada’s total communications services annual industry revenue is in excess of $48 billion\textsuperscript{81} with the majority of that revenue being earned by nine companies.\textsuperscript{82} Although TELUS, Rogers and Bell compete for shares of the national wireless market, most communications services company’s offerings are confined to a specific region. Therefore, integrated communications companies can be compared in terms of their shares of their service areas, or contestable markets. For instance, TELUS’ contestable market includes all four communications services in BC and Alberta, as well as the wireless markets in the other eight provinces. SaskTel, on the other hand, only offers services in Saskatchewan, so its contestable market is defined by the value of all service revenue in that province. Figure 43 illustrates the revenue shares of Canada’s eight largest communications services companies within their respective contestable markets.

Figure 43: Revenue share (%) of contestable market\textsuperscript{83}

The dominance of SaskTel and MTS within their respective regions extends beyond the wireless market. SaskTel holds an estimated 78% revenue share of its contestable market and MTS an estimated 69% share. Outside of those two regional incumbents – and Cogeco at the far right

\textsuperscript{81} Source: Annual reports; CRTC, CMR 2010; Nordicity Research.
\textsuperscript{82} EastLink data on contestable market not relevantly calculable due to the nature of its presence in markets across the country.
\textsuperscript{83} Source: Annual Reports; CRTC CMR, 2010; Nordicity Research. MTS figure estimated.
end – the market shares of Canada’s leading communications services providers are relatively similar. In fact, there is only 14% separating the revenue shares of Videotron (35.7%) and Bell (49.7%). Other than highlighting the lack of communications services competition in Saskatchewan and Manitoba, the graph above shows the very relatively even strength of Canada’s integrated communications services providers.

Many Canadian communications services companies have integrated vertically by adding content assets that add to their annual revenues and increase opportunities to reach consumers. Specifically, in addition to their market shares above, it should be noted that: Rogers’ broadcasting assets capture approximately $490 million, or 9% of the broadcasting industry; Videotron’s parent company Quebecor also captured 6% ($328 million) of broadcasting revenue; and Shaw’s newly-acquired Canwest broadcasting earned $930 million, or 17% of all broadcasting revenue. The Shaw family also holds voting control in Corus Entertainment, which earns roughly 9% of all broadcasting revenue. Finally, Bell’s acquisition of CTVglobemedia is currently pending, but if approved would add approximately 29% of all Canadian broadcasting revenue ($1.6 billion) to Bell’s assets.

5.1.2 Subscribers

Communications services market share can also be examined in terms of subscribers reached. Most communications services providers cite figures in terms of ‘total customer connections,’ referring to their number of unique wireless, TV, Internet and home phone subscriptions. But there is another way to view subscriber reach. Essentially, TV, home phone and Internet are household services, meaning each subscription reaches all members of a subscribing house. Wireless services, on the other hand, are personal services with only one user per subscription.

Figure 44 below accounts for the reach of each type of service – assuming a reach of 2.5 users per TV, Internet and wireline phone account, and only one per wireless account – to demonstrate share of total communications services users per company.  

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84 Subscriber figures for EastLink are not available.
As the graph above illustrates, due to its position as the largest subscription TV provider in Canada, Shaw reaches 14.5% of national communications services users, the third most of any communications services provider in Canada. Provincially-based Videotron also has a significant reach, serving 9.3% of the national market, only 5% less than national player TELUS.

Similar to the comparison of contestable market shares, the graph above shows the similarities in the size and reach of Canada’s largest integrated communications companies. Only 14.5% separates the reach of the largest company, Bell, and the fifth-largest, Videotron. As well, the gap between the absolute subscriber shares of TELUS and Bell (9.5%) is almost twice as large as the gap between Videotron and TELUS (5%).

Considering TELUS reaches roughly the number of communications users as Shaw, and only 5% more than Videotron further illustrates the strength of integrated cable-based communications services companies as well as their overall reach and scope relative to the national wireless providers.

### 5.1.3 Integrated communication services provider profiles

**Shaw Communications**

One of the largest communications services companies in Canada, Shaw started its operations on December 9, 1966 under the corporate name Capital Cable TV Ltd. The company received its

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85 Based on the availability of four communications services per Canadian resident. TV, Internet and Wireline subscriber figures multiplied by 2.5 to reflect total reach.
broadcasting license from the CRTC in 1970 and by 1971, Capital Cable had over 10,000 cable TV customers in BC, Alberta, and Newfoundland. Since then Shaw has become the most dominant broadcast distributor in Canada, counting approximately 2.3 million cable subscribers and more than 900 thousand satellite TV customers. In terms of the overall industry, Shaw holds roughly 29% of the national cable subscriber share, and 29% of subscription TV customers overall. Outside of its satellite TV offering, Shaw's customers are largely based within its core cable footprint covering BC, Alberta, Saskatchewan and Manitoba. While the company initially had operations in parts of Southern Ontario and New Brunswick, a swap agreement in December of 2000 with Rogers Communications Inc. (‘Rogers’) resulted in Shaw exchanging its 600,000 customer base in Ontario and New Brunswick with Rogers’ 623,000 customers in British Columbia for close to $76 million.

The table below provinces Shaw’s subscriber and financial figures.

