

# PERSPECTIVES ON SCENARIOS FOR FOREIGN DIRECT INVESTMENT IN THE CANADIAN TELECOMMUNICATIONS INDUSTRY

## SECOR'S RESPONSE TO REQUEST FOR COMMENT

Presented to:

Director General, Telecommunications Policy Branch

Industry Canada,

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Ottawa, Ontario

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***Note to Reader:***

This study was commissioned by MTS Allstream and was undertaken by SECOR Consulting with the purpose of providing a balanced, objective analysis of potential outcomes of proposed changes to foreign direct investment (FDI) in the Canadian telecommunications (telecom) industry. The study examines potential scenarios and outcomes, and is not intended to provide insight or comment on the actions or performance of any individual telecom player.

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## EXECUTIVE SUMMARY

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The Canadian government has invited public submissions regarding FDI restrictions in the Canadian telecom marketplace. The purpose of this report is to provide a strategic and comparative analysis of the potential outcomes of the three options proposed by the government which SECOR has characterized as follows:

1. **Canadian Control:** Increase foreign ownership limits from an effective 46.7% to 49%;
2. **Open Window:** Remove foreign ownership limits on players with less than 10% market share; &
3. **Open Field:** Remove foreign ownership limits for all players.

To conduct this study, SECOR used an adapted Structure Conduct Performance model to identify how the change in FDI might impact market structure, conduct and performance in each option. These changes were then assessed in terms of their contribution to stated government objectives.

### CURRENT MARKET OVERVIEW (BASE CASE)

Canada's telecom market represents \$41 billion or 1.4% of global telecom revenues.<sup>1</sup> The market is highly concentrated with Bell, TELUS and Rogers owning 96% wireless market share and telecom incumbents owning 73% wireline market share.<sup>2</sup> New entrants face high barriers to entry in the level of capital required for infrastructure build, limitations on wireless spectrum, and regulated prices for selected services. Canada is one of the most restricted markets for foreign investment.

**Canadian consumers** have a choice of wireline, wireless and broadband providers, as well as new wireless entrants. Wireline and broadband penetration is higher and prices are more competitive than many other OECD jurisdictions. Wireless and higher speed broadband penetration, however, is lower and prices are less competitive. Canada also lags other countries in accessing new and innovative products and services.

**Canadian businesses'** choice of providers varies by geography. Some businesses have limited choice of wireline providers, particularly for SMEs outside of major urban centres. Business customers also tend to lag their peers in other countries, in their opportunity to access new and innovative products and services.

The Canadian telecom industry has seen steady growth and service providers have consistently experienced high margins and stable cash flows. Major Canadian telecom players have invested in infrastructure upgrades funded through free cash flow and access to Canadian equity markets. Smaller players and new entrants, however, have less access to lower cost risk capital.

Canada is a high information and communication technology (ICT) user, but has dropped in ICT advancement in its global International Telecommunications Union (ITU) ranking over the past several years. Canada is a net importer of ICT goods, services, and innovations from other jurisdictions.

Key trends impacting global telecom industry evolution and introducing a degree of uncertainty in any forward-looking view of the industry include: the recent economic crisis, media and telecom convergence, telecom next generation networks, global M&A, and increased activity from alternative players (e.g. Google, Microsoft).

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<sup>1</sup> TIA 2010 ICT Market Review and Forecast and 2010 Canadian Radio-television and Telecommunications Commission (CRTC) Communications Monitoring Report

<sup>2</sup> Canadian Wireless Telecommunications Association and 2010 CRTC Communications Monitoring Report



## CONCLUSIONS

**Canadian Control: Option 1, increasing FDI limits to 49%, is not expected to achieve the government’s objectives.** The most likely outcome is no investment, as this change represents an effective 2.3% increase in foreign control. Financial or strategic investments are unlikely without a path to control. As market structure remains constant, the impetus to change conduct is low.

