

**Price Comparisons of
Wireline, Wireless and Internet Services in
Canada and with Foreign Jurisdictions**

2013 Update

**Prepared for the
Canadian Radio-television and Telecommunications
Commission and Industry Canada**

Wall Communications Inc.

NOTE: The views expressed in this document are solely those of Wall Communications Inc. and do not necessarily represent the views of the Canadian Radio-television and Telecommunications Commission or Industry Canada.

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OVERVIEW

This is the sixth update of Wall Communications' annual telecom services price comparison study. The individual services covered by the study include: wireline, mobile wireless, broadband Internet and mobile Internet services. In addition, bundles of these same services along with basic digital TV services are also included in the study.

For each individual service category, prices are measured for a series of defined "service baskets" which have been designed to reflect typical Canadian low to high telecom service usage levels and features. On average, there are three service baskets or "levels" defined for each individual service covered by the study. The lowest available advertised prices, as offered by the surveyed service providers included in the study, are used to measure the prices of each of the defined service baskets.

For Canada, the surveyed service providers include the incumbent telephone companies (e.g., Bell and TELUS) and cable companies (e.g., Rogers, Shaw and Videotron), Primus (a reseller) and, where applicable, the new wireless entrants (e.g., WIND, Mobilicity and Public Mobile). Prices are measured in five metropolitan areas: Halifax, Montreal, Toronto, Regina and Vancouver. Aggregate Canada-wide prices are determined on weighted average basis.

For international comparison purposes, prices have also been determined on the same basis and for the same set of service baskets for five other countries: Australia, France, Japan, the U.K. and U.S.

The highlights of this year's price comparison study update follow:

Wireline Service

Three service baskets are considered in the case of wireline service: Level 1 includes low local and long distance call volumes, Level 2 includes average call volumes plus 2 features, and Level 3 high call volumes plus a full set of features.

- This year, Canadian Level 1, 2 and 3 wireline service prices increased relative to 2012 by 6%, 8% and 2%, respectively. These increases continued the general upward trend in Canadian wireline prices over the last five years, although annual increases in previous years were less pronounced.
- *International Comparison:* As in previous years' studies, Canadian wireline service prices compare favourably with those in the five surveyed foreign jurisdictions, generally falling in the middle of the range of prices measured for those countries.

Mobile Wireless

Three service baskets are also considered in the case of mobile wireless service: Level 1 includes low local and long distance call volumes, Level 2 includes average call volumes plus 2 features and 300 texts, and Level 3 includes high call volumes plus a full set of features, 300 texts and 1 GB of data usage per month.

- This year, Canadian Level 1, 2 and 3 mobile wireless prices decreased significantly relative to 2012, declining by 11%, 13% and 5%, respectively. These decreases continued the general downward trend in Canadian mobile wireless prices over the last five years, although this year's declines are greater than in previous years.
- The new wireless entrants continue to offer mobile wireless prices that are significantly lower than those of the incumbents – i.e., 19%, 14% and 39% lower for the three service levels, respectively. The price differentials narrowed in the case of the Level 1 and 2 service baskets compared to last year. Further, the monthly data allowances offered by the new wireless entrants, on average, exceed those of the incumbents.
- *International Comparison:* As in previous years' studies, while Canada's Level 2 mobile wireless price falls in the middle of the group surveyed foreign justifications, Canadian Level 1 and Level 3 prices fall on the high side of the average for the group of surveyed countries.

Broadband Internet

Four broadband Internet service baskets are included in the study, which are primarily defined on the basis of download speed: Level 1 covers service speeds of 3 Mbps or less, Level 2 covers 4 to 15 Mbps, Level 3 covers 16 to 40 Mbps and Level 4 covers services with speeds over 40 Mbps.

- This year, Canadian Level 1, 2, 3 and 4 broadband Internet prices decreased relative to 2012 by 1%, 6%, 4% and 12%, respectively. While measured broadband prices had been rising previously (and that trend was amplified by the service speed updates included in the broadband service basket definitions in last year's study), 2013 is the first year since 2009 in which measured Canadian broadband Internet prices declined.
- *International Comparison:* As in previous years' studies, Canada's Level 1 and 2 broadband Internet service prices compare favourably with the other surveyed countries. However, Canada's higher-speed Level 3 and 4 broadband Internet prices are higher than those in all of the surveyed countries, with the exception of the U.S.

Mobile Internet

Two mobile Internet service baskets are included in the study. Level 1 covers plans providing 2 GB and Level 2 covers plans providing 5 GB of data usage per month.

- This year, the Canadian Level 1 mobile Internet service declined significantly, by 15% relative to 2012, whereas the Level 2 price remained relatively constant.
- The new wireless entrants offer mobile Internet prices that are significantly lower than those of the incumbents – i.e., 30% less for Level 1 and 41% less for Level 2. The Level 1 differential is slightly smaller this year compared to last, whereas the Level 2 differential is now larger.
- *International Comparison:* Canadian Level 1 mobile Internet service rates fall on the high-side of the average of the group of surveyed countries and Canadian Level 2 mobile Internet service rates are higher of those measured in all five surveyed countries.

Bundled Services

Three service bundles are considered in the study. Bundle 1 includes wireline, broadband Internet and mobile wireless; Bundle 2 includes wireline, broadband Internet and basic digital TV; and Bundle 3 includes all four of these services.

- This year, the Canadian Bundle 1 price declined by 1%, whereas the Bundle 2 and 3 prices increased by 5% and 1 %, respectively. Over the course of the last five years, Bundle 1 and 3 prices have been remained relatively stable, whereas Bundle 2 prices have tended to increase gradually.
- *International Comparison:* Canadian bundled service rates fall in the middle of the group of surveyed countries. While differences across countries in the underlying services included in the bundles (especially broadband and digital TV services) can make bundled service comparisons somewhat tenuous, it is noteworthy that Canadian bundled service rates continue to compare very favourably to those in the U.S., where service pricing and provisioning practices are similar to those in Canada.

The following table provides a summary of the 2013 price comparison results for Canada and the five surveyed foreign jurisdictions expressed in purchasing power parity (PPP) adjusted Canadian dollars.

Summary of International Price Comparisons

Average Monthly Prices in PPP adjusted \$CDN

	Canada	U.S.	U.K.	France	Australia	Japan
Wireline Service						
Level 1 (low-volume use)	\$ 35.33	\$ 45.88	\$ 31.68	\$ 33.53	\$ 46.30	\$ 30.45
Level 2 (average use)	\$ 55.77	\$ 70.85	\$ 42.35	\$ 51.93	\$ 77.05	\$ 61.70
Level 3 (high-volume use)	\$ 61.53	\$ 76.08	\$ 61.35	\$ 55.03	\$ 96.00	\$ 97.17
Wireless Service						
Level 1 (low-volume use)	\$ 30.71	\$ 33.08	\$ 21.97	\$ 20.24	\$ 21.82	\$ 28.09
Level 2 (average use)	\$ 44.86	\$ 76.14	\$ 38.85	\$ 44.08	\$ 35.04	\$ 44.36
Level 3 (high-volume use)	\$ 93.59	\$ 145.79	\$ 63.52	\$ 58.90	\$ 49.54	\$ 125.24
Broadband (Fixed access)						
Level 1 (\leq 3 Mbps, 5 GB/month)	\$ 38.91	\$ 52.38	<i>na</i>	<i>na</i>	<i>na</i>	\$ 45.55
Level 2 (4 -15 Mbps, 20 GB/month)	\$ 51.20	\$ 81.42	\$ 32.85	<i>na</i>	\$ 58.15	\$ 52.53
Level 3 (16 - 40Mbps, 50 GB/month)	\$ 65.18	\$ 99.10	\$ 43.01	\$ 49.34	\$ 57.10	\$ 61.52
Level 4 (\geq 40 Mbps, 75 GB/month)	\$ 82.88	\$ 123.27	\$ 53.31	\$ 54.58	\$ 72.69	\$ 64.89
Mobile Internet (\geq 3G Technology)						
Level 1 (2 GB/month)	\$ 44.55	\$ 54.61	\$ 23.71	\$ 34.98	\$ 28.80	\$ 57.54
Level 2 (5 GB/month)	\$ 64.67	\$ 59.82	\$ 62.01	\$ 44.65	\$ 35.13	\$ 58.24
Bundled Services						
1) Wireline-Broadband-Wireless	\$ 139.15	\$ 185.00	\$ 111.39	\$ 95.62	\$ 146.45	\$ 149.63
2) Wireline-Broadband-DTV	\$ 134.19	\$ 167.92	\$ 98.14	\$ 69.17	\$ 145.27	\$ 137.23
3) Wireline-Broadband-Wireless-DTV	\$ 176.80	\$ 224.09	\$ 140.56	\$ 101.35	\$ 178.24	\$ 182.62

Latest available OECD Purchasing Power Parity (PPP) indexes were used to calculate PPP-adjusted exchange rates. Average market exchange rates for the month corresponding to the OECD PPPs were used to convert foreign prices into Canadian dollars.

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1.0 INTRODUCTION

This report provides a 2013 update of the previous annual telecommunications price comparison studies conducted over the period 2008 to 2012 by Wall Communications Inc. (Wall Communications) for the Canadian Radio-television and Telecommunications Commission (the CRTC or Commission) and Industry Canada.

As in previous years, the consumer telecom services covered in this year's study include the following stand-alone and bundled services:

- i) wireline,
- ii) mobile wireless,
- iii) broadband Internet access (using wireline technology),
- iv) mobile Internet access (using 3G or higher wireless technology), and
- v) bundled combinations of the first three services and basic digital TV.

A series of service baskets reflecting different service usage levels have been established for each of these service categories. For Canada, the study provides a comparison of prices for each of the defined service basket for each of the following five major cities: Halifax, Montreal, Toronto, Regina and Vancouver. As well, an aggregate Canada-wide price is determined based on the weighted average prices measured in these five cities. The study also measures prices for the same set of service baskets for Australia, France, Japan, the United Kingdom (U.K.) and the United States (U.S.). Service basket prices in these five foreign jurisdictions are compared with those measured for Canada. Historical Canadian and international service basket and bundle prices are provided in the study for the period 2008 to 2013.

In terms of layout of this report, the next section provides a brief review of the methodology used to measure and compare stand-alone and bundled service prices, and describes all changes made in this year's study relative to last year's study. Sections 3 through 7 provide Canadian and international price comparisons results for wireline, mobile wireless, broadband Internet access, mobile Internet access and bundled services, respectively. A detailed summary of all service baskets and bundles included in the study is provided in Attachment 1. Detailed historical summary results for the period 2008 to 2013 are provided in Attachments 2 and 3.

2.0 METHODOLOGY

2.1 Service Basket Design

This study relies on the service basket-based price comparison methodology described in detail in Wall Communications' 2008 methodology report.¹ Various modifications to the 2008 methodology have been made in successive studies to reflect changes in service usage patterns over time. All such changes have been carried over into this year's study. All additional changes in methodology introduced this year are described below.

The price comparison methodology used in this study is based on a "service basket" approach where separate service baskets are defined on the basis of service usage levels, service features and characteristics. In the case of wireline and mobile wireless services, three separate service baskets are defined:

- **Level 1:** entry level or low-volume service usage
- **Level 2:** average or mid-level service usage
- **Level 3:** premium level or high-volume service usage

In the case of broadband Internet services, a **Level 4** broadband Internet service basket was introduced in the 2012 study to capture very-high speed broadband Internet services which are now commonly available in Canada and the countries included in the study. In the case of mobile Internet services, only two service baskets or levels are included in the study.

Each of the service baskets has been designed to reflect typical low, mid/average and high-volume Canadian telecom service consumption levels and/or service feature subscription rates.

Three service bundles are also included in the study:

- **Bundle 1:** wireline, broadband internet and mobile wireless
- **Bundle 2:** wireline, broadband internet and digital TV
- **Bundle 3:** wireline, broadband internet, mobile wireless and digital TV

Level 2 or "average-user" stand-alone service baskets are generally used in each of the bundles. In some cases, advertized bundling options restrict the available choice of specific service elements that are eligible for bundling discounts. In such cases, eligible service elements are included instead (which typically involved including a Level 3 or 4 rather than Level 2 service element). For the

¹ Wall Communications, *An Examination of Alternative Approaches for Conducting Price Comparisons of Wireline, Wireless and Internet Services in Canada and with Foreign Jurisdictions*, prepared for the CRTC and Industry Canada, 5 May 2008.

digital TV service component, a "basic" digital television service package option was selected for inclusion in the applicable bundles.

The specific service elements included in each service basket are described in detail in the following sections and the associated service elements and usage assumptions in each case are also summarized in Attachment 1.

2.2 Canadian Price Data

The Canadian price data included in the study has been collected from a variety of telecom service providers, including incumbent telephone companies (such as Bell and TELUS) and incumbent cable companies (such as Rogers, Shaw and Videotron).² Prices offered by reseller Primus are also taken into account. For mobile services, new entrant wireless service providers WIND, Mobilicity and Public Mobile are also taken into account. In terms of geographic coverage, price data is collected for each of the following five Canadian cities: Halifax, Montreal, Toronto, Regina and Vancouver. Table 1 provides a list of the surveyed service providers in this year's study broken out by city and by service basket. No changes have been made to the set Canadian surveyed service providers for this year's study relative to last year.

Table 1
SELECTED CANADIAN CITIES AND SERVICE PROVIDERS

City	Service Baskets	Service Providers
Halifax	Wireline Broadband Internet Mobile Wireless Mobile Internet Bundles	Bell Aliant, EastLink Bell Aliant, EastLink Bell, TELUS, Rogers Bell, TELUS, Rogers Bell Aliant, EastLink
Montreal	Wireline Broadband Internet Mobile Wireless Mobile Internet Bundles	Bell, Videotron, Primus Bell, Videotron, Primus Bell, TELUS, Rogers, Primus, Videotron, Public Mobile Bell, TELUS, Rogers, Videotron Bell, Videotron, Primus (as applicable)
Toronto	Wireline Broadband Internet Mobile Wireless Mobile Internet Bundles	Bell, Rogers, Primus Bell, Rogers, Primus Bell, TELUS, Rogers, Primus, WIND, Mobilicity, Public Mobile Bell, TELUS, Rogers, WIND, Mobilicity Bell, Rogers, Primus (as applicable)

² Note that only the incumbents primary name brand mobile services are taken into account for this study, not their respective flanker brand mobile services (such as Rogers Fido and Chatr, Bell Virgin and Solo and TELUS Koodo).

City	Service Baskets	Service Providers
Regina	Wireline Broadband Internet Mobile Wireless Mobile Internet Bundles	SaskTel, Access Communications SaskTel, Access Communications SaskTel, TELUS, Rogers SaskTel, TELUS, Rogers SaskTel, Access Communications
Vancouver	Wireline Broadband Internet Mobile Wireless Mobile Internet Bundles	TELUS, Shaw, Primus TELUS, Shaw, Primus Bell, TELUS, Rogers, Primus, WIND, Mobilicity Bell, TELUS, Rogers, WIND, Mobilicity TELUS, Shaw, Primus (as applicable)

The measured prices for each of the stand-alone and bundled service baskets in each Canadian city were aggregated using each service provider’s respective estimated subscriber-based market share as weights. In addition, to determine a Canada-wide market price for each stand-alone and bundled service basket, city-specific prices were aggregated using corresponding city population levels as weights.

The price data collected for this study is drawn from the surveyed service providers' websites and, where necessary, supplemented with further clarifications from customer service representatives (CSRs).³ The price data reflects currently advertized prices which are generally available to new customers or existing customers changing service plans. For each service basket, the lowest available currently advertized stand-alone prices are used to determine the total price of each service basket. For this purpose, regular or standard prices are used – i.e., short term promotions or price discounts for which new customers may be eligible are not taken into account.⁴

Overall, the Canadian price comparisons included in this year's study are based on the measurement of the prices of roughly 250 separate Canadian telecommunications service baskets, covering five cities, two to seven service providers by city and up to fifteen stand-alone and bundled service baskets for each service provider.

³ The 2013 Canadian price data was collected during the period January 23 to February 9, 2013. The collection of the additional 2013 international price data was subsequently completed as of March 20, 2013.

⁴ Note that current advertized prices are not necessarily reflective of the average price levels paid by a service provider’s customer base as a whole since a significant number of existing customers are on pre-established price plans.

2.3 International Price Data

Five foreign jurisdictions are included in the study for price comparison purposes: the U.S., the U.K., Australia, France and Japan. The cities and service providers surveyed in each of these countries are summarized in Table 2 below. Note that there are no changes in this respect relative to last year's study.

Table 2
SELECTED FOREIGN JURISDICTIONS AND SERVICE PROVIDERS

City	Basket	Service Providers
United States Boston, MA	Wireline Broadband Internet Mobile Wireless Mobile Internet Bundles	Verizon, Comcast Verizon, Comcast AT&T, Verizon, Sprint AT&T, Verizon, Sprint Verizon, Comcast
Kansas City, MO	Wireline Broadband Internet Mobile Wireless Mobile Internet Bundles	AT&T, Time Warner AT&T, Time Warner AT&T, Verizon, Sprint AT&T, Verizon, Sprint AT&T, Time Warner
Seattle, WA	Wireline Broadband Internet Mobile Wireless Mobile Internet Bundles	Qwest, Comcast Qwest, Comcast AT&T, Verizon, Sprint AT&T, Verizon, Sprint Qwest/Verizon, Comcast
United Kingdom London	Wireline Internet Mobile Wireless Mobile Internet Bundles	BT, Virgin, Talk Talk BT, Virgin, Orange, AOL Broadband Orange, Virgin, Vodafone Orange, Virgin, Vodafone BT (Orange),* Virgin
Australia Sydney	All baskets	Telstra and Optus
France Paris	All baskets	Orange (France Telecom), SFR (Neuf Cegetel), Numericable
Japan Tokyo	Wireline Broadband Internet Mobile Wireless Mobile Internet Bundles	NTT, J:Com NTT, J:Com, KDDI, Yahoo! BB NTT DoCoMo, J:Com (Willcom), KDDI, eMobile NTT DoCoMo, J:Com (Willcom), KDDI, eMobile NTT, J:Com (Willcom**)

* BT discontinued marketing mobile wireless services in 2008. For the purposes of the UK bundles, Orange's mobile wireless service was included along with BT's wireline, Internet and digital TV services.

** Willcom was acquired by SoftBank in 2010.

For international price comparison purposes, foreign currency prices have been converted to Canadian dollars using currency market exchange rates adjusted for purchasing power parity (PPP) differences between countries. The OECD's latest available PPP comparative price level indexes for January 2013 were used for this purpose in conjunction with average market exchange rates for the same one-month period.⁵

Canadian dollar-based price comparisons between Canada and other countries can be affected significantly by year-over-year currency exchange rate fluctuations. PPP-adjusted exchange rates take into account both changes in exchange rates and PPP adjustment factors between countries and, therefore, generally provide a more appropriate basis for comparing price levels between countries. For this reason, all of the international price comparison results shown in the main body of this report are based on PPP-adjusted Canadian dollars.

Nevertheless, it should be noted that fluctuations in both exchange rates and PPP adjustment factors can affect international price comparisons over time. This caveat is particularly relevant in the case of this study given the significant changes in both exchange rates and PPP adjustment factors over the course of the six year period (2008 – 2013) covered by the study.

It should also be noted that service prices in the U.K., France, Australia and Japan are typically quoted inclusive of retail value added taxes (VAT) or goods and services taxes (GST). In each case, we have removed applicable VAT or GST charges to allow a cross-country comparison of service rates excluding government sales taxes.⁶ On the other hand, other industry-specific regulatory fees and surcharges are included for price comparison purposes (e.g., 911 fees, universal service fees and other regulatory and licence fees).