**Figure 45: Company overview, Shaw**

<table>
<thead>
<tr>
<th>Shaw</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Subscribers</em></td>
</tr>
<tr>
<td>Cable TV: 2,326,766</td>
</tr>
<tr>
<td>Satellite TV: 904,257</td>
</tr>
<tr>
<td>Internet: 1,837,618</td>
</tr>
<tr>
<td>Telephony: 1,146,148</td>
</tr>
<tr>
<td><strong>Total Customer Connections:</strong> 6,214,789</td>
</tr>
<tr>
<td><em>Media Assets</em></td>
</tr>
<tr>
<td>Canwest Broadcasting</td>
</tr>
<tr>
<td>Corus Entertainment (voting control)</td>
</tr>
<tr>
<td><em>Financials</em></td>
</tr>
<tr>
<td>Operating Revenue: $3,700,000,000</td>
</tr>
<tr>
<td>Revenue Growth (4 year CAGR): 10.3%</td>
</tr>
<tr>
<td>Free Cash Flow: $515,000,000</td>
</tr>
<tr>
<td><em>Recent Acquisitions</em></td>
</tr>
<tr>
<td>2010: Canwest ($2,000,000,000),</td>
</tr>
<tr>
<td>2009 Mountain Cable Ltd ($289,829,000)</td>
</tr>
<tr>
<td>2008 Campbell River Cable system ($46,000,000)</td>
</tr>
<tr>
<td>2008: AWS spectrum ($190,000,000)</td>
</tr>
</tbody>
</table>

Shaw has established itself as one of Canada’s dominant vertically integrated communications services providers through a combination of organic growth and acquisitions. In the last 10 years Shaw has acquired sixteen companies ranging from broadcasters to regional cable

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86 Source: Annual reports; public data.
companies. It added Internet service and home phone services to its service offering in 1996 and 2005 respectively.

As of 2010, Shaw’s total revenues were $3.71 billion, of which 79% were from its Cable division while 21% were from its Satellite division. In the last 4 years, the company’s revenues have grown at a Compounded Annual Growth Rate of 10.3%, significantly outpacing the industry’s average revenue growth in cable TV, Internet and home phone. In 2008, Shaw acquired approximately 20 MHz of AWS spectrum for $190 million through Industry Canada’s auction for and plans to launch its wireless services in early 2012.

**Videotron (Quebecor)**

Videotron is the a dominant pay television and communications services provider in Quebec with over 4 million customer connections for cable TV, Internet, telephony and wireless services. Videotron’s cable network covers about 80% of the 3,100,000 residential and commercial premises passed by cable in Quebec. The company is part of a family of businesses owned by the media and telecom giant, Quebecor Media Inc. Quebecor purchased Videotron for a cash consideration of $5.2 billion in October of 2000. Quebecor also owns 100% of Sun Media, OSPREY Media and Canoe Inc., has majority economic and voting interest in the largest French language broadcaster and magazine publisher in North America, TVA, as well as a business interest in book publishing retailing and interactive technologies and communications through its subsidiary Nurun Inc. Combined, Quebecor had revenues of almost $4 billion in 2010.

Videotron has benefited greatly from its communication services offerings, more than tripling its revenues from the time it was acquired by Quebecor when it only offered cable and Internet services. At the time of Videotron’s purchase, the company had annual revenues of $659 million. However, by 2010 its annual revenues rocketed to $2.1 billion. Figure 46 further details Videotron’s customer and financial figures.

**Figure 46: Company overview, Videotron**

<table>
<thead>
<tr>
<th><strong>Videotron</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subscribers</strong></td>
</tr>
<tr>
<td>Cable TV: 1,781,000</td>
</tr>
<tr>
<td>Internet: 1,202,000</td>
</tr>
<tr>
<td>Telephony: 1,065,000</td>
</tr>
<tr>
<td>Wireless: 135,000</td>
</tr>
</tbody>
</table>

**Total Customer Connections: 4,183,000**

87 Source: Annual Reports; public data.
Videotron

<table>
<thead>
<tr>
<th>Bundled Subscribers</th>
<th>Internet and Cable: 76%</th>
<th>Internet, Cable and Home Phone: 48%</th>
<th>Internet, Cable, Home Phone and Wireless: 3%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Media Assets</td>
<td>TVA (sister company – largest French language broadcaster in North America; more than $430 million in annual revenues)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Financials</td>
<td>Operating Revenue: $2,108,000,000</td>
<td>Revenue Growth (4 year CAGR): 15%</td>
<td>Free Cash Flow: $467 million</td>
</tr>
<tr>
<td>Acquisitions</td>
<td>2008: AWS Spectrum – including full 40 MHz set-aside in Quebec ($555 million)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Videotron experienced similar growth in its subscriber base as it did in its revenues, increasing from approximately 1.5 million subscribers in 2000 to over 4 million by 2010. The growth in revenue and subscriber base during this period was due in part to Videotron’s launch of telephony over its cable network in 2005 as well its recent entry in to the wireless sector through the purchase of the AWS spectrum in 2008 for $555 million – enough to capture all of the set aside AWS spectrum covering Quebec.

The number of subscribers to Videotron telephone services stood at over a million by 2010, whereas its wireless subscribers totalled an estimated 135,000.  

EastLink (Bragg Communications)

With approximately 457,075 cable customers across Canada, EastLink is Canada’s largest privately-owned cable company and the fifth largest cable company overall. Owned by the Bragg family, EastLink entered Canada’s communications services market in 1971 by serving Amherst, Nova Scotia, and expanded its reach in Nova Scotia and PEI throughout the 1970’s, 80’s and 90’s by acquiring 13 additional cable systems.  

EastLink expanded further to become a national communications services provider in 2007 by acquiring Amtelecom, RuSh Communications and Persona Communications. Through its acquisitions of regional cable systems, EastLink became the only company to offer cable TV services in all 10 Canadian provinces. EastLink was the first cable company in Canada to offer telephone service over its own facilities and was the first communications company in North America to offer cable, Internet and home phone on one bill as a bundle.

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89 Source: [http://www.eastlink.ca/about/history/index.asp](http://www.eastlink.ca/about/history/index.asp)
Because it is a privately held company, segmented financial and subscriber figures for EastLink are not readily accessible. Some available figures are provided in Figure 47.