**Open Window: Option 2, removing FDI limits for players with less than 10% market share, creates the conditions for achieving the government’s objectives and retains the flexibility for a staged increase in FDI limits.** The most likely outcomes (buying and building an additional major competitor or stronger smaller competitors), would change market structure. This provides the impetus for changes such as new products and services introduction, infrastructure build-out, innovation and digital technology advancement. Smaller players would have access to risk capital, strengthening their ability to compete with major players.

**Open Field: Option 3, removing FDI limits for all players, also creates the conditions for achieving the government’s objectives.** The variability of possible outcomes is higher than in Option 2, as foreign investment could focus on major players, smaller players or start-ups. Major players such as TELUS, Bell and Rogers may be acquired, reducing the further investment in smaller players. Synergies with global players could bring new innovative products and services, global connectivity for multi-national businesses, and access to economies of scale.

## RECOMMENDATIONS

Based on this analysis, **Option 2, removing FDI restrictions on players with less than 10% market share**, represents the best choice to achieve government objectives as it:

- Y Provides the highest likelihood of substantial changes in market structure, conduct and performance that could create the conditions to achieve the government’s objectives; and,
- Y Retains the flexibility for staged changes to FDI regulations.

Option 3 provides similar conditions and benefits to Option 2, but presents a higher variation of outcomes and a lower probability of achieving government objectives on balance.

To mitigate potential risks in Option 2, reasonable requirements for investment transactions (e.g. maintaining Canadian centres of innovation, facilities-based investments), and constraints for future wireless spectrum auctions can be set would encourage foreign investment while providing benefits to Canadian consumers and businesses, the telecom industry, and Canada’s economy.

## 1. INTRODUCTION

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The Government of Canada is considering revising current restrictions on foreign investment as a means to strengthen market competition and attract new capital and innovation to the telecom industry in Canada. The Telecommunication Policy Review Panel in 2006 recommended that FDI restrictions be relaxed in two stages. In the first 5 years, foreign acquisition of Canadian companies with market shares up to 10 percent of the revenue in any telecom service market would be permitted. In subsequent years, foreign investment would be fully liberalized in a manner that is competitively neutral. This policy was endorsed by “Compete to Win” – the 2008 report of the Competition Policy Review Panel, also known as “The Red Wilson Panel”.

In June 2010, the Government of Canada tabled three options for opening Canada’s telecommunications sector to foreign investment and invited submissions as part of a process of consultation. The three options are:

1. Increase the foreign ownership limit on voting shares in telecom and broadcast companies to 49% from the current 20% threshold outlined in the Telecommunications Act (1993);
2. Remove foreign ownership restrictions for start up telecom companies and small players with market share of less than 10% of total telecom market revenues; and,
3. Remove foreign ownership restrictions for all telecom common carriers.

**The purpose of this report is to provide a strategic and comparative analysis of the potential outcomes of the three options proposed by the government in terms of their likely impact on the stated government objectives.**

The Government of Canada has committed to ensuring that Canadian consumers and businesses can benefit from potential reform of foreign investment in the telecom sector. Creating a vibrant and sustainable competitive telecom market is central to the objectives of the proposed regulatory changes. Our analysis of the impact of the three options will have a focus on how well the options achieve government priorities.

**Government of Canada priorities:** <sup>3</sup>

- Availability and choice of telecom services for consumers and businesses;
- Competition, innovation, and investment in the telecom industry;
- Level of foreign investment in the telecom industry and distribution of capital in the telecom industry (whether those sectors of the telecom industry that are most in need of capital would benefit);
- Adoption and use of digital technologies in Canada’s economy and, more generally, the objectives set out in the digital economy strategy; and,
- Competitiveness and productivity of the Canadian economy.