Overall, the international price comparisons included in this year's study are based on the measurement of the prices of roughly 270 separate stand-alone and bundled service baskets. Adding the Canadian and international service baskets together, the prices of roughly 520 service baskets were measured to generate the price comparison results presented in this report.

2.4 Summary of Changes in Methodology

There are only relatively minor methodological and measurement changes incorporated in this year's study, which include:

⁵ See the OECD's main economic Indicators at: http://www.oecd.org/document/47/0,3343,en_2649_34357_36202863_1_1_1_1,00.html. Currency exchange rates were obtained from: <http://www.xe.com>.

⁶ The VAT rates in the U.K., France and Japan are 20%, 19.6% and 5%, respectively. The GST in Australia is 10%. Typically in each of these countries advertized prices are quoted inclusive of VAT or GST.

- i) Minor updates to the mobile wireless service baskets were introduced to reflect changes in Canadian usage patterns (e.g., in the applicable wireless baskets, assumed monthly text message volumes were increased from 250 to 300 per month).
- ii) Updates to the market share information used to determine aggregate Canadian and international weighted average prices.⁷

Since first conducted in 2008, each successive price comparison study update has incorporated a number of generally minor methodological and measurement changes (such as those just mentioned). One exception in this respect applies in the case of the changes to the broadband Internet service basket definitions introduced in the 2012 study, which significantly affect comparisons of measured broadband prices in 2012 and 2013 with earlier years. They also affect comparisons of bundled service prices between the same two periods given that broadband Internet service is one of the service elements included in all three defined service bundles. In general, given the ongoing methodological and measurement modifications to the study on a year-to-year basis, caution should be exercised when considering price trends over the six year period for which price data is now available.

⁷ For Canada, the latest CRTC Communications Monitoring Report was relied on for this purpose. For the U.S., FCC market share and industry reports were used. In other cases, regulatory agency market reports, company financial and market analyst reports were also relied on, where necessary.

3.0 WIRELINE SERVICE

3.1 Wireline Service Baskets

As in previous studies, the following service element charges are considered for wireline service price comparison purposes:

- i) access line charges (including, as applicable, free calling allowances);
- ii) local usage/calling charges (where applicable);
- iii) long distance charges for both domestic and international calls;
- iv) optional feature charges (e.g., voice mail, call display & other features); and
- v) other recurring charges, where applicable, such as 9-1-1, network access fees and/or other surcharges or regulatory fees.

One-time service charges, such as installation and activation fees, are excluded.

Three wireline service baskets are included in the study. They consist of the following main elements:

- **Level 1:** 400 incoming & outgoing minutes per month, with 10% of outgoing minutes treated as long distance, and no optional features
- **Level 2:** 1,000 incoming & outgoing minutes per month, with 20% of outgoing minutes treated as long distance, and two optional features (voice mail and call display)
- **Level 3:** 1,600 incoming & outgoing minutes per month, with 30% of outgoing minutes treated as long distance, and a full set of optional features

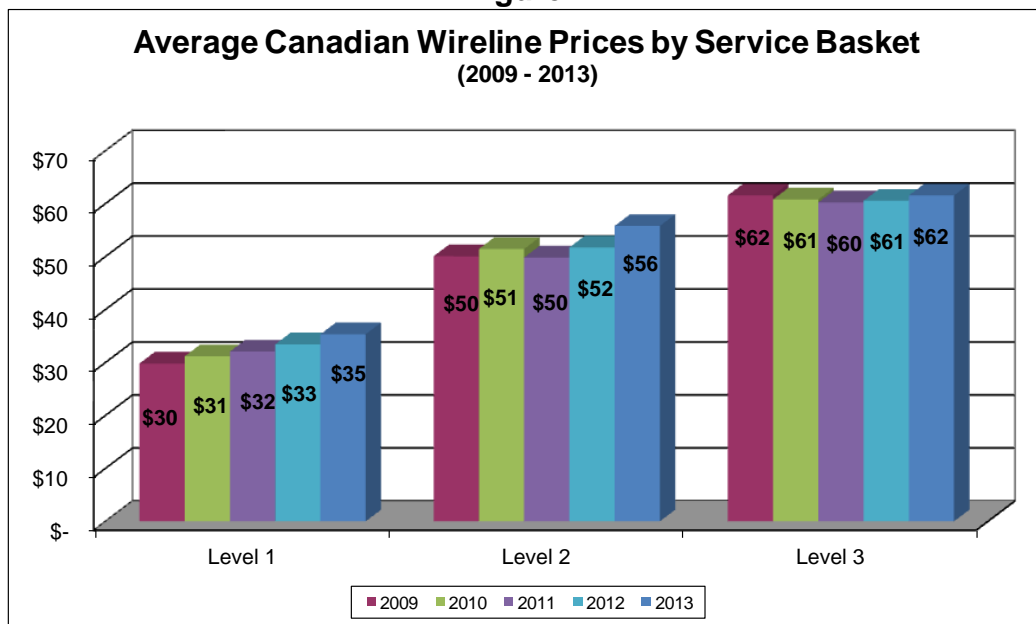
Table A1.1 in Attachment 1 provides a detailed summary of the service elements and usage assumptions for each the three wireline service baskets included in this study. No changes to the wireline service basket definitions have been made in this year's study relative to previous studies.

3.2 Canadian Wireline Service Price Comparisons

Figure 1 below provides a summary of Canadian average monthly prices for each of the three wireline service baskets for the period 2009 to 2013. Average monthly prices for all three wireline service baskets increased relative to last year. The Level 1 and 2 price increases in 2013 relative to 2012 are 5.7% and 7.9%, respectively. The Level 3 price increase is considerably lower at 1.7%.

Over the last five years, on average, the price of the Level 1 wireline service basket has increased at a rate of about 4.4% per year. The Level 2 wireline basket has increased at a somewhat slower rate of about 2.7%. In both cases, these increases exceeded the average annual rate of inflation over the same period which was 1.6%.⁸ On the other hand, the price of the high usage Level 3 basket has remained relatively constant at about \$62 per month.

Figure 1



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Table A2.1 in Attachment 2 provides more detailed average wireline prices by service basket and by surveyed city (Halifax, Montreal, Toronto, Regina and Vancouver) for the period 2008 to 2013.

⁸ Statistics Canada, Catalogue no. 62-001-X.

3.3 International Wireline Service Price Comparisons

In the case of wireline services, there are a variety of important pricing differences to be taken into account when comparing international prices:

- *Regulatory Fees:* In the U.S., there are a number of unique regulatory and government fees and surcharges (other than sales taxes). These include, among other things, subscriber line charges (SLC) and universal service fund (USF) charges. Collectively, these charges can add up to as much as \$8 to \$12 per month over and above a service provider's local, long distance and feature charges. The range and magnitude of these charges, however, varies by state and, indeed, municipality.⁹ For this year's study, the principal surcharges wireline customers face in the U.S., namely the SLC and USF, have been updated.
- *Price Structure:* Wireline rate structures in the U.K., Australia, France and Japan differ significantly compared to Canada (as well as the U.S.). Local phone service rates in these countries are set on a usage sensitive basis. In the case of local calls, per minute charges apply along with a per call set-up or connection fee, both of which can vary depending on the selected service plan.¹⁰ Charges also vary depending on whether a call is made to a landline or mobile number (and can also vary by mobile service provider). Local and national per minute and per call rates are generally the same; as a result, there is typically no price difference between local and domestic long distance calling rates.¹¹

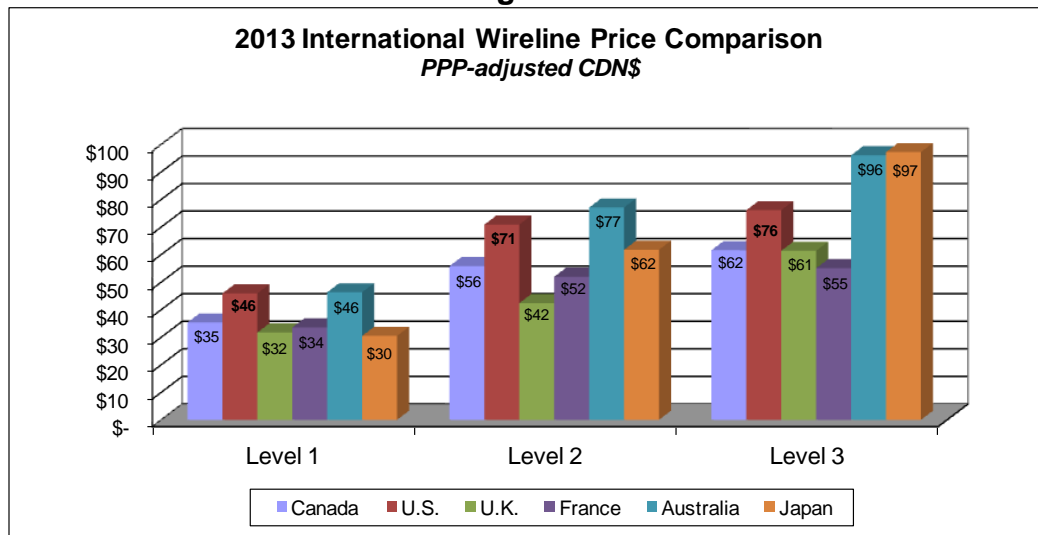
Figure 2 below provides a comparison of 2012 average wireline prices for Canada and the surveyed foreign jurisdictions for each of the three wireline service baskets. All prices have been converted to Canadian dollars using PPP-adjusted exchange rates. Service rates for the U.K., France and Japan exclude VAT and, in Australia's case, GST.

⁹ As noted in previous studies, obtaining precise information on these fees and surcharges is extremely difficult and even company CSRs are unable to provide complete information with regard to these surcharges given they vary so widely by location. As a result, in some cases, estimated surcharges have been used. See the FCC's Consumer Facts Information on Understanding Your Phone Bill:
<http://www.fcc.gov/cgb/phonebills/samplePhonebill.html>.

¹⁰ Australia is unique among the three countries in that local calls to landlines are charged on a per call basis with no additional per minute charges.

¹¹ Australia differs somewhat in this respect. Under some home phone service plans different per minute rates can apply depending on the distance of a domestic call.

Figure 2



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For the Level 1 wireline service basket, at roughly \$35 per month, Canada falls just above the middle of the group of the surveyed countries. Canada's Level 1 wireline service basket price is slightly higher than the corresponding prices in the U.K., France and Japan, but significantly lower than those in the U.S. and Australia.

For the Level 2 wireline service basket, at \$56 per month, Canada sits in a similar position. In this case, corresponding prices in the U.K. and France are lower, whereas prices in Japan are higher and considerably higher in the cases of the U.S. and Australia.

A similar ranking applies in the case of the Level 3 wireline service basket. The Canadian price of \$62 is above the corresponding prices for U.K. and France again, but well below the prices in the remaining three countries.

Table A3.1 and Figures A3.1 a, b and c in Attachment 3 provide detailed historical wireline service basket information for the period 2008 to 2013. As can be seen from that information, Canada's wireline service basket price rankings shown in Figure 2 above are generally consistent with the results obtained in previous years. Wireline prices in Canada along with the U.K. and France have consistently been below those of the U.S., Australia and Japan, especially so in the cases of the Level 2 and 3 wireline service baskets.

The significant difference between measured prices for Canada and the U.S. warrants an explanation. As shown in Figure 2 above, measured in PPP-adjusted Canadian dollars, U.S. wireline rates for each of the three wireline service baskets are considerably higher than those in Canada. However, when compared in terms of "own currencies" (see Table A3.1 in Attachment 3), U.S.

wireline prices measured in U.S. dollars are very close to the corresponding Canadian prices measured in Canadian dollars. As well, the Canada-US exchange rate was very close to par during the time period the price data was collected. Therefore, the significantly higher U.S. wireline service prices expressed in PPP-adjusted Canadian dollar rates are, in large part, a result of the PPP adjustment to the Canadian/U.S. exchange rate. The PPP adjustment, in this case, accounts for the higher purchasing power of a U.S. dollar in the U.S. relative to a Canadian dollar in Canada, which based on the latest available OECD PPP data is 29% higher.¹²

This same PPP adjustment effect applies in the case of the Canadian and U.S. price comparisons provided in the following sections for the other service baskets considered in the study. Indeed, the same consideration applies for the other four foreign jurisdictions as well.¹³

In sum, as in previous years' studies, Canadian wireline service rates compare favourably with those of the five surveyed foreign jurisdictions, generally falling into the middle of the range of wireline prices measured for those countries.

¹² To provide some further context: Suppose that the Canadian/U.S. exchange rate is at par (i.e., a Canadian dollar equals a U.S. dollar). Then suppose the exact same basket of telephone services costs \$40 CDN in Canada and \$40 US in the US. If the PPP is 1.3, meaning that a US dollar will purchase 30% more (of all goods and services) than a Canadian dollar, this implies that the \$40 US paid for the telephone service basket would buy more non-telephone goods and services than the \$40 CDN. In other words, it would take \$52 CDN to buy as much of other goods and services as the \$40 US. Accounting for this PPP difference implies that a \$40 US telephone service basket is equivalent to \$52 CDN in PPP-adjusted terms.

¹³ Based on the same vintage OECD PPP data (i.e., January 2013), the PPP adjustment for the U.K. is 1.10, France is 1.09, Australia is 0.77 and Japan is 1.01.

4.0 MOBILE WIRELESS SERVICE

4.1 Mobile Wireless Service Baskets

As in previous studies, the following mobile wireless service element charges are considered for price comparison purposes:

- i) network access/airtime charges (taking into account defined amounts of daytime, evening and weekend minute volumes);
- ii) optional feature charges (e.g., voice mail, call display and others);
- iii) long distance charges for both domestic and international calls;
- iv) short message service (SMS) or texting charges;
- v) data service charges (e.g., e-mail, browsing and video); and
- vi) other monthly recurring service fees, where applicable, such as 9-1-1 service charges, universal service fees and other regulatory fees or surcharges.

There are several notable service fee or cost exclusions which include: one-time charges (such as activation fees), roaming charges and handset costs. The latter two items have been excluded to reduce the complexity of the analysis and provide more straightforward international price comparisons.

Three mobile wireless service baskets are included in the study. They consist of the following main elements:

- **Level 1:** 150 incoming & outgoing minutes per month, with 10% of outgoing minutes treated as long distance, and no optional features
- **Level 2:** 450 incoming & outgoing minutes per month, with 10% of outgoing minutes treated as long distance, two optional features (voice mail and call display), and 300 text messages per month
- **Level 3:** 1,200 incoming & outgoing minutes per month, with 15% of outgoing minutes treated as long distance, full set of optional features, 300 text messages and 1 Gigabyte (GB) data usage per month

This year one change to the mobile wireless service baskets was made. The number of monthly text messages in the Level 2 and Level 3 service baskets was increased from 250 to 300. The new figure is consistent with the current number of monthly text messages sent by the average Canadian wireless service subscriber.¹⁴

In the case of the Level 1 mobile wireless service basket, both “pre-paid” and “post-paid” service options are considered. The least expensive of the two options is used for the purpose of determining the service basket price. In the case of the other two mobile wireless service baskets, post-paid plans are generally the lowest price option.

Table A1.2 in Attachment 1 provides a summary of each of the service elements and usage assumptions included in all three mobile wireless service baskets.

4.2 Canadian Mobile Wireless Price Comparisons

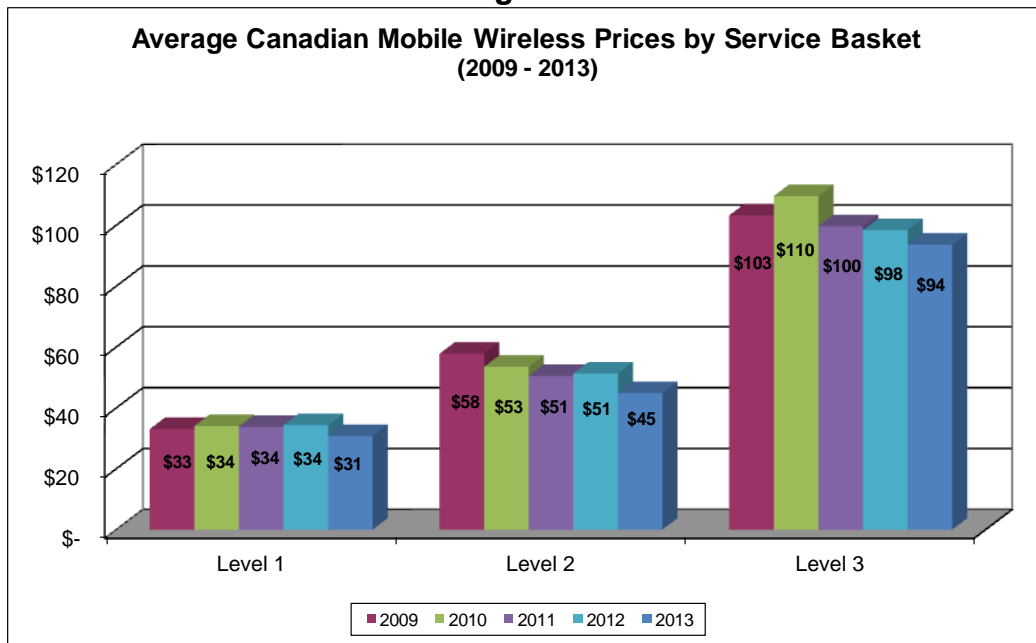
Figure 3 below provides a summary of Canadian weighted average mobile wireless prices for each of the three defined service baskets for the period 2009 to 2013. As shown in the figure, Canadian mobile wireless prices declined significantly in 2013 for all three services levels. Relative to 2012, the Level 1 service basket price dropped by close to 11%, Level 2 dropped by close to 13% and Level 3 dropped by roughly 5%. These price declines were driven in large part by lower price service plan (voice, text and data) offers available from both the incumbent carriers and new entrants.

The decline in prices in 2013 continues the general downward trend in mobile wireless prices over the last five years. The Level 1 service basket price has declined by 7% overall since 2009. In the case of the Level 2 service basket, the price has declined by over 22% over the same period. In the case of the Level 3 service basket, the price has declined by just over 9% since 2009 (or 15% when compared to 2010 when the measured Level 3 service basket price jumped in price).

Table A2.2 in Attachment 2, provides detailed historical mobile wireless price information by city and by service basket for the period 2008 to 2013.

¹⁴ Source: <http://cwta.ca/facts-figures/>.

Figure 3



A comparison of average mobile wireless rates for the incumbent carriers and the new entrants is provided in Table 3 below. The comparison is provided for three cities: Vancouver (where WIND and Mobilicity operate), Toronto (where WIND, Mobilicity and Public Mobile operate) and Montreal (where Videotron and Public Mobile operate). For each of the three cities, the incumbent carriers include Rogers, Bell and TELUS.¹⁵

As can be seen from the table, for the Level 1 mobile wireless service basket, the mobile wireless prices offered by new entrants are between 4% and 27% lower than those of the incumbents and, on average, 19% lower for the three cities combined. The relative price discounts available from the new entrants are not as great in the case of the Level 2 service basket, where new entrants' prices are between 10% to 17% lower by city, and 14% lower on average. The differences are much greater however in the case of the Level 3 service basket, where the price discounts offered by entrants relative to the incumbents' services are 26% to 46% lower by city, and 39% lower on average. The somewhat lower new entrant discounts in the case of Montreal are largely due to Videotron's pricing strategy which appears to be based on providing greater discounts when its mobile wireless service is bundled with other Videotron services rather than purchased on a stand-alone basis.

¹⁵ Note that only the incumbents primary name brand mobile services are taken into account for this study, not their respective flanker brand mobile services (such as Rogers Fido and Chatr, Bell Virgin and Solo and TELUS Koodo).