**Figure 47: Company Overview, EastLink**

<table>
<thead>
<tr>
<th>EastLink</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subscribers</strong></td>
</tr>
<tr>
<td>Cable: 453,075</td>
</tr>
<tr>
<td><strong>Financials</strong></td>
</tr>
<tr>
<td>Cable: $310,600,000</td>
</tr>
<tr>
<td>Internet: $273,000,000</td>
</tr>
<tr>
<td>Total: $590,000,000</td>
</tr>
<tr>
<td>Net Income: $53,000,000</td>
</tr>
</tbody>
</table>

Starting in 2004, EastLink offered a quadruple-play service package by bundling Rogers wireless service with other EastLink services. However, EastLink displayed its intent to enter the wireless sector as a facilities-based provider by investing $25,628,000 million to acquire AWS spectrum covering all of Atlantic Canada, as well as parts of Ontario and Alberta. It is anticipated that EastLink will launch wireless services in 2011.

### 5.1.1 Regional dominance

Section 2 of this report clearly outlines the unmatched ability of cable and satellite TV providers to significantly raise rates on an annual basis while continuing to increase subscribers. The flexibility of the coaxial cable plant has allowed cable companies to extend service offerings to include home phone and Internet, and while doing so they have leveraged their dominant position in the cable market to bundle customers with existing services.

Generally, cable-based communications service providers limit their additional communications services offerings to within their cable footprint. By and large, this regional structure is true for their wireless offerings as well. In the 2008 AWS auction, the leading cable-based new entrants (Shaw, Videotron and EastLink) predominantly acquired spectrum that covered their cable territories. Thus it is clear, that these companies intend to extend their regional dominance in cable into the wireless sector.

Various qualitative and quantitative indicators can be used to determine whether a company is a dominant player in a market. While all the indicators discussed below are necessary conditions for a firm to be a dominant player in a particular product and geographic market, satisfaction of just one of these elements is not a sufficient condition for market dominance. For instance, a company might have a high market share in a product and/or geographic market in which it

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90 Source: Cartt.ca
competes, but may face a highly elastic demand curve. Meaning that any attempts to increase profitability through price increases will result in a significant loss of subscriber base, either because consumers find other substitutes or because there are other companies offering the same product. It is important to take into account various metrics when determining whether a company holds a dominant position in a market. These metrics are discussed below, illustrating how both Shaw and Videotron\textsuperscript{91} hold a dominant position in their respective geographic markets.

Shaw and Videotron have high market share:
As of November 2010, the total number of homes covered by Shaw’s cable network was around 3.8 million. Of these more than 60% or 2,326,766 homes subscribed to Shaw’s cable TV services. Since Shaw reports its penetration rate on a blended basis taking into account the homes passed in Manitoba and Saskatchewan, it is likely that its penetration numbers in these two provinces are lower due to the presence of competing IPTV services from the incumbent telephone companies, SaskTel and MTS. Furthermore, not all Canadian households subscribe to cable TV services. As the CRTC’s 2010 monitoring report noted, there were in total 11.3 million subscribers to BDU services in Canada in 2009, of which 25% subscribed to Satellite TV services. Thus, it is safe to assume that Shaw’s market share of BC and Alberta’s cable TV market is well in excess of 60%.

Similarly, Videotron is a dominant communications service provider in Quebec with over 4 million subscribers for cable TV, Internet, telephony and wireless services combined. Its cable network covers about 80% of Quebec’s 3,100,000 residential and commercial premises passed by cable, including 2,603,000 of homes passed in Quebec. At the end of the third quarter of 2010, Videotron had achieved a 69.2% penetration rate for its cable TV, resulting in 1,802,000 subscribers to its cable TV services. Similarly, its penetration rate for home phone and Internet was 42.2% and 47.4% respectively.

Shaw and Videotron have significant control over prices:
Control over prices is a necessary characterization for market dominance as it shows consumers’ ability and/or willingness to switch to a substitute. If a company is able to pass on price increases to its customers without eroding its customer base, it is likely that its customers lack the countervailing power to introduce price discipline. Shaw and Videotron have been able to successfully pass-through price increases to their subscribers without adversely affecting their respective subscriber bases.

\textsuperscript{91}Because it is a private company, very little subscriber and financial information is available for EastLink, particularly pricing and bundling information needed to illustrate the company’s dominance within its cable footprint. Therefore, this section focuses on Shaw and Videotron alone.
Shaw has consistently raised its prices for cable TV services in BC and Alberta. Shaw, like other incumbent BDUs across Canada offers competitive pricing in two of the 3 product markets where it faces competition, namely, Internet and home phone, while it continues to operate as a monopoly in the cable TV market. Shaw and other cable TV service providers’ bundling strategy has contributed to 5.38% CAGR in ARPU over the last 4 years for cable TV, while the CAGR in ARPU for residential home phone and Internet has been -1.96% and 2.95% respectively.

Videotron, by its own admission, has also been able to pass down price increases to its customers without losing its subscriber base. In 2010, its combined revenues for all cable television services increased by $20.5 million (or 9.6%) and Videotron acknowledged that the increase in revenues was in part due to passing the Local Programming Improvement Fund fees to its customers as well as increased demand for HDTV, Pay TV orders and Video on Demand.

Shaw and Videotron’s ability to offer bundled services is unmatched in their respective geographic markets:

Companies use bundling strategies not only to increase their overall revenues but also as an exclusionary mechanism that prevents non-integrated firms from chipping away at their market share. Both Shaw and Videotron have successfully executed their bundling strategies to both attract customers away from their non-integrated competitors as well as to increase retention. Bundling strategies of this sort have been used by cable companies across Canada for revenue enhancing and customer retention reasons. MTS for instance, after adding mobile wireless services to its bundle has been able to achieve a significantly lower churn rate than its peers in the mobile wireless sector (0.3% versus 1.6%).