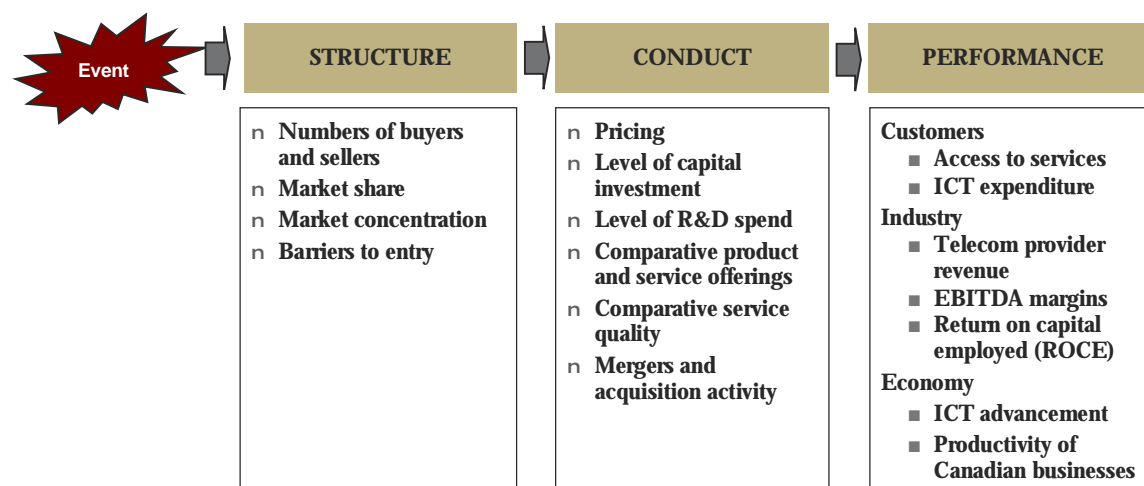
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<sup>3</sup> *Opening Canada’s Doors to Foreign Investment in Telecommunications: Options for Reform, Consultation Paper June 2010*

## 2. FRAMEWORK FOR ANALYSIS

To conduct this study, SECOR used an adapted Structure Conduct Performance (SCP) model to assess potential outcomes following changes to FDI restrictions. The SCP model identifies how an event causes changes in market structure, which in turn cause changes in the conduct of market players and performance of the industry (see Figure 2).<sup>4</sup> This is a standard and well-proven approach to evaluate how industries change when new conditions are introduced. The model has been adapted to assess performance in terms of the expected impact on consumers and businesses, industry players, and the overall Canadian economy.

Figure 2: SCP Model



The study approach included the following analysis:

- Y A **base case** was developed using the adapted SCP model for the current Canadian marketplace (see Chapter 3). This established the basis for comparing potential outcomes of the changes in FDI regulation.
- Y **Key trends that will** impact the industry evolution were identified (see Chapter 4).
- Y **Scenarios** were developed, outlining a range of possible outcomes for each FDI option and potential impacts on market structure, conduct and performance (see Chapter 5). Evidence to support the plausibility of these scenarios was developed based on primary and secondary research, including expert interviews and industry reports (see Appendix 1: References). International telecom company case studies from a variety of jurisdictions were profiled to support the scenarios and demonstrate example outcomes of options (see Appendix 3: Case Studies).
- Y A **comparative analysis** of the options and scenarios was conducted to evaluate the most likely outcomes, benefits and risks, and implications for the government's stated policy objectives (see Chapter 6).
- Y **Recommendations** were developed and mitigating strategies suggested (see Chapter 7).

<sup>4</sup> Source model adapted from early work by Edward Mason and Joseph Bain's *Barriers to New Competition* (1956) and *Industrial Organization* (1959).

The following chart presents the framework for evaluating options and scenarios against government objectives and mapping to the relevant SCP category. In Chapter 5, each scenario is assessed in terms of its ability to achieve government objectives using the range outlined in this chart.