Table 3
2013 Canadian Mobile Wireless Service Rates
Incumbents versus New Entrants

Baskets	Vancouver	Toronto	Montreal	Average
Level 1 Basket (150 min/month)				
Incumbents	\$ 30.38	\$ 32.05	\$ 30.65	\$ 31.03
New Entrants	\$ 22.09	\$ 23.72	\$ 29.58	\$ 25.13
<i>Percentage Differential</i>	<i>-27%</i>	<i>-26%</i>	<i>-4%</i>	<i>-19%</i>
Level 2 Basket (450 min and 300 text per month)				
Incumbents	\$ 44.41	\$ 44.41	\$ 44.68	\$ 44.50
New Entrants	\$ 38.10	\$ 37.07	\$ 40.18	\$ 38.45
<i>Percentage Differential</i>	<i>-14%</i>	<i>-17%</i>	<i>-10%</i>	<i>-14%</i>
Level 3 Basket (1200 min, 300 text and 1GB data per month)				
Incumbents	\$ 95.03	\$ 94.36	\$ 94.63	\$ 94.67
New Entrants	\$ 53.30	\$ 50.53	\$ 69.95	\$ 57.93
<i>Percentage Differential</i>	<i>-44%</i>	<i>-46%</i>	<i>-26%</i>	<i>-39%</i>

Simple unweighted averages used in all cases.

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Compared to last year's study, the differentials between the incumbents' and new entrants' mobile wireless prices have narrowed considerably in the case of the Level 1 and 2 service baskets, but otherwise remained unchanged in the case of the Level 3 service basket. It is also worth noting that while many of the new entrants' service plans include unlimited voice, unlimited text and, in the case of the Level 3 basket, unlimited data, the incumbents' plans typically include limits on at least one or more of these same service components. However, over the last year, the incumbents have introduced new service plans which include unlimited local and, in some cases, unlimited national calling. These new plans have been used to determine the prices of the incumbents' Level 3 service baskets.

4.3 International Mobile Wireless Service Price Comparisons

As noted in previous studies, there are a number of important pricing differences that should be borne in mind when comparing Canadian and foreign mobile wireless prices.

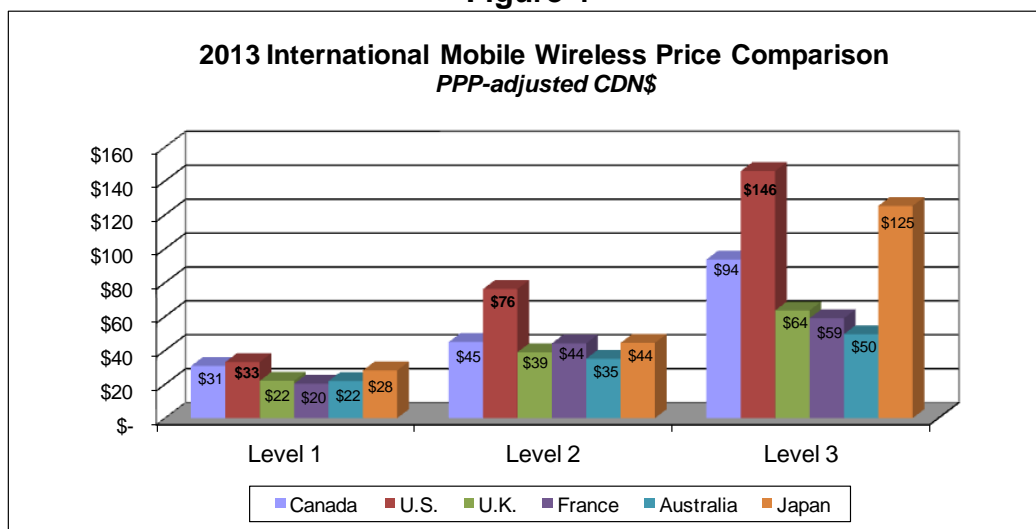
- *Regulatory Fees:* Regulatory fees of one form or another apply in the cases of Canada, Japan and the U.S. In Canada there is typically an explicit 9-1-1 fee as well as an implicit high-cost serving area contribution fee which does not appear as a line item on a customer's bill. In Japan there is a universal service fee. In the U.S., however, there are a variety

of applicable regulatory fees, federal and state USF surcharges and other fees.¹⁶ For this year's study, we have estimated these charges based on information collected in previous pricing studies and, where applicable, updated USF fees and carrier-specific regulatory cost recovery charges.

- **Price Structure:** The pricing of mobile wireless service plans in the U.K., Australia, France and Japan differs significantly compared to Canada as well as the U.S. Mobile wireless prices in the U.K., Australia, France and Japan are set on a "calling party pays" basis, under which mobile customers pay only for outgoing calls. In contrast, Canadian and U.S. pricing plans are based on a "receiving party pays" approach, under which customers pay for incoming and outgoing calls. Unlike Canada and the U.S., some mobile wireless service plans in the U.K., Australia, France and Japan also include per call setup charges and/or different per minute call rates to landline versus mobile customers, as well as potentially different per minute rates for on-net versus off-net mobile calls.

Figure 4 below provides a comparison of current mobile wireless prices for Canada and the surveyed foreign jurisdictions for each of the three wireless service baskets. All prices exclude retail sales taxes (i.e., GST or VAT) and have been converted to PPP-adjusted Canadian dollars.

Figure 4



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In the case of the Level 1 mobile wireless service basket, the Canadian average monthly price of \$31 is slightly lower than the U.S. price. Otherwise, the Canadian Level 1 price is higher than rates found in all of the remaining surveyed foreign jurisdictions, especially so in the cases of the U.K., France and Australia.

¹⁶ See, for instance, <http://www.fcc.gov/cgb/phonebills/WirelessPhonebill.html>.

In the case of the Level 2 service basket, the Canadian average monthly price of \$45 falls roughly in the middle of the group of surveyed countries. It is very similar to but slightly higher than the Level 2 rates in France and Japan. Otherwise it is well below the U.S. rate, but considerably higher than the Level 2 prices in the U.K. and Australia.

In the case of the Level 3 wireless service basket, the average Canadian monthly rate of roughly \$94 falls on the high-side of the average for the group of surveyed foreign jurisdictions as a whole. In this case, the Canadian Level 3 rate is well below the rates found in the U.S. and Japan, but also well above those in the U.K., France and Australia.

Table A3.2 and Figures A3.2 a, b and c in Attachment 3 provide more detailed historical international mobile wireless price information for the period 2008 to 2013. As the data in Attachment 3 shows, Canada's relative mobile wireless service price ranking has not changed significantly between 2008 and 2013 with respect to the five surveyed foreign jurisdictions. However, in the case of the Level 3 service basket, the differential between Canadian rates and those in the countries with lower rates (i.e., the U.K., France and Australia) has grown in recent years.

In sum, the Canadian Level 2 (average usage) mobile wireless service basket price falls in the middle of the group relative to the five foreign justifications included in this study. However, in the case of the Level 1 (low usage) and Level 3 (high usage including data) service baskets, Canada tends to fall on the high side of the average for the group of surveyed countries.

5.0 BROADBAND INTERNET SERVICE

5.1 Broadband Internet Service Baskets

The four broadband service baskets included in the study are defined in terms of broadband service speed and monthly data usage:

- **Level 1:** *Speed:* "basic" Internet service with advertized¹⁷ download speed of up to **3.0 Mbps** (targeted speed in the upper end of the range).

Data usage per month: **5 GB.**

- **Level 2:** *Speed:* "average" (Canadian) high-speed Internet service with advertized download speed of **4.0 to 15 Mbps** (targeted speed in the upper end of the range).¹⁸

Data usage per month: **20 GB.**¹⁹

- **Level 3:** *Speed:* high-speed Internet service with advertized download speed of **16 to 40 Mbps** (targeted speed in the upper end of the range).

Data usage per month: **50 GB.**

- **Level 4:** *Speed:* high-speed Internet service with advertized download speed of **over 40 Mbps** (targeted speed in the 41 to 100 Mbps range).

Data usage per month: **75 GB.**

Modem rental fees are also taken into account since they are mandatory in some instances. In other cases, where the modem is not included but must be purchased by the customer, the cost of the required equipment is amortized over 24 months. Otherwise, one-time installation or activation fees are excluded.

¹⁷ It should be noted that "advertized" speeds can differ for a variety of reasons from "actual" speeds, and the range of any such differences can vary by technology and geographic location. For the purpose of this study, any such variations are assumed to roughly equal on a relative basis across the broadband services included in this study.

¹⁸ CRTC 2012 Communications Monitoring Report, Section 5.3, indicates that roughly 60% of Canadian broadband users subscribe to broadband services with speeds of between 5 Mbps and 15 Mbps.

¹⁹ Ibid., the average Canadian broadband user uploads and downloads roughly 22 GB of data per month.

Some service providers apply monthly data usage caps to their broadband service plans. Where they are applied, they are typically set on the basis of a monthly data allowance (GB/month), with additional fees applied when the data allowance is exceeded.²⁰ Applicable usage caps are taken into account in the study, including any overage fees that may apply once assumed usage levels are exceeded. However, most of the surveyed service providers either have no usage caps or, where they do apply, they are high enough that no overage fees would be incurred given the data usage assumptions adopted for the defined broadband service baskets.

5.2 Canadian Broadband Service Price Comparisons

At the outset, it is important to note that the changes in broadband service basket definitions introduced in last year's study significantly affect comparisons of the 2012 and 2013 price levels with those reported for earlier years. Generally, the changes in service basket definitions (which included increasing service speed ranges and monthly data usage levels) have had the effect of raising measured prices for each service basket.

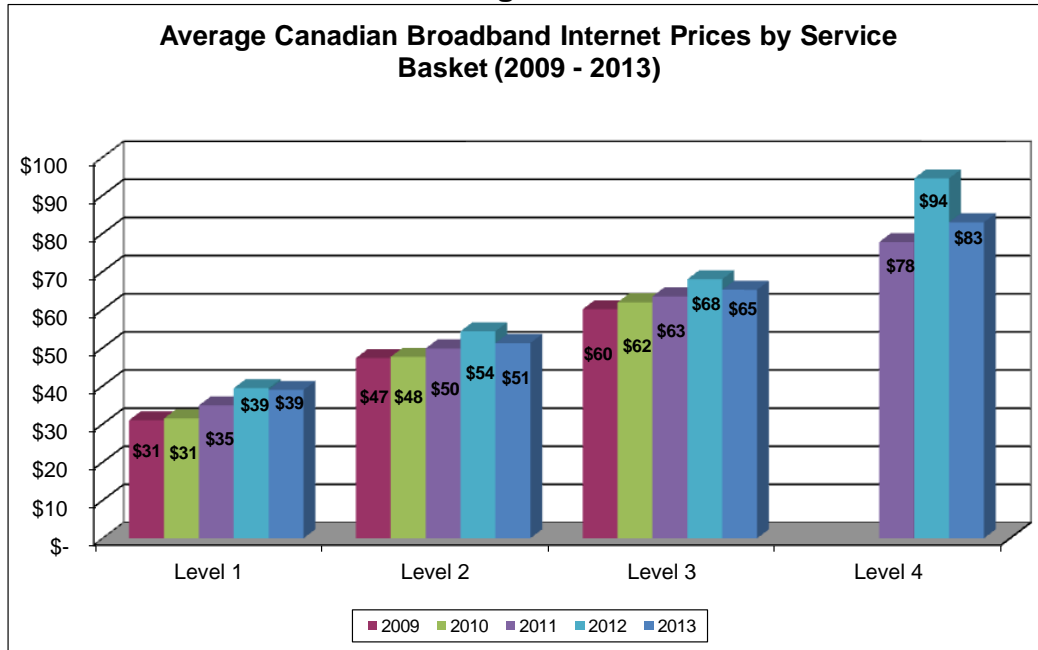
It is also worth noting that the number of Level 1 and 4 broadband service basket price observations included in the study is lower than in the case of the Level 2 and 3 baskets. This is due to the fact that a steadily declining number service providers offer broadband services at speeds of 3 Mbps or less. As well, while the number of service providers offering Level 4 (40+ Mbps) broadband services has increased substantially, there are still some that do not yet offer broadband services in this speed range.

Figure 5 below provides a summary of Canadian weighted average broadband Internet access service prices for the Levels 1 to 3 service baskets for the period 2009 to 2013 and for the Level 4 broadband service basket for the period 2011 and 2013. As shown in the figure, prices for all four broadband service baskets declined in 2013 relative to last year. The decline was minimal in the case of the Level 1 service basket (i.e., roughly 1%), whereas the declines in the cases of the Level 2, 3 and 4 service basket were more pronounced – i.e., roughly 6%, 4% and 12%, respectively. As a result, the price differentials between 2013 and 2011 have been narrowed considerably, which is significant in view of the fact that the broadband service speed ranges included in the study in 2011 were considerably lower than those in the present study.

Many of the service providers have introduced new higher speed services this year at prices very close and, in some cases, equal to pre-existing slower speed services. Consequently, compared to last year, prices have generally declined for all broadband service baskets.

²⁰ In some cases, as in Australia, rather than excess data charges applying, service speed is throttled significantly (i.e., to 256 kbps).

Figure 5



NOTE that broadband service basket definitions were revised 2012 to reflect the general availability of faster broadband service speeds; consequently, price comparisons between 2012 and 2013 and earlier years should be made with caution.
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Roughly half of the surveyed Canadian broadband service plans include unlimited data usage. For the remaining surveyed broadband service plans that include caps, the following monthly data usage cap ranges apply:

- Level 1: 30 GB (only one capped plan at this service level)
- Level 2: 20 to 250 GB, (average 111 GB per month)
- Level 3: 100 to 500 GB, (average 211 GB per month)
- Level 4: 150 to 500 GB, (average 263 GB per month)

Where data usage caps are applied, they have generally increased this year relative to those included in last year's study.

Table A2.3 in Attachment 2, provides more detailed historical information on Canadian broadband Internet service prices by city and by year for each of the four broadband service baskets.

5.3 International Broadband Service Price Comparisons

As with the other service categories, there are a number of notable differences in the way in which broadband services are provisioned in some of the surveyed countries compared to Canada:

- In the U.K. and France, to obtain a DSL broadband Internet service on a stand-alone basis, the customer must also lease a landline connection (adding an additional access line charge in some cases).
- Fibre and DSL-based broadband services offered in the U.K. and France generally include IPTV and/or VoIP services for a single bundled price. The option of a pure stand-alone broadband Internet service is not available in some cases.
- In Japan, broadband Internet service typically consists of two separate service elements: (i) a network access facility (fibre or ADSL), often obtained from NTT directly or indirectly and (ii) Internet access service through a third-party ISP. Therefore, there are two fees involved: the broadband access fee and ISP fee.
- In Australia, service providers such as Telstra and Optus offer customers a single broadband speed (which can vary by location) with alternative prices set on the basis of monthly data usage. Once the data usage cap is reached, service speed is throttled to 256 kbps.

Table 4 below provides a summary of the unweighted average "advertized" download and upload service speeds of the surveyed broadband services included in each of the four specified broadband service baskets for Canada and the surveyed foreign jurisdictions.²¹ The table also includes average monthly data usage caps for those plans which include data caps (as noted, most plans do not include data caps).

As can be seen from the table, no Level 1 broadband services are currently offered by the surveyed service providers in the U.K., France or Australia. As well, the same applies in the case of Level 2 broadband services in France. While broadband service speeds are generally comparable within each of the first three service basket levels, more significant differences exist in the case of the Level 4 basket. For almost all of the surveyed countries, Canada included, one or more of the surveyed broadband Internet service providers did not offer a service with an advertized download speed of over 40 Mbps. The exception was Japan, where all four surveyed service providers provided a Level 4 broadband service. However, for Japan, some of the surveyed service providers do not provide a broadband service within the targeted download speed range of 41 and 100 Mbps. Consequently, higher speed services in these cases were included in the study – specifically including a 200 Mbps service for NTT and a 160 Mbps service for J:Com.

²¹ While advertized download speeds are readily available, the same is not true for upload speeds. Consequently, the average upload speeds shown in Table 4 are based on a somewhat lower number of observations compared to average download speeds.

Table 4
2013 International Broadband Internet Services
Average Advertized Speeds and Applicable Data Caps

Baskets	Canada	U.S.	U.K.	France	Australia	Japan
Level 1 Basket (≤ 3 Mbps, 5GB/month)						
Download Speed (Mbps)	1.6	2.7				1.2
Upload Speed (Mbps)	0.4	0.7				0.5
Data Caps, as applicable (GB)	30	na				na
Level 2 Basket (4 - 15 Mbps, 20 GB/month)						
Download Speed (Mbps)	10.2	14.0	11.0		8.0	10.3
Upload Speed (Mbps)	2.3	2.7	0.4		0.5	1.3
Data Caps, as applicable (GB)	111	na	na *		50	na
Level 3 Basket (16 - 40 Mbps, 50 GB/month)						
Download Speed (Mbps)	24.8	28.0	36.0	22.5	25.0	34.0
Upload Speed (Mbps)	4.7	4.7	6.3	0.8	1.0	1.3
Data Caps, as applicable (GB)	211	na	na	na	85	na
Level 4 Basket (> 40 Mbps, 75 GB/month)						
Download Speed (Mbps)	70.6	56.3	84.0	100.0	100.0	115.1
Upload Speed (Mbps)	11.3	15.0	14.5	27.5	2.0	31.9
Data Caps, as applicable (GB)	263	na	na	100	200	na

Average data caps calculated based on surveyed plans with applicable data caps.

Blank = no broadband service available from the surveyed service providers.

na = no data cap applicable on the surveyed broadband plans.

* AOL in the UK places a cap on music and video downloads of 10G, all other data unlimited.

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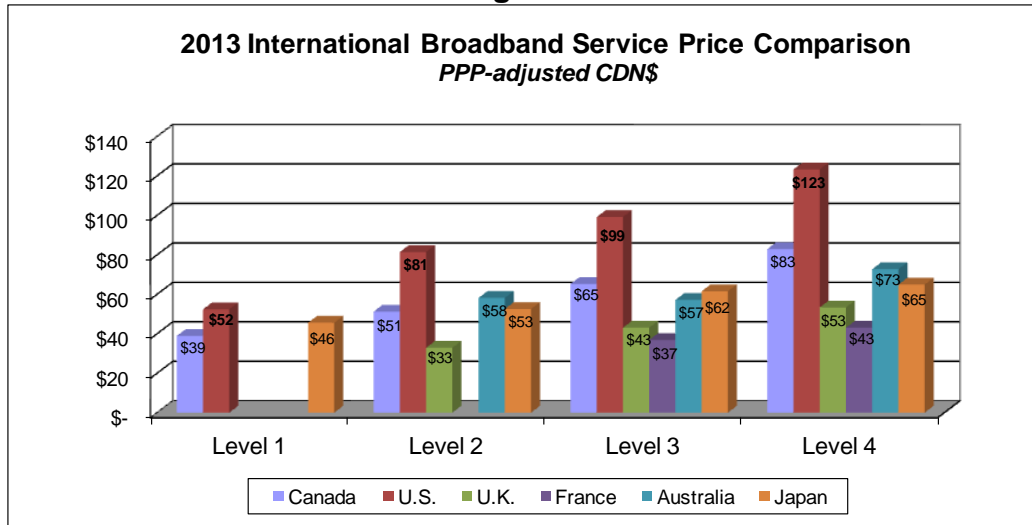
As shown in Table 4, advertized upload speeds can also vary significantly. The most significant differences are associated with fibre-based broadband services included in the Level 3 and Level 4 baskets, and which provide relatively fast upload speeds (e.g., in the Level 4 basket, 100 Mbps in the case of NTT, 50 Mbps in the case of Orange/France Telecom, 35 Mbps in the case of Verizon and 30 Mbps in the case of Bell Aliant).