Videotron introduced telephony in Q1 of 2005 and since then has almost doubled its Net Total ARPU in a span of just five years from around $45 in 2005 to more than $90 by 2010. By offering bundled service discounts to its customers, the company has been able to increase its retention ratio as well as improve its overall revenues. As an example, if a customer purchases only cable TV services from Videotron, the monthly subscription cost is $21.29, but adding home phone to the bundle results in total savings of 14.9% (or $3) over standalone cable pricing. Similarly, adding phone and Internet results in a savings of $6 compared to standalone services ($23.25 and $28.95 standalone). Thus, a customer looking to switch its home phone and Internet services to a competing service provider will be looking for an average savings of 11.5% on a competitors phone and Internet bundle. As of 2010, 76% of Videotron’s customers were subscribing to both cable TV and Internet and almost half were subscribing to cable, Internet and home phone, indicating how successful the company was at inducing its customers to take advantage of bundled services. This success is in part due to the fact that Videotron was able to use its dominance in cable TV as leverage.

Over 6.3 million customers across Canada subscribe to Shaw’s services. Of these, most (78%) subscribe to both cable and Internet services and more than half (53.4%) subscribe to all three services. While the company has made some inroads in Ontario with the acquisition of Hamilton
Mountain Cable and some Northern Ontario cable franchises, for the most part its cable operations are concentrated in Western Canada.

Shaw’s cable footprint in British Columbia and Alberta covers over 92% of all homes and for almost all customers. Furthermore, a customer in either of these provinces, looking to switch to bundled services for all three communications services (TV, Internet and home phone) has Shaw as its only option. Subscription to standalone cable TV services from Shaw and home phone and Internet services from TELUS would mean that a customer will forego the bundled discounts that are available from Shaw. As noted in the Videotron example above, bundled discounts tend to be large enough that it undermines the cost savings resulting from a competing Internet and home phone service provider and thus act as a deterrent for customers wanting to switch to competing services. Due to the absence of competing bundled services options, Shaw's subscribers lack the countervailing power necessary to introduce price discipline to Shaw's cable TV pricing. Thus, Shaw is able to charge supra-competitive prices for its cable TV services and recoup the lost profits incurred in the home phone and Internet market, where it faces competition.

Consumers increasingly prefer to purchase their cable TV, home phone and Internet services from a single service provider. Bundled discounts offered on multiple services as well as the ease of a single bill makes bundled services a valuable proposition. This is evidenced by the fact that since 2006 the number of customers that have signed up for Shaw's cable TV and Internet services has gone up by more than 12 fold, from 4.34% in 2005 to 53.44% in 2010. Furthermore, the number has gone up by more than 12 fold for subscribers that get all three of their services from Shaw increasing from 1.61% in 2005 to 20% in 2010.

### 5.2 Regional wireless incumbents

Section 3.3 outlines the state of regional competition in Canada's wireless sector, and in doing so reveals that, based on multiple measurement parameters, the wireless sectors in Saskatchewan, Manitoba and Newfoundland are noticeably less competitive than those in other sectors. For instance, in 2004 only two provinces – Ontario and Quebec – had a third wireless carrier with at least 15% of subscribers. By 2009, seven provinces had a third provider with at least 15% of subscribers. The only provinces where this wasn't the case were Manitoba, Saskatchewan and Newfoundland.

The trend lines in Figure 48 illustrate the gap in percentage subscriber share between the leading wireless carrier and the third-largest provider, by province or region. As the red and black lines indicate, this gap is currently largest in Newfoundland (74%) and Saskatchewan (69%). In both cases, the gap between the leading and third-largest wireless carrier has declined by less than 8% over five years.
Following Newfoundland and Saskatchewan are Manitoba and the Maritime provinces, each with a 44% gap. However, as is clear in Figure 48, the gap between the leading and third-largest provider decreased by an average of 27% in the Maritime provinces between 2004 and 2009, compared to a 10% decline in Manitoba.

Clearly, some provincial wireless markets more consistently support a strong market leader while simultaneously providing little traction for the third competitor. This is obliviously the case in Saskatchewan, Manitoba and Newfoundland. However, while in the 2008 auction the market leader in Newfoundland (Bell) was not able to access set-aside spectrum, the market leaders in the two other provinces (SaskTel in Saskatchewan and MTS in Manitoba) were. Therefore SaskTel and MTS are examined and profiled in this section.

Long before they were incumbent provincial wireless carriers, SaskTel and MTS were incumbent provincial telephone companies. Their long history of providing services to provincial residents and the resulting brand strength in part helped both companies quickly establish themselves as the incumbent carriers of wireless services. Indeed, between 2005 and 2010, SaskTel increased its wireless subscribers at a greater pace (55.4% over five years) than any other wireless carrier in Canada (see Figure 49). MTS, meanwhile, increased its subscribers by 50% over that time, slightly trailing TELUS’ growth of 51.6%. However, while TELUS increased its subscriber base by

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92 Source: CRTC Monitoring Reports.
93 Q3 2010. SaskTel estimated based on historical growth.
attracting new customers in provinces like New Brunswick and Newfoundland, MTS did so entirely within Manitoba.

**Figure 49: Accrued wireless subscriber growth (%) by provider, 2005-2010**

As further evidence of the strength of SaskTel’s and MTS’ brands, between 2004 and 2009, TELUS only increased its wireless subscriber share by 1% in Saskatchewan and 3% in Manitoba. In spite of the fact that both provinces are adjacent to TELUS’ incumbent territory, they remain the two most difficult markets for TELUS to gain wireless traction. TELUS provides wireless services to 19% of subscribers in Newfoundland, but only 4% in Saskatchewan and 11% in Manitoba.