**Framework for Assessing Achievement of Government Objectives and Mapping to Structure, Conduct and Performance (SCP) Category**

ILLUSTRATIVE

Government Objectives:	Achievement of Government Objectives		SCP Category
	Low	High	
1. Choice of service providers available to consumers	No change from base case or limited number of incremental providers in major centres	Increased number of service providers, offering at least 2 to 3 choices of providers for wireline, wireless or broadband access in most areas	Structure
2. Choice of service providers available to business	No change from base case or limited number of incremental providers in selected segments or services	Increased number of service providers, offering at least 2 to 3 choices of providers for voice, high speed data and integrated services	Structure
3. Availability and selection of telecom products and services for consumers	No change from base case; product availability continues to lag several OECD markets	High penetration of broadband access; choice of wireless handsets comparable to most OECD markets; competitive prices for wireline, wireless and high speed broadband access	Conduct
4. Availability and selection of telecom products and services for business	No change from base case or limited services in areas outside major urban centres	Access to business voice, data and integrated services; ease of global connectivity; increased access to high speed broadband in most areas	Conduct
5. Investment in telecom infrastructure	No change from base case or limited investment in network infrastructure	Increased investment in infrastructure build-out; expanded reach of broadband networks	Conduct
6. Innovation in the telecom industry	No change from base case or limited network upgrades at a pace that lags OECD markets	Increased investment in new products, upgrades to IP networking for wireline and HSPA or equivalent for wireless access, development of new applications for consumers and businesses	Conduct
7. Adoption and use of digital technology in Canada's economy	No change from base case; platforms do not keep pace with changes in smart devices, handsets and switches	Increased investment in digital technologies; network and devices support digital multi-media content and applications	Conduct
8. Level of foreign investment in the telecom industry	No change from base case or minimal investment in a few Canadian telcos	Material foreign investment in Canadian telcos or significant new entrants / start-ups	Performance
9. Distribution of capital in the telecom industry to those in need	No change from base case or limited access to risk capital for a few players	Lower cost of capital for those who need it; <sup>3</sup> Growth capital for major players; risk capital for small players and start-ups	Performance
10. Competitiveness and productivity of the Canadian economy	No change from base case or adoption of new technology at a pace that lags other OECD markets	Increased productivity, ICT adoption and advancement of Canadian businesses; increase in Canadian ICT balance of trade	Performance

Source: SECOR Analysis

**Study scope:** The focus of this report is on current industry players offering wireline and wireless telecom services. This would include the telecom carriers, wireless companies, and the voice, data and broadband units of cable companies. Excluded are broadcast, cable distribution, radio, satellite, power utilities and telecom resellers. In some cases, the potential impacts of non-telecom players and new entrants are identified in the scenario discussion to recognize the role that these players could add in the future.

<sup>5</sup> Bell, TELUS and Rogers have publicly stated they have sufficient access to capital under the current FDI regulations. As such, the government objective, *9. Distribution of Capital*, is assumed to apply primarily to smaller players.

**Types of foreign investors:** A wide variety of potential investors were considered as part of the study. Investors are classified into two categories:

- Y Non-telecom financial investors, such as private equity firms seeking financial returns (e.g. increased efficiency, restructuring, optimization value etc.); and,
- Y Telecom strategic investors seeking financial returns, strategic partnerships, synergies (e.g. coverage benefits, local access, adjacency roaming arrangements, procurement scale benefits, or access to software platforms for digital applications). Strategic investors include:
  - Large global telecommunications service providers (e.g. Vodafone, Verizon);
  - Large global business services market providers (e.g. Global Crossing, AT&T Global Services);
  - US regional players (e.g. Frontier Communications);
  - Foreign investors currently invested in Canadian companies (e.g. Orascom); and,
  - Foreign companies currently operating as ISPs or resellers in Canada (e.g. Primus).