With respect to data usage, there are numerous broadband service plans included in the study that offer unlimited data usage. For instance, all of the service providers we surveyed in the U.S. and Japan currently offer unlimited data usage plans. All but one of the plans included for the U.K. provided unlimited data usage. Only one of the surveyed service providers in France (i.e., cable operator, Numericable) applied data caps. On the other hand, as noted above, the Australian broadband service plans are based more so on data usage than service speed. Consequently, all of the surveyed plans for Telstra and Optus include data caps.

As noted for Canada, roughly half of the surveyed broadband Internet service providers currently include data caps with their various service offers.

Figure 6 provides a comparison of 2013 weighted average broadband service prices for Canada and the five surveyed foreign jurisdictions for each of the four broadband service level baskets.

Figure 6



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In the case of the Level 1 broadband service basket, Canada's average monthly price of roughly \$39 is considerably lower than the average prices in the U.S. and Japan – the only two countries for which Level 1 prices were available.

In the case of the Level 2 basket, Canada's average monthly price of roughly \$51 falls into the middle of the group of surveyed countries. Rates in the U.S., Australia and Japan are higher, whereas the rate in the U.K. is considerably lower. There was no Level 2 service plan offered by the surveyed service providers in France.

For the Level 3 basket, Canada's average monthly price of roughly \$65 falls on the higher side of the range of rates for the surveyed countries. It is considerably lower than the rate in the U.S. Otherwise, it is higher than the rates measured for France and Japan, and considerably higher than the measured rates for the U.K. and France.

A similar ranking is found in the case of the Level 4 basket. Canada's average monthly price of roughly \$83 is only lower than the rate measured for the U.S. Otherwise, it is higher than the measured rates in the other four countries, significantly so in the case of the U.K. and France. It is worth noting in this respect that all of the countries with lower Level 4 rates also have higher measured average download speeds compared to Canada (see Table 4 above).

Table A3.3 and Figures A3.3 a, b and c in Attachment 3 provide more detailed historical broadband Internet service price results for the period 2008 to 2013 for each of the four broadband service baskets. As the data in Attachment 3 shows, relative to previous years' studies, Canada's ranking has improved in the case of the Level 1 and 2 broadband service baskets. Otherwise, for Levels 3 and 4, Canada's prices remain on the high side of the group average, and remain higher than those in all of the surveyed countries except the U.S.

In sum, Canadian broadband Internet service prices compare favourably with the other surveyed countries in the case of the Level 1 (≤ 3.0 Mbps download speeds) and Level 2 (4 – 15 Mbps) broadband service baskets. However, Canadian Level 3 (16 – 40 Mbps) and Level 4 (> 40 Mbps) prices are higher than the prices measured in the surveyed countries included in the study, with the exception of the U.S.

6.0 MOBILE INTERNET SERVICE

6.1 Mobile Internet Service Baskets

There are two mobile Internet service levels included in the study, which consist of the following usage-based service elements and characteristics:

- Technology: Third Generation (3G) or better (including 3G+, 4G and 4G LTE)
- Service speed: Advertized download speed of 1.5 Mbps or faster²²
- Equipment: USB modem stick (rental or purchase)
- Data usage: **Level 1:** 2 GB per month
Level 2: 5 GB per month

Once again, one-time charges (such as activation fees) are excluded.

6.2 Canadian Mobile Internet Service Price Comparisons

Figure 7 below provides a summary of Canadian Level 1 mobile Internet service basket prices for the period 2010 to 2013 and the Level 2 prices for the period 2012 and 2013. As the figure shows, the Level 1 price declined significantly in 2013 to \$45, representing a 15% price decline relative to 2012. Most of the service plans used to measure the average Level 1 included 2 GB of usage per month, although several included greater usage levels of 3 GB to 6 GB. The average for all surveyed plans was to 2.7 GB per month. The Level 2 mobile Internet service basket price, on the other hand, remained relatively close to last year's measured rate of \$65. The surveyed Level 2 plans included data usage limits of between 5 and 10 GB per month, with an overall average of 6 GB per month.²³

The average advertised download speeds of the mobile Internet services included in this year's study is roughly 72 Mbps. The relatively high speed reflects the fact that the incumbent wireless carrier, Rogers, Bell and TELUS, have all launched 4G LTE mobile Internet access services.²⁴ Rogers and Bell, for instance, advertise that their 4G LTE networks allow download speeds of up

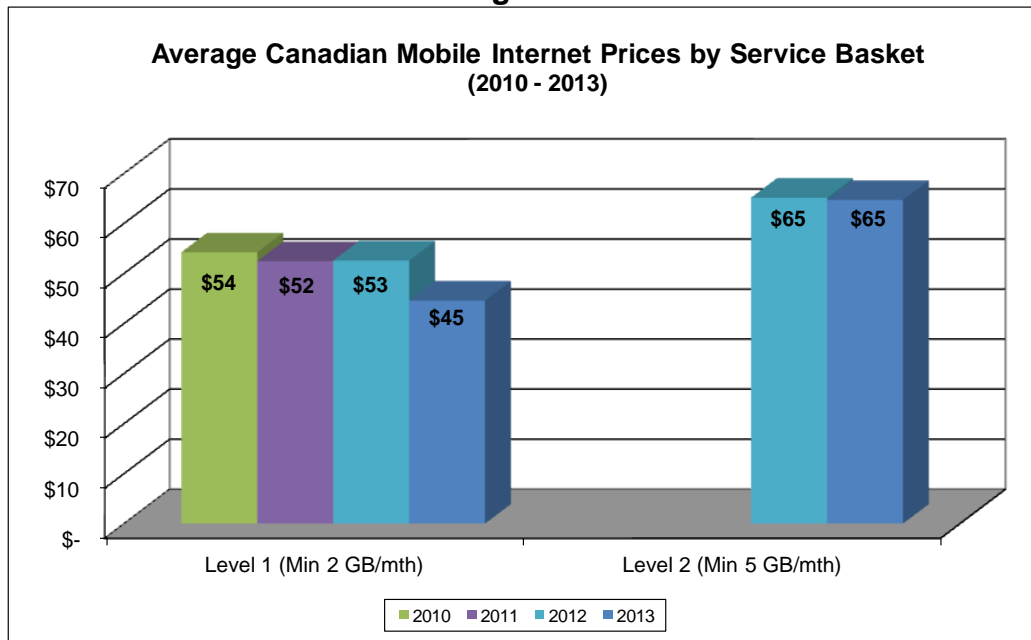
²² Actual and advertised speeds can vary significantly, especially in the case of wireless services which can be sensitive to network usage levels and a user's location.

²³ The Level 1 and 2 data cap averages in this year's study have changed very little compared to last year.

²⁴ The comparable average advertised mobile Internet download speed reported in the 2011 price comparison study was 18 Mbps.

to 100 Mbps. New entrants such as WIND and Mobilicity advertize 3G+ speeds of up to 21 Mbps.

Figure 7



A comparison of the mobile Internet service rates offered by the incumbents (Rogers, Bell and TELUS) and new entrants (Mobilicity, WIND and Videotron), as applicable, in the cities of Vancouver, Toronto, and Montreal is provided in Table 5 below. For the Level 1 mobile Internet service basket, the new entrants' rates are roughly 30% less expensive than the incumbents' average rates. For the Level 2 service basket, the differential is even larger at roughly 41%. As in the case of mobile wireless services, the differentials are largest in Vancouver and Toronto where Mobilicity and WIND are offering Level 2 price discounts of close to 50% relative to the incumbents.

Compared to last year, the new entrants' mobile Internet price discounts relative to the incumbents declined slightly in the case of the Level 1 basket (i.e., from 33% last year to 30% this year). On the other hand, they increased in the case of the Level 2 basket (i.e., from 35% last year to 41% this year).

It is also worth noting that in the case of the Level 1 basket, WIND and Videotron's mobile Internet service plans include 3 GB of monthly usage and Mobilicity's plan includes 6 GB. The incumbents' plans, in contrast, include 2 GB. In the case of the Level 2 basket, WIND's service plan includes 10 GB of monthly usage, whereas Mobilicity's and TELUS' plans include 6 GB. Rogers, Bell and Videotron's Level 2 plans all include 5 GB of monthly data usage.

Consequently, on average, the new entrants' mobile Internet service plans are not only less expensive, but also provide a higher monthly data allowance.

Table 5
2013 Canadian Mobile Internet Service Rates
Incumbents versus New Entrants

Baskets	Vancouver	Toronto	Montreal	Average
Level 1 Basket (2 GB/month)				
Incumbents	\$ 45.13	\$ 45.13	\$ 45.13	\$ 45.13
New Entrants	\$ 30.00	\$ 30.00	\$ 34.95	\$ 31.65
<i>Percentage Differential</i>	<i>-34%</i>	<i>-34%</i>	<i>-23%</i>	<i>-30%</i>
Level 2 Basket (5 GB/month)				
Incumbents	\$ 66.80	\$ 66.80	\$ 60.13	\$ 64.57
New Entrants	\$ 35.00	\$ 35.00	\$ 44.95	\$ 38.32
<i>Percentage Differential</i>	<i>-48%</i>	<i>-48%</i>	<i>-25%</i>	<i>-41%</i>

Simple unweighted averages used in all cases.
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6.3 International Mobile Internet Service Price Comparisons

Mobile Internet service plans can vary significantly in terms of advertized download speeds and monthly data allowances. Table 6 below provides a summary of the average Level 1 and 2 advertized speeds and data allowances for Canada and the surveyed foreign jurisdictions.

As shown in the table, the average advertized download speed of the surveyed Canadian mobile Internet services is roughly 72 Mbps. Considerably lower average advertized mobile Internet speeds are available in all of the five surveyed foreign jurisdictions. Of the group, France and Australia offer the highest average advertized speeds at 42 Mbps and 40 Mbps, respectively. The U.K. has the lowest average advertized speed at 7.2 Mbps.

Individual service provider's policies on advertized mobile Internet service speeds can vary considerably. Verizon and AT&T, for instance, have both launched 4G LTE mobile Internet services in the U.S. Mobile Internet service speed information on their websites (which is very limited)²⁵ suggests that their 4G LTE actual average download speeds are currently in the range of 14 Mbps. In contrast, and as already noted, Rogers and Bell advertize 4G LTE download speeds of up to 100 Mbps. NTT in Japan also advertizes 4G LTE download speeds of up to 100 Mbps. TELUS advertizes that its 4G LTE download speed is

²⁵ As well, CSRs are unable to provide service speed information.

75 Mbps. Consequently, differences in advertized speeds for the same technology can be significant.

In terms of wireless technology, Canada, the U.S. and Japan are the only countries included in this study where surveyed service providers currently offer 4G LTE mobile Internet services. Otherwise, 3G, 3G+ and/or 4G mobile Internet services, with advertized download speeds of 7 to 40 Mbps, are available in the cases of the U.K., France and Australia.

Table 6
2013 International Mobile Internet Services
Average Advertized Speeds and Data Caps

Baskets	Canada	U.S.	U.K.	France	Australia	Japan
Level 1 Basket (2 GB/month)						
Download Speed (Mbps)	72.2	10.5	7.2	28.2	40.0	34.5
Data Cap	2.7	5.0	2.3	2.5	7.0	na
Level 2 Basket (5 GB/month)						
Download Speed (Mbps)	72.2	10.5	7.2	42.0	40.0	32.0
Data Cap	6.0	5.7	5.0	5.0	9.0	na

Simple averages calculated based on surveyed plans in each country.

na = most surveyed plans unlimited.

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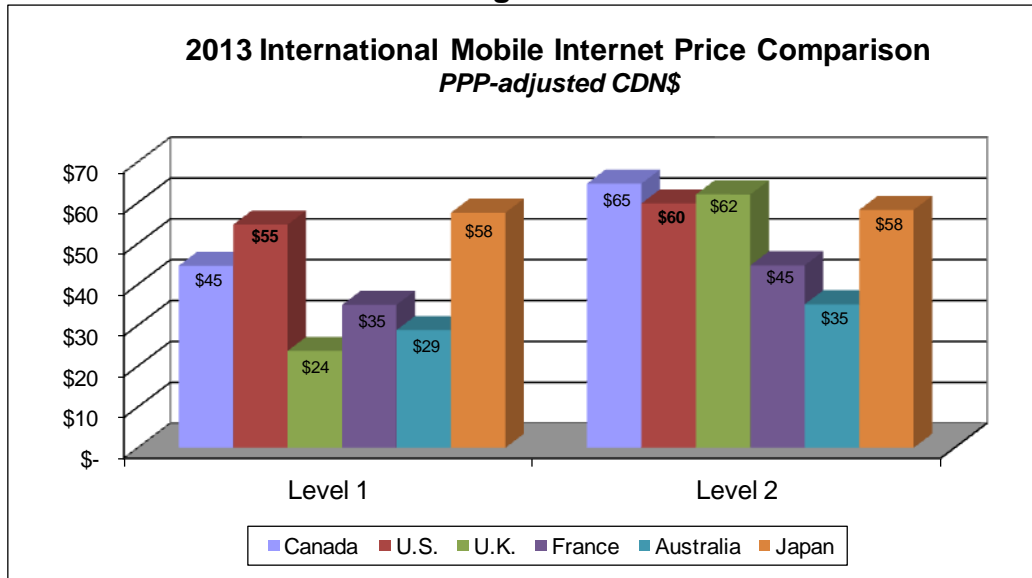
In terms of monthly data usage, the surveyed Level 1 mobile Internet plans in the case of Canada, the U.K. and France include between 2 and 3 GB of monthly usage. The surveyed U.S. and Australian plans include considerably higher average monthly data allowances of 5 and 7 GB, respectively. The surveyed Japanese plans mostly include unlimited data usage. Consequently, in a number of cases, the service plans included in the Level 1 service baskets provide a much higher monthly data allowance than 2 GB and, as noted, in some cases they include unlimited data usage. Most of the surveyed Level 2 plans include between 5 and 6 GB of monthly data usage. The surveyed Australian plans provide a higher average monthly data allowance of 9 GB, whereas once again the Japanese plans are mostly unlimited.

Figure 8 below provides a comparison of 2013 Level 1 and 2 mobile Internet service basket prices for Canada and the five surveyed foreign jurisdictions. As the figure shows, the Canadian Level 1 mobile Internet price of roughly \$53 is lower than rates in the U.S. and Japan, but considerably higher than those in the U.K., France and Australia. While the Canadian rate is lower than the rates in the U.S. and Japan, as noted, the surveyed plans in both the U.S. and Japan provide a significantly higher average monthly data allowance compared to the Canadian service plans.

For the Level 2 service basket, the average Canadian mobile Internet price of \$65 is higher than the measured rates for all five of the surveyed foreign

jurisdictions. While the price differential is not large relative to the U.S. and Japan, the measured Level 2 rates are much lower in the case of France and Australia compared to Canada.

Figure 8



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Table A3.4 and Figures A3.4 a, b and c in Attachment 3 provide detailed historical mobile Internet price results for the period 2010 to 2013 for the Level 1 mobile Internet service basket and 2012 to 2013 for the Level 2 service basket. As the data in Attachment 3 shows, relative to previous years' studies, Canada's Level 1 mobile Internet service basket ranking has remained relatively stable. Otherwise, Canada's Level 2 service basket ranking has worsened relative to last year (when it was first included in the study).

On balance, Canadian Level 1 (2 GB/month) mobile Internet service rates fall on the high-side of the average of the group of surveyed countries, whereas Canadian Level 2 (5 GB/month) rates are the highest of the group. On the other hand, Canadian advertized mobile Internet download speeds are higher than those in the other surveyed countries (largely due to the launch of 4G LTE services in Canada).

7.0 BUNDLED SERVICES

7.1 Bundled Service Baskets

The following three bundled service baskets are included in the study:

- **Bundle 1:** wireline, broadband internet and mobile wireless
- **Bundle 2:** wireline, broadband internet and digital TV
- **Bundle 3:** wireline, broadband internet, mobile wireless and digital TV

For the wireline, Internet and wireless mobile service elements in each bundle, Level 2 stand-alone service options are used. For the digital TV service element, a "basic" digital TV service option is included in the bundle. In a limited number of cases where Level 2 service options were not eligible for bundling discounts, higher level service options (e.g., Level 3 or 4) have been included.

7.2 Canadian Bundled Service Price Comparisons

All of the Canadian incumbent telephone companies included in this study are capable of offering all three defined service bundles. In the case of the surveyed cable companies, Rogers, Videotron and EastLink can provide all three service bundles.²⁶ Access Communications and Shaw, on the other hand, do not provide wireless services either directly or indirectly through a third party. Consequently, they are only able to provide Bundle 2. In Primus' case, it is only able to provide Bundle 1 since it does not offer digital TV services.

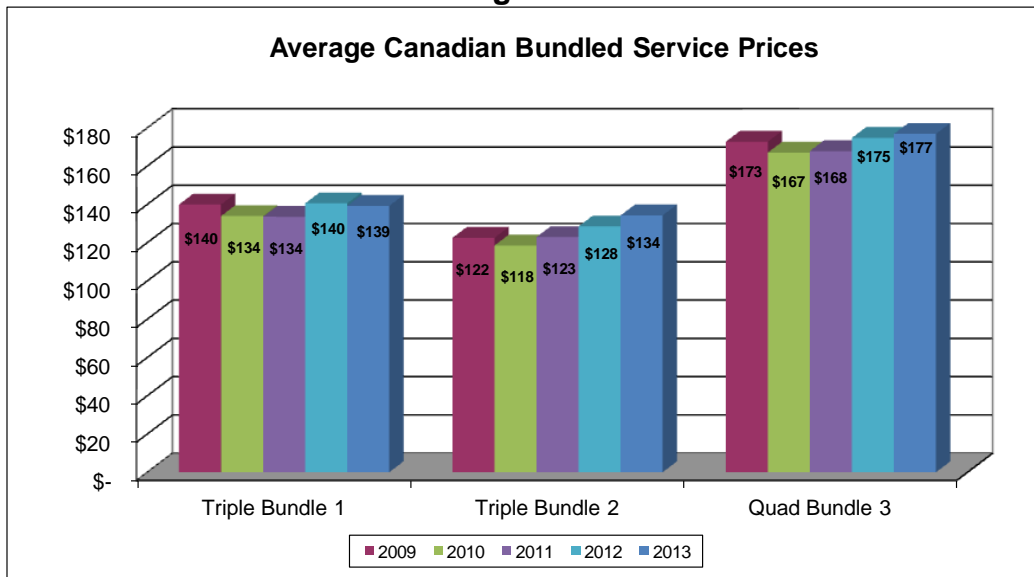
Basic digital TV packages can vary considerably across service providers in terms of TV channel inclusions and package prices. Based on the Canadian service offerings surveyed for the study, basic cable and IPTV service packages include between 30 and 70 channels, whereas basic satellite service packages include roughly 150 or more channels (of which many are time-shifted channels). Stand-alone prices vary considerably as well, ranging between \$30 to \$60 and averaging just over \$40 (excluding equipment fees). Consequently, differences in basic digital TV service prices can introduce a fair degree of variation in Bundle 2 and 3 prices.

Figure 9 provides a summary of Canadian average monthly prices for each of the three defined service bundles for the five year period 2009 to 2013. As the figure shows, the average Bundle 1 price declined slightly in 2013 relative to 2012 (i.e.,

²⁶ EastLink launched its own mobile wireless service in early 2013, which is included in its service bundles for the purpose of this study.

by roughly 1%). Average measured prices for the other two bundles increased – i.e., by 4.5% in the case of Bundle 2 and 1.2% in the case of Bundle 3.

Figure 9



It should be noted that the rates for all three bundles increased in 2012 relative to earlier years largely due to the changes in the definition of the broadband service basket component included in each bundle in that year.