MTS’ and SaskTel’s respective ability to grow subscribers in their home provinces doesn’t stop at wireless services. As the profiles below describe, both companies have extended their original home phone incumbency into multiple communications services markets.

### 5.2.1 Regional wireless incumbent profiles

**SaskTel**

SaskTel was established in 1908 and has since grown to become one of the dominant telecommunications services providers in Canada, particularly on a regional level. SaskTel surpassed $1 billion in annual revenue in 2007 and in 2009 recorded more than $1.15 billion in annual revenue with $129 million in net income. Originally serving landline telephony to

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94 Source: Annual Reports. SaskTel 2010 figure is estimated.
residents of Saskatchewan, SaskTel added cellular service in 1989, high-speed Internet service in 1996 and IPTV in 2002.

Figure 50: Company overview, SaskTel

<table>
<thead>
<tr>
<th>SaskTel</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subscribers</strong></td>
</tr>
<tr>
<td>Wireless: 560,000</td>
</tr>
<tr>
<td>Telephony: 543,000</td>
</tr>
<tr>
<td>Internet: 225,000</td>
</tr>
<tr>
<td>TV: 83,000</td>
</tr>
<tr>
<td><strong>Total Customer Connections: 1,400,000</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating Revenue: $1,150,000,000</td>
</tr>
<tr>
<td>Net Income: $129,000,000</td>
</tr>
</tbody>
</table>

SaskTel now provides roughly 1.4 million customer connections in Saskatchewan, a province with a population of 1.05 million people. In terms of wireless services, SaskTel’s 76% market share in Saskatchewan ranks behind only Bell’s 77% share in Newfoundland and Labrador. In 2008 SaskTel acquired an additional (40 MHz of spectrum including the 10MHz G block) covering Saskatchewan for $65,690,000 in Industry Canada’s 2008 AWS auction, the eighth highest expenditure of all auction bidders.

MTS Allstream

Like SaskTel, MTS boasts more than 100 years of experience providing communications services in Canada. Beginning as a provincial telephony provider in 1908 – when it purchased Bell’s Manitoba system for $3.3 million – MTS added cellular services in the late 1980’s, high-speed Internet in 1999 and digital cable in 2003. MTS additionally acquired Allstream in 2004 for $1.7 billion, merging both companies to form MTS Allstream. MTS now has nearly 2 million customer connections and a fibre optic network spanning nearly 30,000 kilometres.

Figure 51: Company overview, MTS Allstream

<table>
<thead>
<tr>
<th>MTS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Wireless</strong>: 483,754</td>
</tr>
<tr>
<td><strong>Telephony</strong>: 1,192,612</td>
</tr>
</tbody>
</table>

95 Source: Annual Reports; Press releases.
96 Source: Annual Reports.
Competition and New Entry in Canada’s Communications Services Market

<table>
<thead>
<tr>
<th>Subscribers</th>
<th>Internet: 184,806</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>TV: 89,967</td>
</tr>
<tr>
<td>Total Customer Connections: 1,951,139</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financials</th>
<th>Operating Revenue: $1,810,000,000</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Revenue Growth (4 year CAGR): 11.6%</td>
</tr>
<tr>
<td></td>
<td>Free Cash Flow: $233,000,000</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Acquisitions</th>
<th>2008: AWS spectrum ($40,773,750)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2004: Allstream ($1,700,000,000)</td>
</tr>
</tbody>
</table>

With more than $1.8 billion in annual revenue, MTS is the sixth-largest communications services company in Canada. With nearly 500,000 wireless subscribers, MTS holds a 55% wireless subscriber share in Manitoba, the sixth-largest provincial market share in the country.

As recently as 2008, MTS appeared poised to extend its wireless services outside of Manitoba, potentially becoming a national provider. Prior to the 2008 AWS auction, MTS initially secured financial backing to develop a national wireless network and even submitted a deposit for the auction that suggested it would be bidding on spectrum at a national-coverage scale. In fact, MTS’ deposit for the 2008 auction secured the company the third-most eligibility points of all bidders. However, MTS’s financial consortium dissolved before the auction began and MTS shed nearly 60% of its eligibility points following the first round of the auction, immediately forgoing any attempt at becoming a national wireless provider. Ultimately, MTS acquired spectrum covering Manitoba only (30 MHz including the 10MHz G block) for $40.1 million, positioning itself to solely remain the dominant provider in Manitoba instead of increasing overall national wireless competition.

5.3 2008 pure-play new entrants

Following the 2008 AWS spectrum auction three new players entered Canada’s communications services industry – Wind Mobile, Mobilicity and Public Mobile. Of these three, only Wind, which is owned by dial-around long distance and business communications services provider Globalive, had any previous experience in Canada’s communications services market. However, that Globalive launched wireless services under the Wind brand – a brand used by its financial backer, Orascom – speaks to the fact that Globalive saw little value in tying its wireless service to its existing brand. Effectively, these three providers are new entrants to Canada’s communications services industry.

Since launching over the past two years, these three new entrants have captured nearly 400,000 wireless subscribers. Combined, all three offer services in the major metropolitan areas of BC, Alberta, Ontario and Quebec, taking advantage of the country’s highest population-densities to acquire early subscribers. In terms of future growth, these three new entrants hold spectrum
covering all of Canada’s major cities. Figure 52 lists the amount of spectrum in MHz that Wind, Mobilicity and Public Mobile respectively hold in Canada’s major metropolitan markets, or regions.