### 3. BASE CASE OVERVIEW

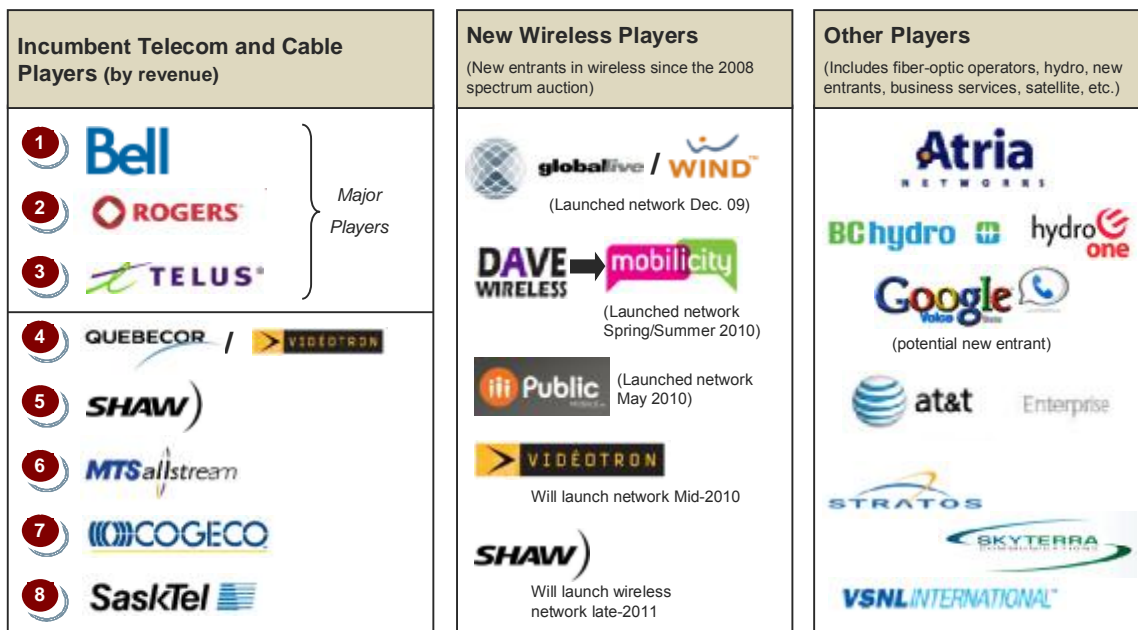
The base case for this study has been developed using the adapted SCP model for the current Canadian marketplace, assuming no changes to FDI regulations. This establishes the foundation for comparison in assessing the potential outcomes for each FDI option and their ability to achieve government objectives.

#### BASE CASE MARKET STRUCTURE

Market structure refers to the nature of buyers and sellers, and the openness of the market. Key indicators of market structure include the number of players, market share, market concentration and barriers to entry.

The Canadian telecom marketplace is characterized by three major incumbent telecom players (Bell, Rogers and TELUS); smaller incumbent telecom and cable providers (Videotron, Shaw, MTS Allstream, Cogeco, and SaskTel); new wireless entrants (Globalive, Mobilicity and Public Mobile); and other players in hydro, IP telephony and satellite (see Figure 3).<sup>6</sup>

Figure 3: Key Canadian Telecom Market Players<sup>7</sup>



Source: Globe and Mail ROB Top 1000 (2010), OECD, SECOR Analysis, Company Websites

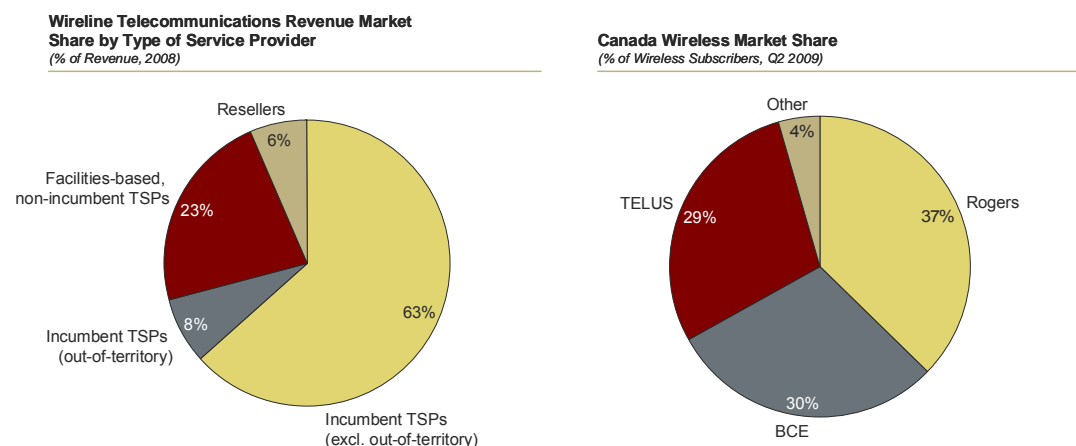
For wireline services, incumbent telecom service providers (TSPs) represent 71% of revenue market share (see Figure 4).<sup>8</sup>