The available bundling discounts available to Canadian consumers vary widely across the surveyed service provider plans. On average, for the three bundles included in the study, the average total bundling discount fell between 8% and 10%. This represents a monthly savings of between \$12 and \$16 between regular bundled versus stand-alone prices.

Table A2.4 in Attachment 2 provides average bundled service prices by city and by bundle for the period 2008 to 2013.

7.3 International Bundled Service Price Comparisons

Surveyed foreign service providers capable of providing all three bundles include the incumbent telecom carriers in the U.S., France, Australia and Japan. In the U.K., BT had for some time provided wireless service (on a resale basis), but discontinued doing so in 2009. Consequently, in BT's case, Orange's Level 2 mobile wireless service (at stand-alone rates) has been included in BT's Bundles 1 and 3.

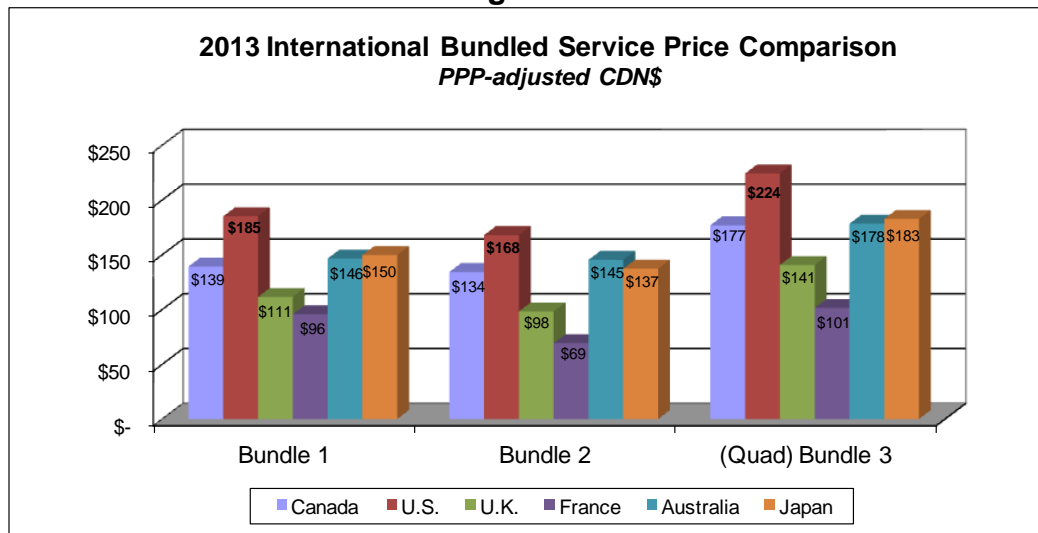
Some cable companies are also capable of providing all three bundles such as Virgin in the U.K. and Numericable in France. In Japan, J:COM had for some time provided wireless service (on a resale basis via Willcom) but no longer does so. In this case, Willcom's mobile wireless service has been left as part of J:COM's bundles; however, there is no longer a bundling discount available for this service element. Otherwise, the U.S. cable companies included in the study, Comcast and Time Warner, do not provide wireless services and, therefore, do offer packages that meet the Bundle 1 and 3 requirements.

As already noted, basic digital TV service packages can vary significantly by service provider in terms of the number of TV channels and prices, which complicates the comparison of bundles which include this service. Basic TV packages in the U.S., for instance, tend to offer a large number of TV channels (well over 100 on average), but at prices that are relatively expensive (i.e., roughly US\$50 on average) compared to the surveyed service providers in the other countries included in the study. In contrast, in the U.K. and France, basic digital TV services are included with broadband services for little or no additional cost. The basic digital TV service packages in these two cases are by far the least expensive of the surveyed jurisdictions included in the study. They also include among the highest number of TV channels (e.g., in the case of France, well over 100). The surveyed basic digital TV service packages in Canada's case fall in the middle ground between these two extremes in terms of average prices and number of basic-tier channels.

Figure 10 below provides a comparison of current average monthly prices for each of the three service bundles. In the case of Bundle 1, the average monthly price in Canada of roughly \$139 falls into the middle of the rates measured for surveyed group countries. Only in the U.K. and France are Bundle 1 rates lower. A similar result occurs in the case of Bundle 2 where the Canadian average monthly price is \$134. Once again, only rates in the U.K. and France are lower. Lastly, the same relative ranking applies in the case of Bundle 3. In this case, the average Bundle 3 price in Canada is \$177.

More detailed historical bundled price information for the period 2008 to 2013 is provided in Table A3.5 and Figures A3.5 a, b and c in Attachment 3. As information in Attachment 3 shows, Canada's middle-of-the-pack rating with respect to bundled services has changed little over the last few years.

Figure 10



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In sum, average Canadian bundled service rates fall in the middle of the group of countries surveyed for this study. While differences across countries in the underlying services included in the bundles (especially broadband and digital TV services) can make bundled service comparisons somewhat tenuous, it is noteworthy that Canadian bundled service rates continue to compare very favourably to those in the U.S., where service pricing and provisioning practices are similar to those in Canada.

ATTACHMENT 1 – SERVICE BASKETS

**TABLE A1.1
WIRELINE SERVICE BASKETS**

Local Minutes of Use	Level 1	Level 2	Level 3
Outgoing (55%)	220	550	880
Incoming (45%)	180	450	720
Total Minutes	400	1,000	1,600
Outgoing by Time of Day/Week			
Peak (40%)	88	220	352
Off-Peak (60%)	132	330	528
Outgoing LD	10% of total	20% of total	30% of total
National Minutes	16	70	150
U.S. Minutes	6	30	80
Other Int'l Minutes		10	34
Total	22	110	264
Outgoing to Mobile	15% of total	15% of total	15% of total
Local	33	60	100
National		22.5	32
International			
Total	33	82.5	132
Average Call Length	3	3	3
Optional Features			
Voice Mail		Yes	Yes
Caller ID		Yes	Yes
Other			Yes (bundled, if available)

**TABLE A1.2
MOBILE WIRELESS SERVICE BASKETS**

Minutes of Use/Month	Level 1	Level 2	Level 3
Outgoing (60%)	90	270	720
Incoming (40%)	60	180	480
Total	150	450	1,200
Time of Day/Week			
Peak (40%)	60	180	480
Off-Peak (60%)	90	270	720
Outgoing LD	10% of total	10% of total	15% of total
National	9	21	90
US		6	18
Other			
Total	9	27	108
Outgoing to Mobile	50% of total	50% of total	50% of total
On-net (2/3)	30	90	240
Off-net (1/3)	15	45	120
Total	45	135	360
Average Call Length	3 min.	3 min.	3 min.

Minutes of Use/Month	Level 1	Level 2	Level 3
Features			
Voice Mail		Yes	Yes
Caller ID		Yes	Yes
Other			Yes
Data			
SMS		300	300
Data Service			1 GB

**TABLE A1.3
BROADBAND INTERNET SERVICE BASKETS**

Elements	Level 1	Level 2	Level 3	Level 4
Transmission Speed	Basic Services ≤ 3.0 Mbps	4 – 15 Mbps (highest available)	16 – 40 Mbps (highest available)	> 40 Mbps (highest available in target range of 41 to 100 Mbps)
Monthly Usage	5 GB	20 GB	50 GB	75 GB
Modem	No cost with contract or rental / 24 month amortization			

**TABLE A1.4
MOBILE INTERNET SERVICE BASKETS**

Elements	Level 1	Level 2
Monthly Usage	2 GB	5 GB
Transmission Speed	≥ 1.5 Mbps download (3G technology or higher)	
USB Modem	No cost with contract or rental / 24 month amortization	

**TABLE A1.5
BUNDLED SERVICE BASKETS**

Elements	Bundle 1 Triple-play	Bundle 2 Triple-play	Bundle 3 Quad-Play
Wireline	Wireline Level 2	Wireline Level 2	Wireline Level 2
Wireless	Wireless Level 2		Wireless Level 2
Broadband Internet	Broadband Level 2	Broadband Level 2	Broadband Level 2
Television		Basic Digital TV Package	Basic Digital TV Package

Note that where Level 2 service options are not eligible for bundling discounts, higher level services (i.e., Level 3 or 4) may be included in a bundle as long as the resulting bundled price is lower than the sum of the corresponding stand-alone Level 2 service component prices.

ATTACHMENT 2 – CANADIAN PRICE COMPARISONS

Table A2.1 - Canadian Wireline Prices

Baskets	Halifax	Montreal	Toronto	Regina	Vancouver	Average
Level 1 Basket (low-volume use, 400 min/month)						
2008	\$ 31.73	\$ 30.27	\$ 31.61	\$ 28.16	\$ 30.90	\$ 30.88
2009	\$ 32.23	\$ 28.92	\$ 32.51	\$ 28.16	\$ 25.92	\$ 29.80
2010	\$ 30.08	\$ 29.39	\$ 33.88	\$ 26.49	\$ 28.27	\$ 31.16
2011	\$ 31.79	\$ 27.33	\$ 34.63	\$ 26.52	\$ 34.52	\$ 32.06
2012	\$ 31.89	\$ 31.31	\$ 35.30	\$ 26.76	\$ 33.16	\$ 33.42
2013	\$ 32.04	\$ 32.85	\$ 38.45	\$ 26.86	\$ 33.12	\$ 35.33
CAGR	0.2%	1.7%	4.0%	-0.9%	1.4%	2.7%
Level 2 Basket (average use, 1,000 min/month)						
2008	\$ 48.93	\$ 45.44	\$ 48.96	\$ 41.39	\$ 48.67	\$ 47.91
2009	\$ 53.61	\$ 52.01	\$ 57.78	\$ 41.39	\$ 34.68	\$ 50.05
2010	\$ 50.78	\$ 46.81	\$ 58.09	\$ 41.50	\$ 44.18	\$ 51.42
2011	\$ 47.34	\$ 46.72	\$ 54.66	\$ 41.52	\$ 44.62	\$ 49.81
2012	\$ 49.05	\$ 48.55	\$ 57.08	\$ 41.71	\$ 45.19	\$ 51.71
2013	\$ 51.56	\$ 54.58	\$ 62.50	\$ 39.94	\$ 43.63	\$ 55.77
CAGR	1.1%	3.7%	5.0%	-0.7%	-2.2%	3.1%
Level 3 Basket (high-volume use, 1,600 min/month)						
2008	\$ 60.63	\$ 59.36	\$ 63.02	\$ 49.81	\$ 57.45	\$ 60.27
2009	\$ 66.34	\$ 61.68	\$ 67.59	\$ 49.56	\$ 51.51	\$ 61.55
2010	\$ 67.02	\$ 61.15	\$ 64.19	\$ 48.96	\$ 51.79	\$ 60.78
2011	\$ 58.35	\$ 60.97	\$ 61.36	\$ 48.99	\$ 57.59	\$ 60.22
2012	\$ 60.33	\$ 59.08	\$ 65.97	\$ 49.66	\$ 50.62	\$ 60.52
2013	\$ 64.58	\$ 60.94	\$ 65.84	\$ 49.11	\$ 52.69	\$ 61.53
CAGR	1.3%	0.5%	0.9%	-0.3%	-1.7%	0.4%

Note that some generally minor changes in methodology apply year-to-year.

Averages calculated on a market share and population weighted basis.

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Table A2.2 - Canadian Mobile Wireless Prices

Baskets	Halifax	Montreal	Toronto	Regina	Vancouver	Average
Level 1 Basket (low-volume use, 150 min/month)						
2008	\$ 33.25	\$ 31.96	\$ 33.55	\$ 30.16	\$ 32.90	\$ 32.73
2009	\$ 32.48	\$ 33.24	\$ 33.34	\$ 29.44	\$ 33.32	\$ 33.03
2010	\$ 29.23	\$ 34.38	\$ 34.33	\$ 28.64	\$ 34.10	\$ 34.03
2011	\$ 29.24	\$ 34.47	\$ 34.45	\$ 29.59	\$ 31.94	\$ 33.73
2012	\$ 29.75	\$ 34.72	\$ 34.44	\$ 29.66	\$ 34.58	\$ 34.32
2013	\$ 30.76	\$ 30.63	\$ 31.09	\$ 28.88	\$ 30.06	\$ 30.71
CAGR	-1.5%	-0.8%	-1.5%	-0.9%	-1.8%	-1.3%
Level 2 Basket (average use, 450 min and 300 text per month)						
2008	\$ 53.14	\$ 62.62	\$ 63.37	\$ 61.20	\$ 58.34	\$ 60.81
2009	\$ 48.73	\$ 59.17	\$ 59.20	\$ 44.44	\$ 59.30	\$ 57.78
2010	\$ 48.05	\$ 54.34	\$ 53.56	\$ 44.77	\$ 53.74	\$ 53.49
2011	\$ 47.39	\$ 51.50	\$ 49.99	\$ 48.19	\$ 50.86	\$ 50.51
2012	\$ 47.22	\$ 51.04	\$ 51.97	\$ 42.54	\$ 51.61	\$ 51.31
2013	\$ 43.44	\$ 44.78	\$ 45.40	\$ 44.86	\$ 43.93	\$ 44.86
CAGR	-4.0%	-6.5%	-6.5%	-6.0%	-5.5%	-5.9%
Level 3 Basket (high-volume use, 1,200 min, 300 text and 1GB data per month)						
2008	\$ 121.04	\$ 113.21	\$ 111.51	\$ 113.67	\$ 109.68	\$ 112.34
2009	\$ 105.61	\$ 104.38	\$ 102.20	\$ 94.64	\$ 101.24	\$ 103.24
2010	\$ 101.44	\$ 108.37	\$ 112.63	\$ 94.97	\$ 107.27	\$ 109.59
2011	\$ 96.73	\$ 98.73	\$ 100.76	\$ 96.69	\$ 99.61	\$ 99.69
2012	\$ 96.44	\$ 98.92	\$ 98.26	\$ 96.42	\$ 98.22	\$ 98.37
2013	\$ 94.40	\$ 93.78	\$ 93.89	\$ 77.07	\$ 93.96	\$ 93.59
CAGR	-4.8%	-3.7%	-3.4%	-7.5%	-3.0%	-3.6%

Note that some generally minor changes in methodology apply year-to-year.

Averages calculated on a market share and population weighted basis.

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Table A2.3 - Canadian Broadband Internet Service Prices

Baskets	Halifax	Montreal	Toronto	Regina	Vancouver	Average
Level 1 (speed, usage/mth): (i) ≤ 1.5 Mbps, 2 GB for 2008-11 and (ii) ≤ 3 Mbps, 5GB for 2012-13						
2008	\$ 34.95	\$ 32.45	\$ 38.95	\$ 30.45	\$ 23.45	\$ 32.88
2009	\$ 35.95	\$ 28.43	\$ 35.45	\$ 30.45	\$ 24.95	\$ 30.98
2010	\$ 36.95	\$ 29.43	\$ 33.45	\$ 30.95	\$ 29.00	\$ 31.44
2011	\$ 36.15	\$ 36.90	\$ 34.15	\$ 32.52	\$ 33.00	\$ 34.85
2012	\$ 39.15	\$ 33.35	\$ 45.37	\$ 31.95	\$ 35.40	\$ 39.37
2013	\$ 42.15	na	na	\$ 31.95	\$ 39.00	\$ 38.91
CAGR	3.8%	na	na	1.0%	10.7%	3.4%
Level 2 (speed, usage/mth): (i) 1.5 - 9 Mbps, 15 GB for 2008-11 and (ii) 4 - 15 Mbps, 20 GB for 2012-13						
2008	\$ 47.45	\$ 48.95	\$ 48.95	\$ 45.45	\$ 40.95	\$ 46.58
2009	\$ 48.45	\$ 50.43	\$ 50.95	\$ 45.45	\$ 38.45	\$ 47.26
2010	\$ 49.45	\$ 51.43	\$ 47.95	\$ 45.95	\$ 40.00	\$ 47.60
2011	\$ 50.75	\$ 52.83	\$ 49.33	\$ 48.52	\$ 45.65	\$ 49.79
2012	\$ 57.75	\$ 60.92	\$ 52.79	\$ 54.95	\$ 46.40	\$ 54.31
2013	\$ 51.15	\$ 55.60	\$ 47.18	\$ 54.95	\$ 53.51	\$ 51.20
CAGR	1.5%	2.6%	-0.7%	3.9%	5.5%	1.9%
Level 3 (speed, usage/mth): (i) 10 - 19 Mbps, 30 GB for 2008-11 and (ii) 16 - 40 Mbps, 50 GB for 2012-13						
2008	\$ 57.45	\$ 83.45	\$ 73.95	\$ 55.95	\$ 50.95	\$ 68.74
2009	\$ 58.45	\$ 64.40	\$ 62.45	\$ 55.95	\$ 53.45	\$ 60.08
2010	\$ 59.45	\$ 65.40	\$ 62.45	\$ 56.45	\$ 55.48	\$ 61.88
2011	\$ 60.75	\$ 66.33	\$ 65.35	\$ 56.75	\$ 55.00	\$ 63.44
2012	\$ 88.95	\$ 66.95	\$ 72.17	\$ 79.95	\$ 54.60	\$ 67.94
2013	\$ 77.95	\$ 67.05	\$ 64.35	\$ 79.95	\$ 60.69	\$ 65.18
CAGR	6.3%	-4.3%	-2.7%	7.4%	3.6%	-1.1%
Level 4 (speed, usage/mth): (i) > 20 Mbps, 50 GB for 2011 and (ii) > 40 Mbps, 75 GB for 2012-13						
2011	\$ 84.75	\$ 73.30	\$ 73.75	\$ 99.95	\$ 91.40	\$ 77.71
2012	\$ 138.95	\$ 82.95	\$ 106.98	na	\$ 74.90	\$ 94.39
2013	\$ 102.75	\$ 82.95	\$ 80.57	\$ 99.95	\$ 85.00	\$ 82.88
CAGR	10.1%	6.4%	4.5%	0.0%	-3.6%	3.3%

Note that some generally minor changes in methodology apply year-to-year.

Averages calculated on a market share and population weighted basis.

Note that speed ranges and data usage per month has been increased as of 2012 for all four service levels which has had the effect of increasing prices in 2012 relative 2011 in some cases.