**Figure 52: Spectrum holdings per metro market, by pure-play new entrant carrier**

<table>
<thead>
<tr>
<th>Market</th>
<th>Wind Mobile</th>
<th>Mobilicity</th>
<th>Public Mobile</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toronto</td>
<td>20 MHz</td>
<td>10 MHz</td>
<td>10 MHz</td>
<td>40 MHz</td>
</tr>
<tr>
<td>Vancouver</td>
<td>10 MHz</td>
<td>10 MHz</td>
<td>--</td>
<td>20 MHz</td>
</tr>
<tr>
<td>Montreal</td>
<td>--</td>
<td>--</td>
<td>10 MHz</td>
<td>10 MHz</td>
</tr>
<tr>
<td>Calgary</td>
<td>10 MHz</td>
<td>10 MHz</td>
<td>--</td>
<td>20 MHz</td>
</tr>
<tr>
<td>Edmonton</td>
<td>10 MHz</td>
<td>10 MHz</td>
<td>--</td>
<td>20 MHz</td>
</tr>
<tr>
<td>Ottawa</td>
<td>10 MHz</td>
<td>10 MHz</td>
<td>10 MHz</td>
<td>30 MHz</td>
</tr>
<tr>
<td>Saskatoon</td>
<td>10 MHz</td>
<td>--</td>
<td>--</td>
<td>10 MHz</td>
</tr>
<tr>
<td>Regina</td>
<td>10 MHz</td>
<td>--</td>
<td>--</td>
<td>10 MHz</td>
</tr>
<tr>
<td>Winnipeg</td>
<td>10 MHz</td>
<td>--</td>
<td>--</td>
<td>10 MHz</td>
</tr>
<tr>
<td>Quebec</td>
<td>--</td>
<td>--</td>
<td>10 MHz</td>
<td>10 MHz</td>
</tr>
<tr>
<td>Maritime Provinces</td>
<td>10 MHz</td>
<td>--</td>
<td>--</td>
<td>10 MHz</td>
</tr>
<tr>
<td>Newfoundland</td>
<td>20 MHz</td>
<td>--</td>
<td>--</td>
<td>20 MHz</td>
</tr>
</tbody>
</table>

As Figure 52 illustrates, Wind Mobile, Mobilicity and Public Mobile have spectrum covering all of Canada’s major cities, ranging from 40 MHz in Toronto, to 10 MHz in Quebec and the Maritime provinces. Combined, the assets of these three new entrants would provide a company with spectrum significant enough to compete as a national wireless provider. TELUS’ ability to accrue wireless customers in provinces outside of its incumbent territory of BC and Alberta over the past decade provide evidence of new entrant ability to gain traction in the wireless market. The fact that TELUS only had low-band spectrum in one of those provinces – Quebec – and had to make roaming arrangements with another carrier (as new entrants will do under the mandated roaming framework) make the situation between the 2008 new entrants and TELUS more analogous.

Unlike TELUS, however, the new entrants have an abundance of spectrum with which to grow their subscriber bases.

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97 Source: Industry Canada.
As discussed in Section 3.2, the 2008 entrants (including the integrated cable-based incumbents) have a favourable projected spectrum-to-subscriber ratio for 2012.

In fact, the 2008 new entrants would have to quadruple their projected 2012 subscriber levels to decline to a spectrum deficit similar to TELUS’.

**5.3.1 2008 new entrant profiles**

It is instructive to examine the spectrum assets and subscribers of Wind, Mobilicity and Public Mobile as a whole because all indications to date are that eventually at least two or all three of these providers will merge or be acquired by another new entrant.

Benchmarking wireless market structures in global jurisdictions proves conclusively that most countries can support no more than three wireless providers in a given market. Currently, the number of providers in Canada’s provincial markets range from three in Atlantic Canada to eight in Ontario. On average, the typical Canadian consumer has the option of at least four wireless providers. In addition, EastLink is expected to launch wireless services in Atlantic Canada this year, and Shaw’s launch is scheduled for 2012.

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Canada’s regional markets have each reached or surpassed what is considered has proven to the be the limit in terms of number of profitable wireless services providers. Not surprisingly then, rumours of mergers among the wireless providers are wide spread, and have been almost since the 2008 AWS auction.

For instance, in mid 2009, Alex Krstajic, CEO of Public Mobile said at an industry event:

“‘Take a look at the three of us up here,’ he said on stage during a panel discussion where he was joined by the heads of Wind Mobile and Mobilicity, two rival new entrants. ‘Two will not be here next year, or will be here but have different business cards.’”

More recently, Krstajic has renewed his view on what is the optimal market structure for Canada’s wireless sector. In December 2010, he said:

“I don’t think there is any question in my mind that it would be good for all parties concerned that the new entrants consolidate.”

Wind Mobile has been bolder in that it has predicted who will lead the consolidation efforts. Naguib Sawiris, chairman of Orascom, the Egyptian wireless giant providing financial backing for Wind in Canada, noted in August 2010:

“They [the other new entrants] will be dead on arrival. Wind should be the consolidator of all the smaller players here.”

Not only are rumours of new entrant consolidation not surprising based on common wireless market structures, they are also not surprising given the nature of the companies that provide at least some financial backing for these new entrants. Each of the three 2008 new entrant providers receives some level of financing from at least one foreign firm, including multiple private equity funds that follow mandates based on clear return and exit strategies. Figure 54 provides the investors in each of the 2008 new entrants.

**Figure 54: Investors in the 2008 pure-play new entrant carriers**

<table>
<thead>
<tr>
<th>New Entrant</th>
<th>Investor</th>
<th>Location(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind Mobile</td>
<td>Orascom Telecom Holding</td>
<td>Egypt</td>
</tr>
<tr>
<td></td>
<td>Charles River Ventures</td>
<td>United States</td>
</tr>
</tbody>
</table>


100 Source: Ibid.


102 Source: Company websites; news reports.
As Figure 54 illustrates, Public Mobile and Mobilicity are both backed by private equity firms. Such firms tend to have investment philosophies that require a structured, sector-specific investment process with an eventuality of an exit through a merger, sale or an IPO. For example, Public Mobile backer, Charles River Ventures, is focused on industries in communications and technology, enterprise software and services, and media and entertainment. Additionally, the company’s investment band is between $3 million and $20 million, and upon successful return on its investment it typically exits through an IPO. Besides Charles River Ventures, Public Mobile is backed by six other investment firms; Columbia Capital, M/C Venture Partners, OMERS Private Equity, Rho Ventures, Ignition Partners, and Kensington Capital Partners.