<sup>6</sup> Globalive is marketed under the name Wind Mobile; Mobilicity was formerly known as DAVE Wireless

<sup>7</sup> Ranking of major integrated players by revenue (see Appendix 2, Figure 22)

<sup>8</sup> 2010 Communications Monitoring Report released by the CRTC. Note: The large incumbents include Bell Aliant Regional Communications Ltd., Bell Canada, MTS Allstream Inc., Saskatchewan Telecommunications, and TELUS Communications Company (TCC), as well as Northwestel Inc., Télébec Ltd., and TELUS Communications (Québec) Inc. (now part of TCC).

**Figure 4: Market Share for Wireline and Wireless Canadian Providers**



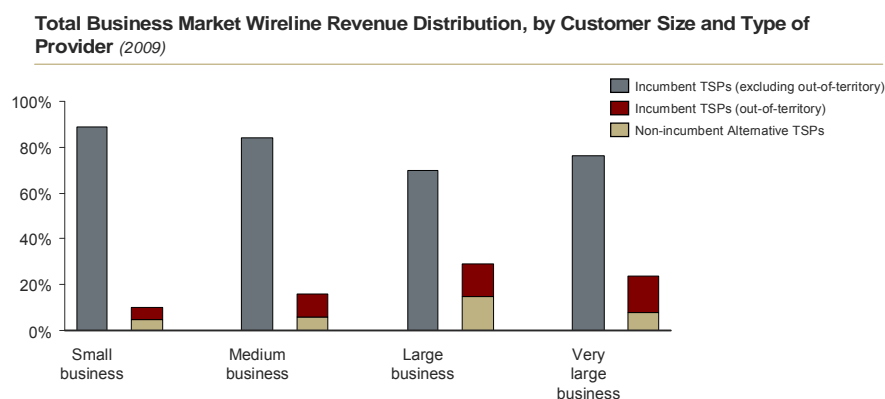
Source: SECOR Analysis, CRTC 2010, Canadian Wireless Telecommunications Association

Note: Incumbent TSPs provided telecom services on a monopoly basis prior to the introduction of competition (e.g. Bell, TELUS). Facilities based, non incumbent TSPs are alternative TSPs that own and operate telecom networks (e.g. cable, broadcasting distribution undertakings, utilities). Resellers acquire telecomm services from another operator (e.g. Distributel, Primus).

For the **consumer market**, wireline services are provided primarily by incumbent telcos and cable providers who have almost ubiquitous network coverage. Incumbent TSPs capture a revenue share of 58.7%, suggesting there are several options for wireline consumers.<sup>9</sup>

For the **business market**, some Canadian businesses have limited choice of wireline providers. Incumbent TSPs capture a revenue share of 70-90% of total business wireline revenues in each market segment – small, medium, large and very large (see Figure 5).<sup>10</sup> Bell and TELUS provide national connectivity for large business and service a range of businesses across their in-territory networks. MTS Allstream provides alternative national business services through its national Allstream division. Providers such as SaskTel, Cogeco, Videotron, Rogers and Shaw serve business customers with their regional service offerings.<sup>11</sup>

**Figure 5: Total Business Market Wireline Revenue Distribution**



Source: CRTC data collection

1. Revenues include wireline revenues from local and access, long distance, and data and private line services.

For **wireless services**, major players (Rogers, Bell, and TELUS) represent 96% of subscriber market share (see Figure 4). Canada is not unlike other OECD countries that also have significant market share for their top three wireless players (see Appendix 2, Figure 23). However, Canada’s three-player wireless market share