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Table A2.4 - Canadian Mobile Internet Prices

Baskets	Halifax	Montreal	Toronto	Regina	Vancouver	Average
Level 1 Basket (2GB usage per month)						
2010	\$ 54.15	\$ 54.15	\$ 54.15	\$ 56.23	\$ 54.16	\$ 54.19
2011	\$ 52.32	\$ 52.76	\$ 52.17	\$ 53.98	\$ 52.22	\$ 52.41
2012	\$ 53.05	\$ 52.56	\$ 52.51	\$ 53.05	\$ 52.51	\$ 52.55
2013	\$ 45.12	\$ 44.52	\$ 44.37	\$ 48.99	\$ 44.52	\$ 44.55
CAGR	<i>-5.9%</i>	<i>-6.3%</i>	<i>-6.4%</i>	<i>-4.5%</i>	<i>-6.3%</i>	<i>-6.3%</i>
Level 2 Basket (5 GB usage per month)						
2012	\$ 66.38	\$ 60.94	\$ 65.59	\$ 69.55	\$ 70.22	\$ 65.11
2013	\$ 66.79	\$ 59.22	\$ 65.21	\$ 70.11	\$ 71.28	\$ 64.67
CAGR	<i>0.6%</i>	<i>-2.8%</i>	<i>-0.6%</i>	<i>0.8%</i>	<i>1.5%</i>	<i>-0.7%</i>

*Averages calculated on a market share and population weighted basis.
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Table A2.5 - Canadian Bundled Service Prices

Baskets	Halifax	Montreal	Toronto	Regina	Vancouver	Average
Bundle 1 (Wireline-Broadband-Mobile)						
2008	\$ 139.86	\$ 141.61	\$ 152.20	\$ 140.02	\$ 152.47	\$ 146.96
2009	\$ 135.63	\$ 141.37	\$ 152.65	\$ 120.12	\$ 122.22	\$ 139.86
2010	\$ 132.23	\$ 135.16	\$ 139.75	\$ 125.12	\$ 118.30	\$ 133.83
2011	\$ 132.10	\$ 131.72	\$ 138.69	\$ 130.36	\$ 124.54	\$ 133.50
2012	\$ 134.44	\$ 140.06	\$ 146.09	\$ 133.85	\$ 129.11	\$ 140.47
2013	\$ 131.27	\$ 142.46	\$ 144.41	\$ 141.80	\$ 122.25	\$ 139.15
CAGR	-1.3%	0.1%	-1.0%	0.3%	-4.3%	-1.1%
Bundle 2 (Wireline-Broadband-TV)						
2008	\$ 124.71	\$ 118.68	\$ 126.54	\$ 112.13	\$ 111.40	\$ 119.93
2009	\$ 121.14	\$ 123.46	\$ 129.71	\$ 115.13	\$ 110.31	\$ 122.43
2010	\$ 120.37	\$ 116.94	\$ 123.39	\$ 119.47	\$ 108.36	\$ 118.41
2011	\$ 121.46	\$ 119.09	\$ 129.92	\$ 127.52	\$ 112.05	\$ 122.87
2012	\$ 124.19	\$ 127.91	\$ 135.81	\$ 131.56	\$ 111.81	\$ 128.44
2013	\$ 127.95	\$ 139.67	\$ 140.25	\$ 133.57	\$ 111.87	\$ 134.19
CAGR	0.5%	3.3%	2.1%	3.6%	0.1%	2.3%
Bundle 3 (Wireline-Broadband-Mobile-TV)						
2008	\$ 178.86	\$ 182.13	\$ 183.94	\$ 148.97	\$ 186.47	\$ 181.31
2009	\$ 169.03	\$ 181.24	\$ 182.81	\$ 142.07	\$ 151.22	\$ 172.68
2010	\$ 169.19	\$ 168.65	\$ 169.82	\$ 145.81	\$ 158.98	\$ 167.01
2011	\$ 170.01	\$ 164.24	\$ 177.48	\$ 160.04	\$ 150.77	\$ 167.81
2012	\$ 171.85	\$ 171.99	\$ 179.85	\$ 181.58	\$ 166.61	\$ 174.71
2013	\$ 165.50	\$ 179.99	\$ 183.73	\$ 186.56	\$ 155.97	\$ 176.80
CAGR	-1.5%	-0.2%	0.0%	4.6%	-3.5%	-0.5%

Note that some generally minor changes in methodology apply year-to-year.

Averages calculated on a market share and population weighted basis.

Note that bundle prices in 2012 have increased relative to 2011, in some cases, due to the changes in the broadband service speed ranges introduced in this year's study.

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ATTACHMENT 3 – INTERNATIONAL PRICE COMPARISONS

Table A3.1 - International Wireline Prices

Baskets		Canada	U.S.	U.K.	France	Australia	Japan
Own Currency							
Wireline Level 1	2008	\$30.88	\$31.68	£17.14	€ 22.43	\$53.84	
	2009	\$29.80	\$31.56	£18.57	€ 22.95	\$54.91	
	2010	\$31.16	\$32.63	£19.35	€ 23.29	\$54.35	¥2,767
	2011	\$32.06	\$34.23	£20.58	€ 26.71	\$55.81	¥2,766
	2012	\$33.42	\$35.77	£18.04	€ 22.45	\$56.60	¥2,766
	2013	\$35.33	\$35.85	£18.21	€ 23.27	\$57.87	¥2,741
	CAGR		3%	3%	1%	1%	1%
Wireline Level 2	2008	\$47.91	\$56.64	£24.24	€ 41.25	\$104.43	
	2009	\$50.05	\$56.92	£26.19	€ 41.22	\$105.95	
	2010	\$51.42	\$56.76	£26.15	€ 41.10	\$105.28	¥5,416
	2011	\$49.81	\$56.77	£27.66	€ 38.68	\$88.87	¥5,555
	2012	\$51.71	\$57.09	£25.30	€ 36.98	\$91.81	¥5,561
	2013	\$55.77	\$55.36	£24.33	€ 36.04	\$96.30	¥5,554
	CAGR		3%	0%	0%	-3%	-2%
Wireline Level 3	2008	\$60.27	\$66.21	£32.87	€ 48.20	\$117.00	
	2009	\$61.55	\$65.33	£36.11	€ 49.48	\$117.00	
	2010	\$60.78	\$63.69	£36.17	€ 47.76	\$116.14	¥8,430
	2011	\$60.22	\$60.76	£36.45	€ 48.12	\$99.51	¥8,578
	2012	\$60.52	\$60.49	£35.54	€ 44.94	\$109.14	¥8,587
	2013	\$61.53	\$59.45	£35.25	€ 38.19	\$120.00	¥8,746
	CAGR		0%	-2%	1%	-5%	1%
CDN\$ - PPP							
Wireline Level 1	2008	\$ 30.88	\$ 37.82	\$ 32.32	\$ 28.73	\$ 43.35	
	2009	\$ 29.80	\$ 39.45	\$ 35.24	\$ 31.24	\$ 45.20	
	2010	\$ 31.16	\$ 39.75	\$ 35.32	\$ 31.53	\$ 44.45	\$ 27.23
	2011	\$ 32.06	\$ 44.84	\$ 34.35	\$ 37.86	\$ 45.86	\$ 29.55
	2012	\$ 33.42	\$ 46.84	\$ 28.22	\$ 32.34	\$ 46.57	\$ 29.84
	2013	\$ 35.33	\$ 45.88	\$ 31.68	\$ 33.53	\$ 46.30	\$ 30.45
	CAGR		3%	4%	0%	3%	1%
Wireline Level 2	2008	\$ 47.91	\$ 67.63	\$ 45.71	\$ 52.84	\$ 84.09	
	2009	\$ 50.05	\$ 71.15	\$ 49.68	\$ 56.10	\$ 87.22	
	2010	\$ 51.42	\$ 69.13	\$ 47.74	\$ 55.63	\$ 86.10	\$ 53.30
	2011	\$ 49.81	\$ 74.37	\$ 46.18	\$ 54.83	\$ 73.02	\$ 59.33
	2012	\$ 51.71	\$ 74.75	\$ 39.57	\$ 53.29	\$ 75.55	\$ 60.00
	2013	\$ 55.77	\$ 70.85	\$ 42.35	\$ 51.93	\$ 77.05	\$ 61.70
	CAGR		3%	1%	-2%	0%	-2%
Wireline Level 3	2008	\$ 60.27	\$ 79.05	\$ 61.99	\$ 61.74	\$ 94.21	
	2009	\$ 61.55	\$ 81.66	\$ 68.51	\$ 67.35	\$ 96.32	
	2010	\$ 60.78	\$ 77.58	\$ 66.03	\$ 64.65	\$ 94.98	\$ 82.95
	2011	\$ 60.22	\$ 79.59	\$ 60.86	\$ 68.20	\$ 81.77	\$ 91.61
	2012	\$ 60.52	\$ 79.21	\$ 55.60	\$ 64.76	\$ 89.81	\$ 92.65
	2013	\$ 61.53	\$ 76.08	\$ 61.35	\$ 55.03	\$ 96.00	\$ 97.17
	CAGR		0%	-1%	0%	-2%	0%

Table A3.1 - International Wireline Prices (Cont'd)

Baskets		Canada	U.S.	U.K.	France	Australia	Japan
CDN\$ - Exchange Rate							
Wireline Level 1	2008	\$ 30.88	\$ 31.52	\$ 34.02	\$ 34.21	\$ 49.26	
	2009	\$ 29.80	\$ 39.45	\$ 33.25	\$ 37.64	\$ 46.12	
	2010	\$ 31.16	\$ 34.27	\$ 31.54	\$ 33.54	\$ 51.09	\$ 33.21
	2011	\$ 32.06	\$ 33.71	\$ 32.72	\$ 36.06	\$ 55.25	\$ 33.20
	2012	\$ 33.42	\$ 36.31	\$ 28.50	\$ 29.40	\$ 59.71	\$ 35.95
	2013	\$ 35.33	\$ 35.57	\$ 28.80	\$ 30.76	\$ 60.13	\$ 30.15
	CAGR	3%	2%	-3%	-2%	4%	-3%
Wireline Level 2	2008	\$ 47.91	\$ 56.36	\$ 48.11	\$ 62.91	\$ 95.55	
	2009	\$ 50.05	\$ 71.15	\$ 46.87	\$ 67.59	\$ 89.00	
	2010	\$ 51.42	\$ 59.59	\$ 42.62	\$ 59.18	\$ 98.96	\$ 65.00
	2011	\$ 49.81	\$ 55.92	\$ 43.98	\$ 52.22	\$ 87.98	\$ 66.67
	2012	\$ 51.71	\$ 57.95	\$ 39.97	\$ 48.45	\$ 96.86	\$ 72.30
	2013	\$ 55.77	\$ 54.92	\$ 38.50	\$ 47.64	\$ 100.06	\$ 61.09
	CAGR	3%	-1%	-4%	-5%	1%	-2%
Wireline Level 3	2008	\$ 60.27	\$ 65.88	\$ 65.25	\$ 73.50	\$ 107.06	
	2009	\$ 61.55	\$ 81.66	\$ 64.63	\$ 81.15	\$ 98.28	
	2010	\$ 60.78	\$ 66.88	\$ 58.96	\$ 68.78	\$ 109.17	\$ 101.16
	2011	\$ 60.22	\$ 59.85	\$ 57.96	\$ 64.96	\$ 98.52	\$ 102.93
	2012	\$ 60.52	\$ 61.40	\$ 56.16	\$ 58.88	\$ 115.14	\$ 111.63
	2013	\$ 61.53	\$ 58.98	\$ 55.77	\$ 50.49	\$ 124.68	\$ 96.21
	CAGR	0%	-2%	-3%	-7%	3%	-2%

Note that some generally minor changes in methodology apply year-to-year.

For each year, the latest available OECD Purchasing Power Parity (PPP) indexes along with corresponding market exchange rates were used to convert foreign prices into PPP-adjusted and unadjusted Canadian dollars.

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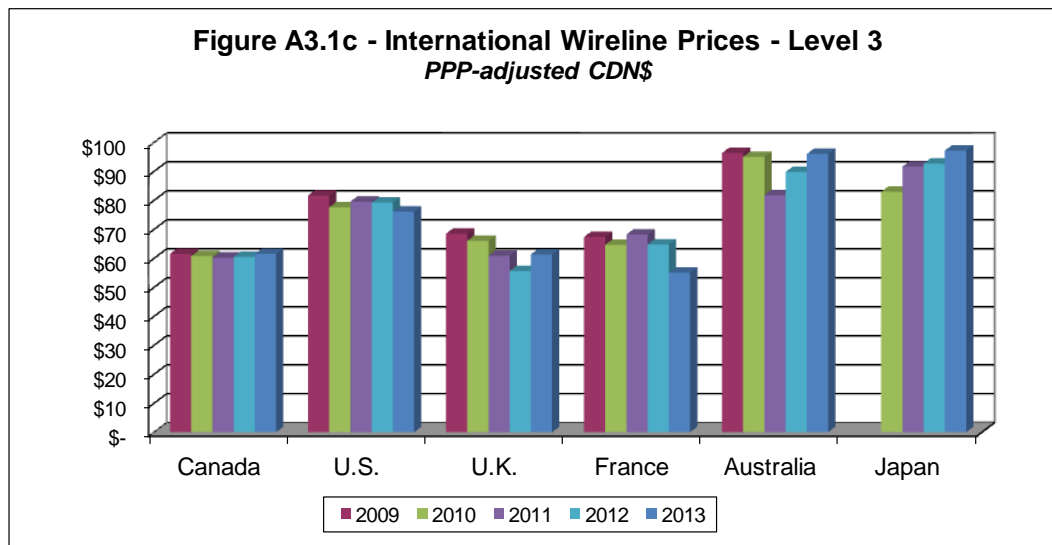
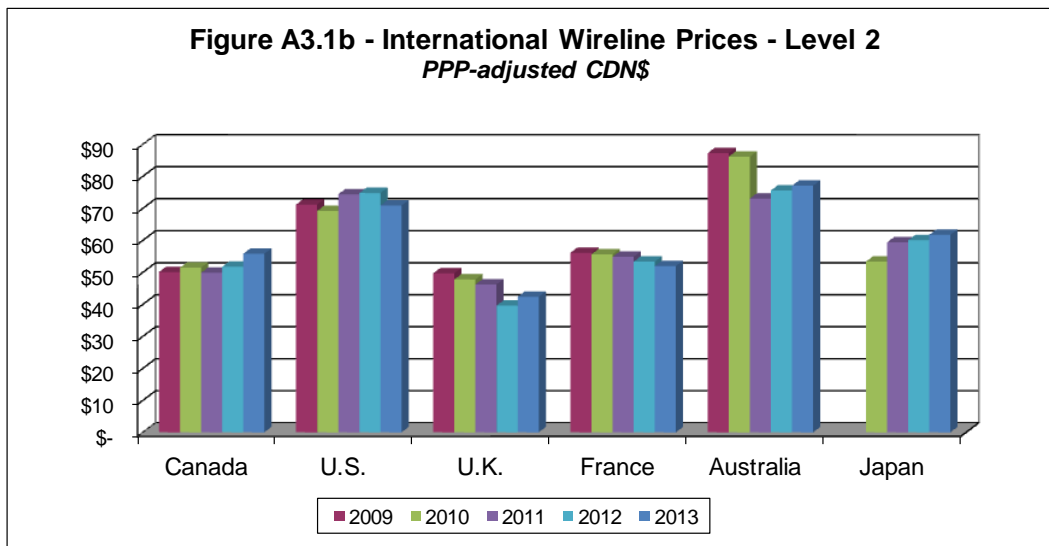
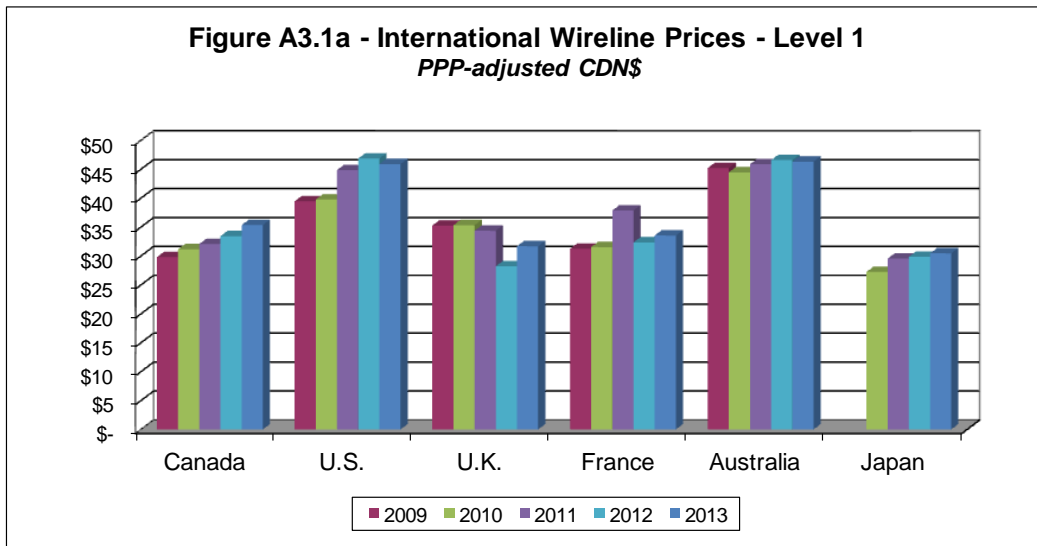


Table A3.2 - International Mobile Wireless Prices

Baskets		Canada	U.S.	U.K.	France	Australia	Japan
Own Currency							
Wireless Level 1	2008	\$32.73	\$34.27	£14.09	€ 18.39	\$ 27.27	
	2009	\$33.03	\$34.01	£12.82	€ 18.64	\$ 24.27	
	2010	\$34.03	\$33.20	£12.77	€ 19.61	\$ 23.18	¥2,459
	2011	\$33.73	\$25.48	£11.17	€ 18.44	\$ 25.50	¥2,368
	2012	\$34.32	\$25.80	£11.00	€ 16.72	\$ 27.27	¥2,366
	2013	\$30.71	\$25.85	£12.63	€ 14.04	\$ 27.27	¥2,528
	CAGR	-1%	-5%	-2%	-5%	0%	1%
Wireless Level 2	2008	\$60.81	\$54.06	£28.63	€ 43.95	\$ 40.86	
	2009	\$57.78	\$53.10	£23.57	€ 45.19	\$ 44.55	
	2010	\$53.49	\$49.75	£20.41	€ 50.76	\$ 43.60	¥4,506
	2011	\$50.51	\$52.43	£19.62	€ 52.81	\$ 44.99	¥4,601
	2012	\$51.31	\$55.71	£24.57	€ 42.42	\$ 42.00	¥4,567
	2013	\$44.86	\$59.50	£22.33	€ 30.59	\$ 43.79	¥3,993
	CAGR	-6%	2%	-5%	-7%	1%	-4%
Wireless Level 3	2008	\$112.34	\$113.67	£47.85	€ 86.23	\$ 120.16	
	2009	\$103.24	\$106.06	£40.25	€ 80.13	\$ 113.14	
	2010	\$109.59	\$101.81	£38.06	€ 80.80	\$ 112.41	¥11,909
	2011	\$99.69	\$106.12	£38.50	€ 71.08	\$ 89.90	¥11,256
	2012	\$98.37	\$108.30	£44.30	€ 58.83	\$ 63.61	¥10,984
	2013	\$93.59	\$113.93	£36.50	€ 40.87	\$ 61.92	¥11,273
	CAGR	-4%	0%	-5%	-14%	-12%	-2%
CDN\$ - PPP		Canada	U.S.	U.K.	France	Australia	Japan
Wireless Level 1	2008	\$ 32.73	\$ 40.92	\$ 26.57	\$ 23.55	\$ 21.96	
	2009	\$ 33.03	\$ 42.51	\$ 24.33	\$ 25.37	\$ 19.98	
	2010	\$ 34.03	\$ 40.43	\$ 23.31	\$ 26.54	\$ 18.96	\$ 24.20
	2011	\$ 33.73	\$ 33.38	\$ 18.64	\$ 26.13	\$ 20.95	\$ 25.29
	2012	\$ 34.32	\$ 33.78	\$ 17.21	\$ 24.09	\$ 22.44	\$ 25.53
	2013	\$ 30.71	\$ 33.08	\$ 21.97	\$ 20.24	\$ 21.82	\$ 28.09
	CAGR	-1%	-4%	-4%	-3%	0%	5%
Wireless Level 2	2008	\$ 60.81	\$ 64.54	\$ 53.98	\$ 56.30	\$ 32.90	
	2009	\$ 57.78	\$ 66.38	\$ 44.73	\$ 61.51	\$ 36.67	
	2010	\$ 53.49	\$ 60.60	\$ 37.27	\$ 68.70	\$ 35.65	\$ 44.34
	2011	\$ 50.51	\$ 68.69	\$ 32.75	\$ 74.86	\$ 36.97	\$ 49.14
	2012	\$ 51.31	\$ 72.94	\$ 38.43	\$ 61.13	\$ 34.56	\$ 49.28
	2013	\$ 44.86	\$ 76.14	\$ 38.85	\$ 44.08	\$ 35.04	\$ 44.36
	CAGR	-6%	3%	-6%	-5%	1%	0%
Wireless Level 3	2008	\$ 112.34	\$ 135.72	\$ 90.23	\$ 110.46	\$ 96.75	
	2009	\$ 103.24	\$ 132.58	\$ 76.36	\$ 109.08	\$ 93.13	
	2010	\$ 109.59	\$ 124.01	\$ 69.49	\$ 109.37	\$ 91.93	\$ 117.19
	2011	\$ 99.69	\$ 139.03	\$ 64.27	\$ 100.75	\$ 73.87	\$ 120.21
	2012	\$ 98.37	\$ 141.80	\$ 69.30	\$ 84.77	\$ 52.35	\$ 118.51
	2013	\$ 93.59	\$ 145.79	\$ 63.52	\$ 58.90	\$ 49.54	\$ 125.24
	CAGR	-4%	1%	-7%	-12%	-13%	2%