Similarly, Quadrangle, a US investment firm, has invested $200 million in Mobilicity. Quadrangle’s previous investments have been in various competitive telecommunications and cable companies. It has successfully invested and exited after realizing the required rate of return on its investment in these companies. Some of Quadrangle’s previous investments include: DataNet Communications; NuVox Communications; US LEC; Adelphia Communications; Cablevision Systems; Charter Communication; and ProSiebenSat.1. As an example of the underlying motivations held by private investment firms for investing in telecommunications business, Quadrangle acquired DataNet Communications from Warwick Valley Telephone Company in November 2004 for $4.5. In 2008, Quadrangle sold DataNet to Lightower Fiber after it “fully realized its investment.”

Wind Mobile, the brand to market name for Globalive has a different investor profile than either Public Mobile or Mobilicity. The firm is part owned by Orascom Telecom Holding (‘Orascom’), which holds roughly 99% of Wind’s debt, 65.4 % of the outstanding equity of Globalive and has 33.2% of the voting rights. Globalive benefits from being part of a global telecommunications player, Orascom, with operations in the Middle East, Africa, Asia and Canada. At the end of 2010, Orascom’s market capitalization was US$3.8 billion and it had a total subscriber base of 103 million worldwide.

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5.4 Conclusions

The companies permitted to bid on set-aside spectrum in the 2008 AWS auction all possess the resources – including financial backing, bundling ability, regional communications market dominance, and spectrum – to compete openly in Canada’s communications services industry.

Currently, six companies that acquired set-aside spectrum in the 2008 AWS auction under the Industry Canada definition of ‘new entrants’ are offering wireless services. It is anticipated that two more, EastLink and Shaw, will launch wireless offerings in 2011 and 2012, respectively. Examining these eight companies leads to multiple observations and conclusions with respect to their ability to compete openly in Canada’s wireless sector, including:

- Five of the eight companies (Shaw, SaskTel, MTS, Videotron, and EastLink) are incumbent communications services providers offering at least three communications services and holding substantial significant regional market shares across multiple service categories;
- Shaw is the largest cable and overall subscription TV provider in Canada, holds nearly 10% of all communications services and broadcasting industry revenue and 37.8% of all communications services revenue in its constable market, serves 14.5% of all Canadian communications services subscribers (third most of any company) and has free cash flow in excess of $500 million;
- Videotron holds nearly 5% of all communications services and broadcasting industry revenue and 35.7% of all communications services revenue in its constable market, serves nearly 10% of all communications services subscribers (fifth most of any company) and has free cash flow of roughly $467 million;
- EastLink is the fifth-largest cable company in Canada and the only company to offer cable services in all 10 provinces. By acquiring more than 15 other communications services providers across the country over the past few decades, EastLink has proven it has the resources to openly enter any Canadian communications services market;
- Through their ability to raise prices, capture market share and bundle customers, Shaw and Videotron have proven they are the dominant communications services companies within their cable territories;
- SaskTel and MTS, both incumbent provincial telecom providers, have each been operational for more than 100 years, have offered wireless service for more than two decades, and currently reach roughly 55% and 45% of their total provincial communications services users;
- With provincial wireless subscriber market shares of 76% and 55%, respectively, SaskTel and MTS are the leading wireless services providers in what are two of the three least
competitive markets in Canada. Advantaged by the 2008 AWS auction framework as ‘new entrants,’ neither carrier increased competitiveness in the national market by acquiring spectrum outside of its incumbent territory. Rather the companies spent a combined $105 million to secure additional spectrum covering their respective provinces;

- Each of the three companies that entered Canada’s communications market through spectrum acquired in the 2008 AWS auction – Wind Mobile, Mobilicity and Public Mobile – is financially backed to varying degrees by at least one foreign company, including multiple private equity funds. Many of these private equity firms follow mandates to enter markets under favourable conditions with the eventuality of exiting through a merger, sale or IPO.

- The three 2008 new entrants have been open about likely consolidation amongst themselves, making the prospect of multiple foreign based private equity firms being among the chief beneficiaries of the 2008 AWS new entrant framework.
6. Conclusions

A review of Canada’s communications services market and its competitors results in the following conclusions and supporting arguments:

6.1 Canada’s wireless sector is as competitive, if not more competitive than any other Canadian communications services sector, particularly so when compared to the subscription TV sector:

- The average Canadian has more choice in facilities-based wireless services than for any other communications service, while most Canadians are limited to one cable and one satellite provider;
- Wireless voice ARPU has not experienced a year-over-year percentage increase greater than that of the consumer price index since 2007, and voice ARPU has increasingly declined since 2008. In addition, wireless voice ARPU declined by 2.03% on an average annual basis between 2005 and 2009, well below the average CPI increase of 1.63%. Conversely, TV ARPU growth has greatly outpaced that of all other communications services as well as the CPI, increasing in a way that suggests de facto monopoly power;
- Cable continues to increase its share of national landline communications services revenue, and in all likelihood has now passed the traditional telecommunications services network as the leading landline platform. This growth continues in spite of the fact that three of the four largest cable companies in the country (Shaw, Videotron and Cogeco) had no wireless offering in their bundle until recent months. Conversely, the operators of the four largest telecommunications infrastructures in the country (TELUS, Bell, MTS and SaskTel) have offered wireless services for more than two decades, yet continue to lose overall landline market share to cable, demonstrating cable TV unmatched strength as the anchor of a service bundle.