Table A3.2 - International Mobile Wireless Prices (Cont'd)

Baskets		Canada	U.S.	U.K.	France	Australia	Japan
CDN\$ - Exchange Rate							
Wireless Level 1	2008	\$ 32.73	\$ 34.10	\$ 27.97	\$ 28.04	\$ 24.95	
	2009	\$ 33.03	\$ 42.51	\$ 22.96	\$ 30.56	\$ 20.39	
	2010	\$ 34.03	\$ 34.86	\$ 20.81	\$ 28.23	\$ 21.79	\$ 29.51
	2011	\$ 33.73	\$ 25.10	\$ 17.76	\$ 24.89	\$ 25.25	\$ 28.42
	2012	\$ 34.32	\$ 26.19	\$ 17.38	\$ 21.90	\$ 28.77	\$ 30.76
	2013	\$ 30.71	\$ 25.64	\$ 19.98	\$ 18.57	\$ 28.34	\$ 27.81
	CAGR	-1%	-6%	-7%	-8%	3%	-2%
Wireless Level 2	2008	\$ 60.81	\$ 53.79	\$ 56.83	\$ 67.03	\$ 37.39	
	2009	\$ 57.78	\$ 66.38	\$ 42.19	\$ 74.11	\$ 37.42	
	2010	\$ 53.49	\$ 52.24	\$ 33.27	\$ 73.09	\$ 40.98	\$ 40.98
	2011	\$ 50.51	\$ 51.64	\$ 31.19	\$ 71.30	\$ 44.54	\$ 55.21
	2012	\$ 51.31	\$ 56.54	\$ 38.82	\$ 55.58	\$ 44.31	\$ 59.38
	2013	\$ 44.86	\$ 59.03	\$ 35.32	\$ 40.44	\$ 45.50	\$ 43.92
	CAGR	-6%	2%	-9%	-10%	4%	2%
Wireless Level 3	2008	\$ 112.34	\$ 113.10	\$ 94.98	\$ 131.50	\$ 109.95	
	2009	\$ 103.24	\$ 132.58	\$ 72.04	\$ 131.42	\$ 95.03	
	2010	\$ 109.59	\$ 106.90	\$ 62.04	\$ 116.35	\$ 105.67	\$ 105.67
	2011	\$ 99.69	\$ 104.53	\$ 61.21	\$ 95.96	\$ 89.00	\$ 135.07
	2012	\$ 98.37	\$ 109.92	\$ 70.00	\$ 77.07	\$ 67.11	\$ 142.79
	2013	\$ 93.59	\$ 113.02	\$ 57.74	\$ 54.03	\$ 64.34	\$ 124.00
	CAGR	-4%	0%	-9%	-16%	-10%	5%

Note that some generally minor changes in methodology apply year-to-year.

For each year, the latest available OECD Purchasing Power Parity (PPP) indexes along with corresponding market exchange rates were used to convert foreign prices into PPP-adjusted and unadjusted Canadian dollars.

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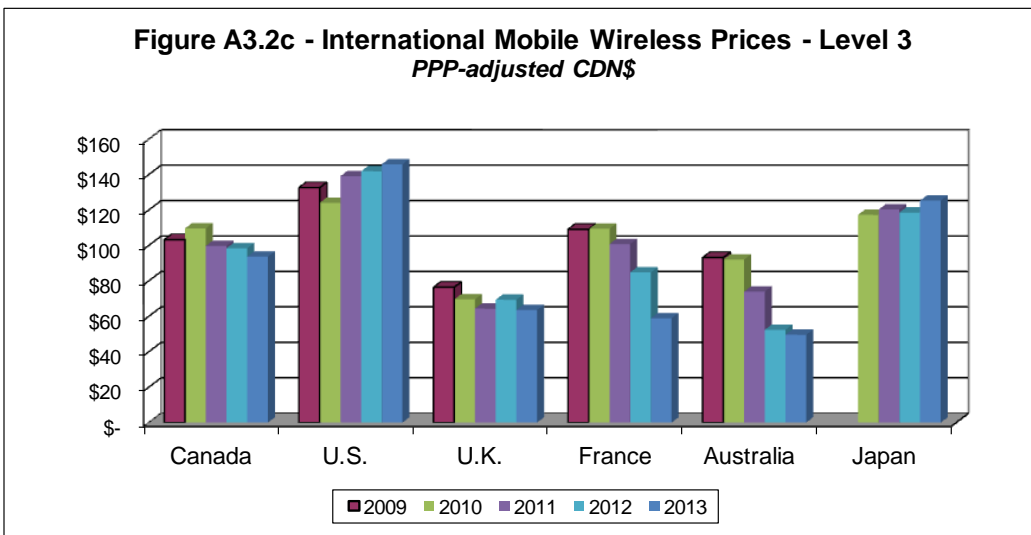
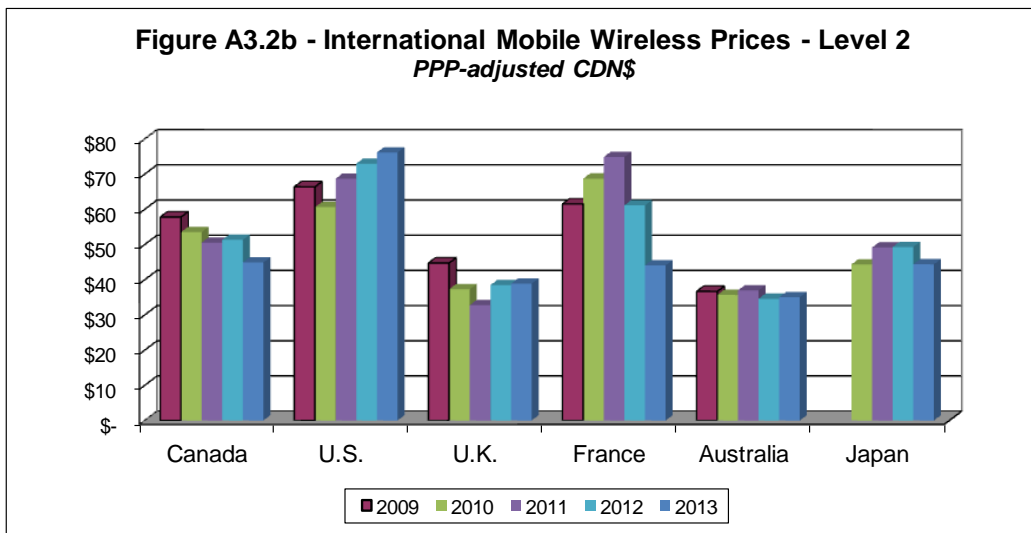
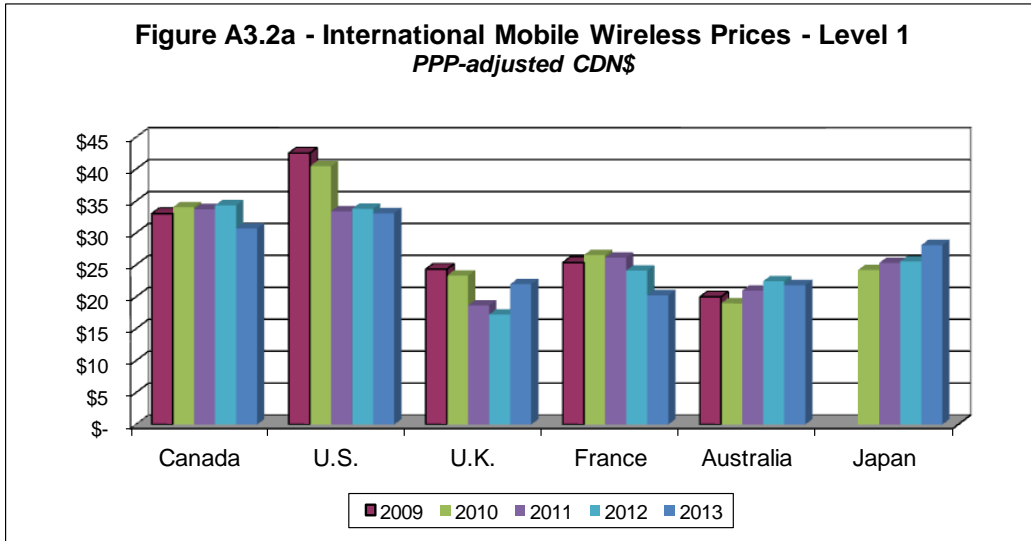


Table A3.3 - International Broadband Internet Service Prices

Baskets		Canada	U.S.	U.K.	France	Australia	Japan
Own Currency							
Broadband Level 1	2008	\$32.88	\$28.28	£15.87	€ 32.97	\$53.15	
	2009	\$30.98	\$32.15	na	€ 32.97	\$50.18	
	2010	\$31.44	\$32.52	na	na	\$42.69	¥4,038
	2011	\$34.85	\$38.97	na	€ 19.98	\$36.32	¥4,038
	2012	\$39.37	\$43.72	na	na	na	¥4,678
	2013	\$38.91	\$40.93	na	na	na	¥4,100
	CAGR	3%	8%				1%
Broadband Level 2	2008	\$46.58	\$46.88	£23.36	€ 35.77	\$77.69	
	2009	\$47.26	\$46.34	£15.93	€ 35.77	\$77.45	
	2010	\$47.60	\$48.41	£22.22	€ 32.53	\$63.60	¥5,036
	2011	\$49.79	\$49.72	£24.39	€ 33.44	\$69.05	¥5,036
	2012	\$54.31	\$60.21	£19.50	€ 32.60	\$72.68	¥5,162
	2013	\$51.20	\$63.62	£18.88	na	\$72.68	¥4,728
	CAGR	2%	6%	-4%		-1%	-2%
Broadband Level 3	2008	\$68.74	\$56.45	£27.96	€ 38.57	\$94.97	
	2009	\$60.08	\$56.33	£18.94	€ 35.07	\$94.73	
	2010	\$61.88	\$61.79	£25.33	€ 42.44	\$90.87	¥7,332
	2011	\$63.44	\$60.76	£24.01	€ 46.82	\$72.68	¥5,104
	2012	\$67.94	\$74.08	£26.14	€ 31.97	\$74.96	¥5,503
	2013	\$65.18	\$77.44	£24.71	€ 34.24	\$71.38	¥5,537
	CAGR	-1%	7%	-2%	-2%	-6%	-9%
Broadband Level 4	2011	\$77.71	\$72.57	£29.99	€ 35.12	\$81.77	¥5,595
	2012	\$94.39	\$122.94	£37.50	€ 43.28	\$99.95	¥5,806
	2013	\$82.88	\$96.33	£30.64	€ 37.88	\$90.86	¥5,841
	CAGR	3%	15%	1%	4%	5%	2%
CDNS - PPP							
Broadband Level 1	2008	\$ 32.88	\$ 33.77	\$ 29.93	\$ 42.23	\$ 42.79	
	2009	\$ 30.98	\$ 40.19	na	\$ 44.87	\$ 41.31	
	2010	\$ 31.44	\$ 39.61	na	na	\$ 34.91	\$ 39.73
	2011	\$ 34.85	\$ 51.06	na	\$ 28.33	\$ 29.84	\$ 43.13
	2012	\$ 39.37	\$ 57.24	na	na	na	\$ 50.48
	2013	\$ 38.91	\$ 52.38	na	na	na	\$ 45.55
	CAGR	3%	9%				5%
Broadband Level 2	2008	\$ 46.58	\$ 55.97	\$ 44.05	\$ 45.82	\$ 62.56	
	2009	\$ 47.26	\$ 57.92	\$ 30.22	\$ 48.69	\$ 63.76	
	2010	\$ 47.60	\$ 58.97	\$ 40.57	\$ 44.03	\$ 52.01	\$ 49.55
	2011	\$ 49.79	\$ 65.14	\$ 40.72	\$ 47.41	\$ 56.74	\$ 53.79
	2012	\$ 54.31	\$ 78.84	\$ 30.50	\$ 46.97	\$ 59.81	\$ 55.70
	2013	\$ 51.20	\$ 81.42	\$ 32.85	na	\$ 58.15	\$ 52.53
	CAGR	2%	8%	-6%		-1%	2%
Broadband Level 3	2008	\$ 68.74	\$ 67.40	\$ 52.72	\$ 49.41	\$ 76.47	
	2009	\$ 60.08	\$ 70.41	\$ 35.93	\$ 47.73	\$ 77.98	
	2010	\$ 61.88	\$ 75.26	\$ 46.24	\$ 57.45	\$ 74.32	\$ 72.15
	2011	\$ 63.44	\$ 79.60	\$ 40.09	\$ 66.37	\$ 59.72	\$ 54.52
	2012	\$ 67.94	\$ 97.00	\$ 40.88	\$ 46.07	\$ 61.69	\$ 59.37
	2013	\$ 65.18	\$ 99.10	\$ 43.01	\$ 49.34	\$ 57.10	\$ 61.52
	CAGR	-1%	8%	-4%	0%	-6%	-5%
Broadband Level 4	2011	\$ 77.71	\$ 95.07	\$ 50.07	\$ 49.79	\$ 67.19	\$ 59.76
	2012	\$ 94.39	\$ 160.97	\$ 58.66	\$ 62.36	\$ 82.25	\$ 62.65
	2013	\$ 82.88	\$ 123.27	\$ 53.31	\$ 54.58	\$ 72.69	\$ 64.89
	CAGR	3%	14%	3%	5%	4%	4%

Table A3.3 - International Broadband Internet Service Prices (Cont'd)

Baskets		Canada	U.S.	U.K.	France	Australia	Japan
CDN\$ - Exchange Rate							
Broadband Level 1	2008	\$ 32.88	\$ 28.14	\$ 31.51	\$ 50.27	\$ 48.63	
	2009	\$ 30.98	\$ 40.19	na	\$ 54.06	\$ 42.15	
	2010	\$ 31.44	\$ 34.15	na	na	\$ 40.13	\$ 48.46
	2011	\$ 34.85	\$ 38.39	na	\$ 26.98	\$ 35.96	\$ 48.46
	2012	\$ 39.37	\$ 44.37	na	na	na	\$ 60.82
	2013	\$ 38.91	\$ 40.60	na	na	na	\$ 45.10
	CAGR	3%	8%				-2%
Broadband Level 2	2008	\$ 46.58	\$ 46.64	\$ 46.37	\$ 54.54	\$ 71.09	
	2009	\$ 47.26	\$ 57.92	\$ 28.51	\$ 58.66	\$ 65.06	
	2010	\$ 47.60	\$ 50.83	\$ 36.22	\$ 46.84	\$ 59.79	\$ 60.43
	2011	\$ 49.79	\$ 48.98	\$ 38.78	\$ 45.15	\$ 68.36	\$ 60.43
	2012	\$ 54.31	\$ 61.12	\$ 30.81	\$ 42.70	\$ 76.68	\$ 67.10
	2013	\$ 51.20	\$ 63.11	\$ 29.87	na	\$ 75.52	\$ 52.01
	CAGR	2%	6%	-8%		1%	-5%
Broadband Level 3	2008	\$ 68.74	\$ 56.17	\$ 55.50	\$ 58.82	\$ 86.89	
	2009	\$ 60.08	\$ 70.41	\$ 33.90	\$ 57.51	\$ 79.57	
	2010	\$ 61.88	\$ 64.88	\$ 41.29	\$ 61.12	\$ 85.42	\$ 87.99
	2011	\$ 63.44	\$ 59.85	\$ 38.18	\$ 63.21	\$ 71.96	\$ 61.25
	2012	\$ 67.94	\$ 75.19	\$ 41.29	\$ 41.88	\$ 79.09	\$ 71.54
	2013	\$ 65.18	\$ 76.82	\$ 39.10	\$ 45.27	\$ 74.16	\$ 60.91
	CAGR	-1%	6%	-7%	-5%	-3%	-12%
Broadband Level 4	2011	\$ 77.71	\$ 71.48	\$ 47.69	\$ 47.41	\$ 80.96	\$ 67.15
	2012	\$ 94.39	\$ 124.78	\$ 59.25	\$ 56.69	\$ 105.45	\$ 75.48
	2013	\$ 82.88	\$ 95.56	\$ 48.47	\$ 50.08	\$ 94.41	\$ 64.25
	CAGR	3%	16%	1%	3%	8%	-2%

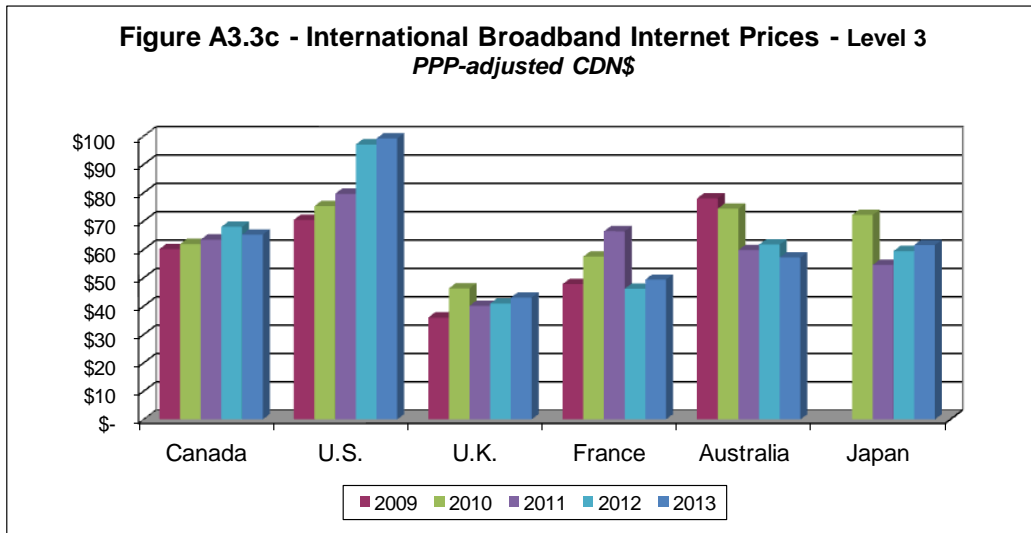
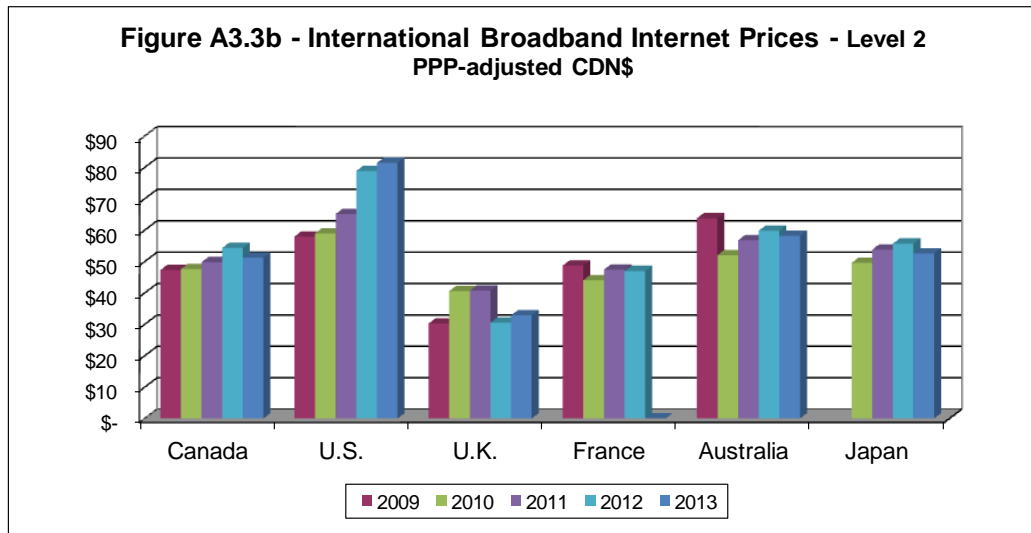
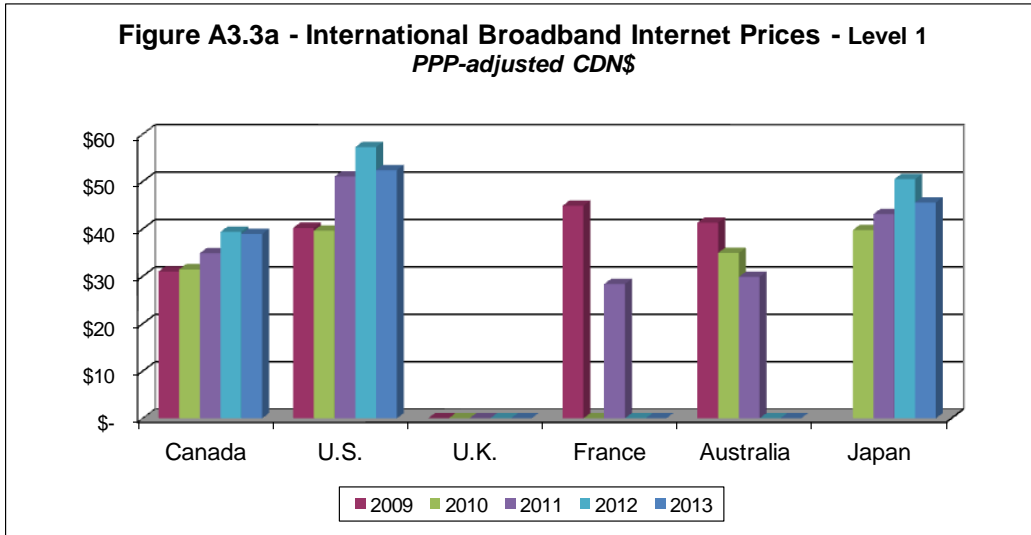
Note that some generally minor changes in methodology apply year-to-year.

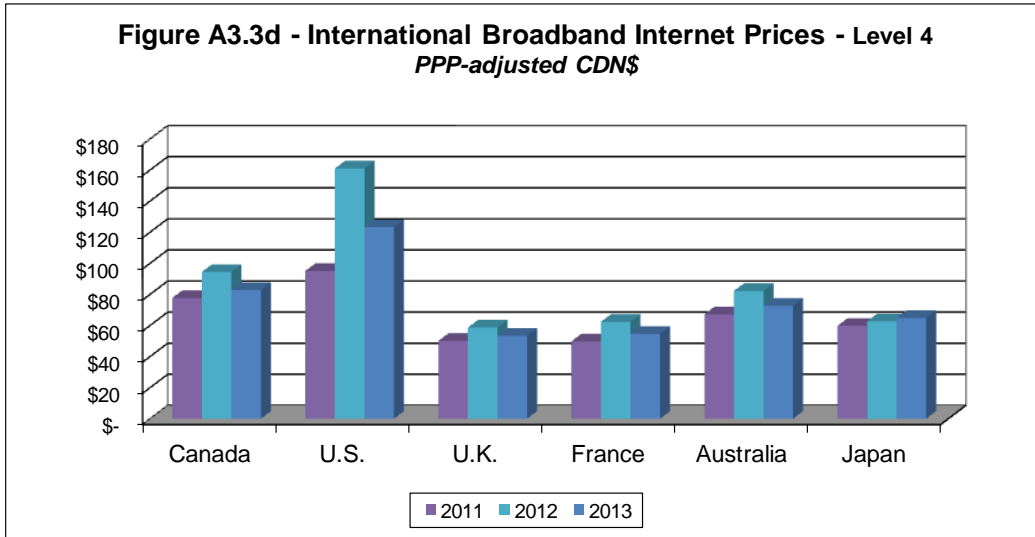
"na" implies that no service currently marketed by the surveyed companies in the defined speed range.

For each year, the latest available OECD Purchasing Power Parity (PPP) indexes along with corresponding market exchange rates were used to convert foreign prices into PPP-adjusted and unadjusted Canadian dollars.

Note that speed ranges and monthly data usage levels were increased in 2012 for all four service levels, which had the effect of increasing prices in 2012 and 2013 relative to earlier years in some cases.

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Note: the broadband service basket changes introduced in the 2012 study – which increased download speed ranges and data usage levels in the case of each basket – caused prices to increase in 2012 and 2013 relative to earlier years in some cases.

Table A3.4 - International Mobile Internet Prices

Baskets		Canada	U.S.	U.K.	France	Australia	Japan
Own Currency							
Level 1 (2 GB/month)	2010	\$54.02	\$60.15	£13.62	€ 34.20	\$41.44	¥7,724
	2011	\$52.41	\$54.58	£14.08	€ 30.54	\$33.08	¥6,497
	2012	\$52.55	\$39.94	£17.53	€ 27.31	\$38.14	¥5,087
	2013	\$44.55	\$42.68	£13.63	€ 24.27	\$36.00	¥5,179
	CAGR	-6%	-11%	0%	-11%	-5%	-12%
Level 2 (5 GB/month)	2012	\$65.11	\$53.09	£25.00	€ 69.50	\$54.50	¥5,261
	2013	\$64.67	\$46.75	£35.63	€ 30.99	\$43.91	¥5,242
	CAGR	-1%	-12%	43%	-55%	-19%	0%
CDN\$ - PPP							
Level 1 (2 GB/month)	2010	\$ 54.02	\$ 73.26	\$ 24.86	\$ 46.29	\$ 33.89	\$ 76.00
	2011	\$ 52.41	\$ 71.50	\$ 23.51	\$ 43.30	\$ 27.18	\$ 69.38
	2012	\$ 52.55	\$ 52.29	\$ 27.42	\$ 39.36	\$ 31.38	\$ 54.89
	2013	\$ 44.55	\$ 54.61	\$ 23.71	\$ 34.98	\$ 28.80	\$ 57.54
	CAGR	-6%	-9%	-2%	-9%	-5%	-9%
Level 2 (5 GB/month)	2012	\$ 65.11	\$ 69.51	\$ 39.11	\$ 100.15	\$ 44.85	\$ 56.77
	2013	\$ 64.67	\$ 59.82	\$ 62.01	\$ 44.65	\$ 35.13	\$ 58.24
	CAGR	-1%	-14%	59%	-55%	-22%	3%
CDN\$ - Exchange Rate							
Level 1 (2 GB/month)	2010	\$ 54.02	\$ 63.16	\$ 22.20	\$ 49.24	\$ 38.95	\$ 92.69
	2011	\$ 52.41	\$ 53.76	\$ 22.39	\$ 41.23	\$ 32.75	\$ 77.96
	2012	\$ 52.55	\$ 40.53	\$ 27.69	\$ 35.78	\$ 40.23	\$ 66.14
	2013	\$ 44.55	\$ 42.34	\$ 21.56	\$ 32.09	\$ 37.40	\$ 56.97
	CAGR	-6%	-12%	-1%	-13%	-1%	-15%
Level 2 (5 GB/month)	2012	\$ 65.11	\$ 53.88	\$ 39.50	\$ 91.05	\$ 57.50	\$ 68.39
	2013	\$ 64.67	\$ 46.38	\$ 56.37	\$ 40.97	\$ 45.62	\$ 57.66
	CAGR	-1%	-14%	43%	-55%	-21%	-16%

Note that some generally minor changes in methodology apply year-to-year.

For each year, the latest available OECD Purchasing Power Parity (PPP) indexes along with corresponding market exchange rates were used to convert foreign prices into PPP-adjusted and unadjusted Canadian dollars.

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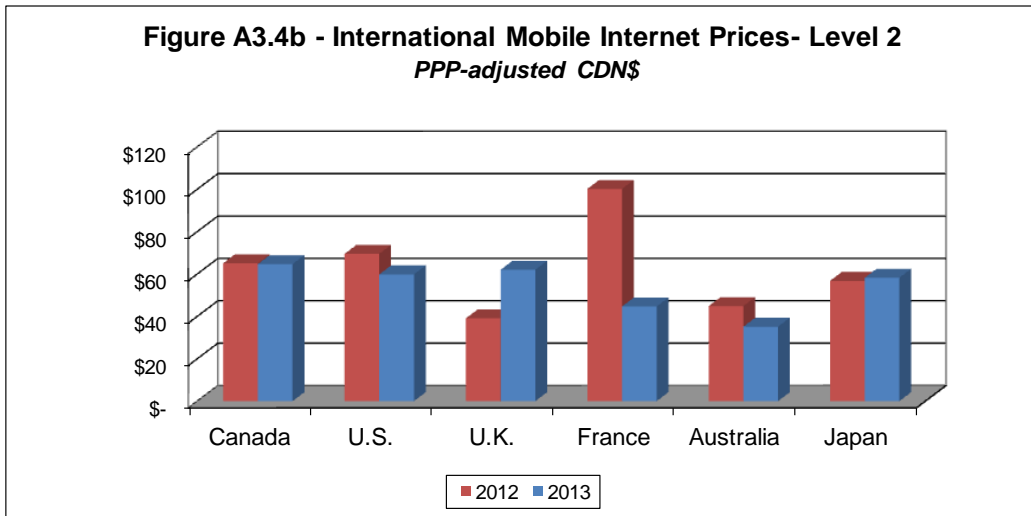
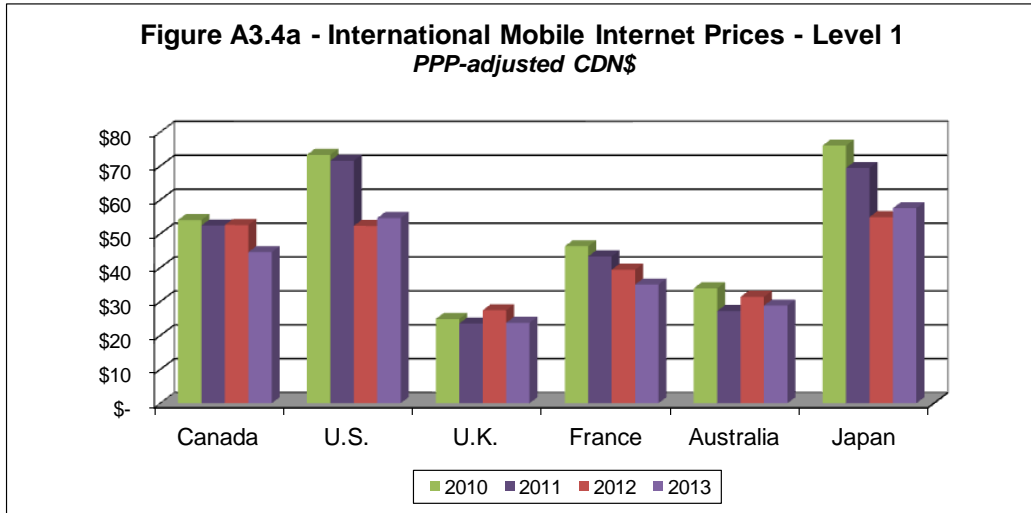


Table A3.5 - International Bundled Service Prices

Baskets		Canada	U.S.	U.K.	France	Australia	Japan
Own Currency							
Bundle 1 (Wireline-Broadband- Mobile)	2008	\$146.96	\$147.40	£73.11	€ 107.87	\$191.03	
	2009	\$139.86	\$142.19	£66.65	€ 110.12	\$193.53	
	2010	\$133.83	\$135.15	£57.95	€ 105.77	\$161.75	¥13,931
	2011	\$133.50	\$139.42	£57.12	€ 98.87	\$176.81	¥14,037
	2012	\$140.47	\$142.88	£63.02	€ 84.62	\$185.28	¥14,618
	2013	\$139.15	\$144.57	£64.01	€ 66.36	\$183.05	¥13,468
	CAGR	-1%	0%	-3%	-9%	-1%	-1%
Bundle 2 (Wireline-Broadband- TV)	2008	\$119.93	\$129.89	£57.02	€ 67.46	\$181.41	
	2009	\$122.43	\$131.05	£58.18	€ 67.42	\$183.26	
	2010	\$118.41	\$135.43	£60.90	€ 70.44	\$160.18	¥12,906
	2011	\$122.87	\$132.73	£59.35	€ 52.01	\$169.76	¥12,896
	2012	\$128.44	\$135.30	£54.84	€ 47.35	\$180.92	¥13,482
	2013	\$134.19	\$131.22	£56.40	€ 48.00	\$181.59	¥12,352
	CAGR	2%	0%	0%	-7%	0%	-1%
Bundle 3 (All four services)	2008	\$181.31	\$180.17	£84.46	€ 110.40	\$225.53	
	2009	\$172.68	\$170.58	£70.82	€ 112.65	\$231.24	
	2010	\$167.01	\$172.84	£74.21	€ 120.26	\$201.30	¥17,533
	2011	\$167.81	\$181.88	£79.29	€ 103.39	\$218.17	¥18,043
	2012	\$174.71	\$183.79	£82.54	€ 87.71	\$226.19	¥18,723
	2013	\$176.80	\$175.12	£80.77	€ 70.33	\$222.79	¥16,437
	CAGR	-1%	-1%	-1%	-9%	0%	-2%
CDN\$ - PPP							
Bundle 1 (Wireline-Broadband- Mobile)	2008	\$ 146.96	\$ 175.99	\$ 137.87	\$ 138.18	\$ 153.82	
	2009	\$ 139.86	\$ 177.74	\$ 126.45	\$ 149.89	\$ 159.31	
	2010	\$ 133.83	\$ 164.61	\$ 105.80	\$ 143.16	\$ 132.28	\$ 137.08
	2011	\$ 133.50	\$ 182.65	\$ 95.36	\$ 140.15	\$ 145.28	\$ 149.91
	2012	\$ 140.47	\$ 187.07	\$ 98.57	\$ 121.94	\$ 152.47	\$ 157.73
	2013	\$ 139.15	\$ 185.00	\$ 111.39	\$ 95.62	\$ 146.45	\$ 149.63
	CAGR	-1%	1%	-4%	-7%	-1%	3%
Bundle 2 (Wireline-Broadband- TV)	2008	\$ 119.93	\$ 155.09	\$ 107.53	\$ 86.41	\$ 146.07	
	2009	\$ 122.43	\$ 163.81	\$ 110.39	\$ 91.78	\$ 150.86	
	2010	\$ 118.41	\$ 164.95	\$ 111.18	\$ 95.34	\$ 131.00	\$ 126.99
	2011	\$ 122.87	\$ 173.88	\$ 99.08	\$ 73.72	\$ 139.49	\$ 137.73
	2012	\$ 128.44	\$ 177.15	\$ 85.78	\$ 68.23	\$ 148.88	\$ 145.47
	2013	\$ 134.19	\$ 167.92	\$ 98.14	\$ 69.17	\$ 145.27	\$ 137.23
	CAGR	2%	2%	-2%	-4%	0%	3%
Bundle 3 (All four services)	2008	\$ 181.31	\$ 215.13	\$ 159.27	\$ 141.43	\$ 181.60	
	2009	\$ 172.68	\$ 213.23	\$ 134.37	\$ 153.35	\$ 190.36	
	2010	\$ 167.01	\$ 210.52	\$ 135.48	\$ 162.78	\$ 164.62	\$ 172.52
	2011	\$ 167.81	\$ 238.27	\$ 132.38	\$ 146.56	\$ 179.27	\$ 192.70
	2012	\$ 174.71	\$ 240.65	\$ 129.11	\$ 126.39	\$ 186.13	\$ 202.02
	2013	\$ 176.80	\$ 224.09	\$ 140.56	\$ 101.35	\$ 178.24	\$ 182.62
	CAGR	-1%	1%	-2%	-6%	0%	2%

Table A3.5 - International Bundled Service Prices (Cont'd)

Baskets		Canada	U.S.	U.K.	France	Australia	Japan
CDN\$ - Exchange Rate							
Bundle 1 (Wireline-Broadband- Mobile)	2008	\$ 146.96	\$ 146.66	\$ 145.12	\$ 164.50	\$ 174.80	
	2009	\$ 139.86	\$ 177.74	\$ 119.29	\$ 180.59	\$ 162.56	
	2010	\$ 133.83	\$ 141.91	\$ 94.46	\$ 152.30	\$ 152.05	\$ 167.17
	2011	\$ 133.50	\$ 137.33	\$ 90.82	\$ 133.48	\$ 175.04	\$ 168.44
	2012	\$ 140.47	\$ 145.02	\$ 99.56	\$ 110.85	\$ 195.47	\$ 190.04
	2013	\$ 139.15	\$ 143.41	\$ 101.26	\$ 87.73	\$ 190.19	\$ 148.15
	CAGR		-1%	0%	-7%	-12%	2%
Bundle 2 (Wireline-Broadband- TV)	2008	\$ 119.93	\$ 129.24	\$ 113.18	\$ 102.87	\$ 165.99	
	2009	\$ 122.43	\$ 163.81	\$ 104.15	\$ 110.57	\$ 153.94	
	2010	\$ 118.41	\$ 142.20	\$ 99.26	\$ 101.43	\$ 150.57	\$ 154.87
	2011	\$ 122.87	\$ 130.74	\$ 94.36	\$ 70.21	\$ 168.06	\$ 154.75
	2012	\$ 128.44	\$ 137.33	\$ 86.65	\$ 62.03	\$ 190.87	\$ 175.27
	2013	\$ 134.19	\$ 130.17	\$ 89.22	\$ 63.46	\$ 188.67	\$ 135.88
	CAGR		2%	0%	-5%	-9%	3%
Bundle 3 (All four services)	2008	\$ 181.31	\$ 179.27	\$ 167.65	\$ 168.36	\$ 206.36	
	2009	\$ 172.68	\$ 213.23	\$ 126.77	\$ 184.75	\$ 194.24	
	2010	\$ 167.01	\$ 181.48	\$ 120.97	\$ 173.17	\$ 189.22	\$ 189.22
	2011	\$ 167.81	\$ 179.15	\$ 126.07	\$ 139.58	\$ 215.99	\$ 216.52
	2012	\$ 174.71	\$ 186.55	\$ 130.41	\$ 114.90	\$ 238.63	\$ 243.40
	2013	\$ 176.80	\$ 173.72	\$ 127.78	\$ 92.98	\$ 231.48	\$ 180.81
	CAGR		-1%	-1%	-5%	-11%	2%

Note that some generally minor changes in methodology apply year-to-year.

For each year, the latest available OECD Purchasing Power Parity (PPP) indexes along with corresponding market exchange rates were used to convert foreign prices into PPP-adjusted and unadjusted Canadian dollars.

Note that speed ranges and monthly data usage levels were increased in 2012 for all four service levels, which had the effect of increasing prices in 2012 and 2013 relative to earlier years in some cases.

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