6.2 Canada’s wireless sector has significant national and regional competition, and there are considerable differences in spectrum need amongst the wireless carriers:

- Rather than equitably sharing the growth in the national wireless market, Canada’s five historical wireless providers have competed vigorously for new subscriber additions over the past five years, with corporate percentage subscriber growth ranging from 55% to 30% over that time. A snapshot of the percentage of net subscriber additions captured by the three national carriers over the past three years shows a very competitive market share disbursement of 33.2% for TELUS, 29.4% for Rogers and 22.4% for Bell;
Collectively, the 2008 entrants captured 33.7% of the net additions in Q4 2010, and 23.2% of the net additions overall for the full year 2010;

With an average of 6.6 spectrum holders per province, and a minimum of five per province, spectrum is currently shared between a significant number of providers on provincial level. In 2004 only two provinces – Ontario and Quebec – had a third wireless carrier with at least 15% of subscribers. By 2009, seven provinces had a third provider with at least 15% of subscribers. The only provinces where this wasn’t the case are Manitoba, Saskatchewan and Newfoundland.

It is estimated that by 2012, 2008 entrant providers will have roughly 6.4% of national wireless subscribers and 13% of all national spectrum, providing the collective 2008 entrant providers the largest spectrum/subscriber ratio of all carriers. Conversely, with an estimated 28.5% of national subscribers and only 15% of national spectrum, TELUS will continue to have the worst spectrum/subscriber ratio through 2012.

### 6.3 Canada’s wireless fees and market structure compare favourably with other developed wireless sectors around the world, in spite of the difficult operating conditions presented by the Canada’s dispersed population:

- Canada has the seventh lowest average revenue per minute out of 21 developed international wireless market. At an average of $674.70 in total wireless revenue per square kilometre per month, Canada only ranks ahead of Australia in terms of the least profitable networks. The US market generates nearly 2.7 times as much revenue per square kilometre than Canada, and the UK market nearly 14 times more. Average revenue per square kilometre in Canada is more than eight times less than the average of the developed wireless market, and nearly 25 times less than the Netherlands – the leading country;

- Based on the Teligen methodology for comparing international wireless prices:
  - For a calling profile of 100 monthly calls and roughly 188 minutes of use, Canada ranks 13th out of 19 developed markets;
  - For a calling profile of 300 monthly calls and roughly 589 minutes of use, Canada ranks as having the eighth-lowest price of the 19 developed wireless markets;
  - Canadian mobile users can expect to pay only a 16.5% premium for tripling call volume from 100 calls to 300 calls per month, which ranks fourth among all developed wireless markets.
Canada’s wireless market is structured very similarly to that of other international markets, particularly in terms of combined subscriber share between the two leading carriers. At 66.4% subscriber share between Bell and Rogers, Canada’s market structure falls within the international trend that sees the two leading carriers in 16 of 20 developed markets combine for between 63% and 77% subscriber share. At 8.3%, the gap in subscriber shares between Canada’s leading and third-largest wireless carrier is the second lowest of all developed markets, eliminating any possibility of the duopoly structures that are common in other international wireless sectors;

Markets such as the US, which has ten times more wireless subscribers and more than double the density of subscribers as Canada, struggle to support more than four wireless carriers, further confirming the natural structure of Canada’s wireless market. In fact, in Australia, a market very similar in terms of population and geography to Canada’s, the third- and fourth-largest carriers merged in 2009 to create a market structure almost identical to Canada’s.

6.4 The companies permitted to bid on set-aside spectrum in the 2008 AWS auction all possess the resources – including financial backing, bundling ability, regional communications market dominance, and spectrum – to compete openly in Canada’s communications services industry:

- Five of the eight companies (Shaw, SaskTel, MTS, Videotron, and EastLink) are integrated incumbent communications services providers offering at least three communications services and holding substantial significant regional market shares across multiple service categories, three of which are dominant cable-based incumbents and two are regional wireless incumbents;

- Among the cable-based integrated communications services incumbents:
  - Shaw is the largest cable and overall subscription TV provider in Canada, holds nearly 10% of all communications services and broadcasting industry revenue, serves 14.5% of all Canadian communications services subscribers (third most of any company) and has free cash flow in excess of $500 million;
  - Videotron holds nearly 5% of all communications services and broadcasting industry revenue, serves nearly 10% of all communications services subscribers (fifth most of any company) and has free cash flow of roughly $467 million; and
  - EastLink is the fifth largest cable company in Canada and the only company to offer cable services in all 10 provinces. By acquiring more than 15 other communications services providers across the country over the past few
decades, EastLink has proven it has the resources to openly enter any Canadian communications services market.

- Among the regional wireless incumbents:
  - SaskTel and MTS have each been operational for more than 100 years, have offered wireless service for more than two decades, and currently reach roughly 55% and 45% of their total provincial communications services users;
  - With provincial wireless subscriber market shares of 76% and 55%, respectively, SaskTel and MTS are the leading wireless services providers in what are two of the three least competitive markets in Canada. Advantaged by the 2008 AWS auction framework as ‘new entrants,’ neither carrier increased competitiveness in the national market by acquiring spectrum outside of its incumbent territory. Rather the companies spent a combined $105 million to secure additional spectrum covering their respective provinces;

- The three other companies that have effectively entered Canada’s communications market through spectrum acquired in the 2008 AWS auction – Wind Mobile, Mobilicity and Public Mobile – are financially backed to varying degrees by at least one foreign entity, including multiple private equity funds that follow mandates to enter markets under favourable conditions with the eventuality of exiting through a merger, sale or IPO;

- Although the three pure-play new entrants have the spectrum and the financial resources to attempt to compete in Canada’s wireless market for years, they have speculated openly about the option of benefiting from the 2008 auction set-aside by selling their spectrum and network assets.