<sup>9</sup> 2010 Communications Monitoring Report released by the CRTC – Table 5.1.5 “Wireline telecommunications revenue market share (%), by type of service provider (2009)”

<sup>10</sup> 2010 Communications Monitoring Report released by the CRTC – Figure 5.1.6 “Total business market wireline revenue distribution, by customer and type of provider (2009)”

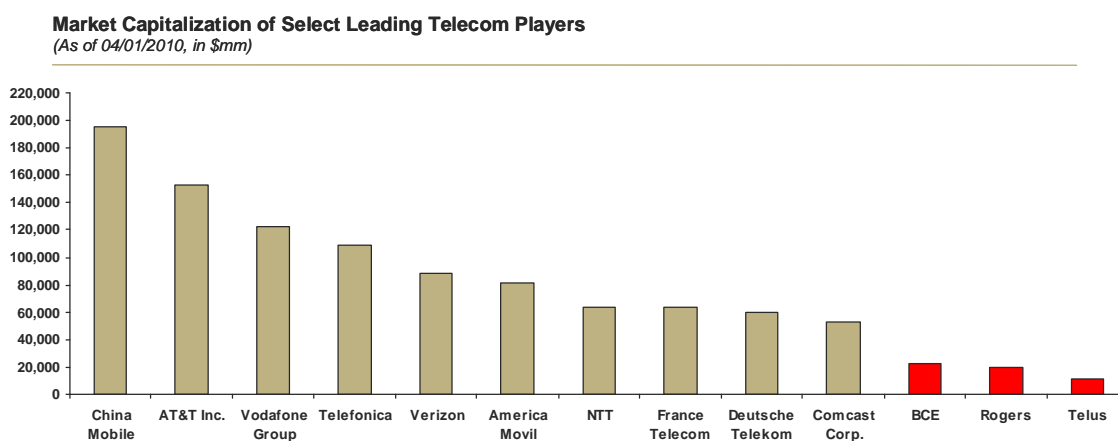
<sup>11</sup> Rogers has fibre network infrastructure in addition to its regional cable business services offering

is much higher (96%), than other jurisdictions such as the UK (73.2%), US (81.1%), and Germany (86.7%). These countries each have four wireless operators with greater than 10% market share.

For both the **consumer and business markets**, wireless services are provided primarily by Bell, TELUS and Rogers. New Canadian wireless players have recently launched competitive service offerings in the market, but have not yet captured significant market share.

The **global telecom marketplace** represents US\$2.9 trillion (2008) in revenue and is increasing at a 6.3% compound annual growth rate (CAGR).<sup>12</sup> Canada is a relatively small and mature market, representing \$41.0 billion (2009) with a five year CAGR of 4.4%.<sup>13</sup> Canada's three largest telecom players are small in scale compared to leading global players (see Figure 6) and have not actively expanded their global reach as compared to companies such as Vodafone, Telefonica, France Telecom or Deutsche Telekom.

**Figure 6: Global Comparison of Telecom Players**



Sources: Capital IQ – Standard and Poor's, Bloomberg, company reports, SECOR Analysis

New entrants face high barriers to entry in the Canadian market:

- Y The high level of capital required to build wireless and wireline infrastructure makes economies of scale or focus on densely populated areas essential to telecom profitability;
- Y Long-term contracts for post-paid wireless subscribers raise switching costs, especially given Canada's higher handset subsidies and a higher proportion of post-paid subscribers (78% of total subscribers in 2007)<sup>14</sup> compared to other jurisdictions;
- Y Restrictions on FDI, wireless spectrum auction control, and regulated pricing for selected services contribute to barriers to entry.
- Y Limited competitor access to incumbent-controlled last mile for broadband access in Canada.

Canada is one of the most restrictive countries and is well above the OECD average; based on the G7 index of FDI restrictions on telecom (see Figure 7).

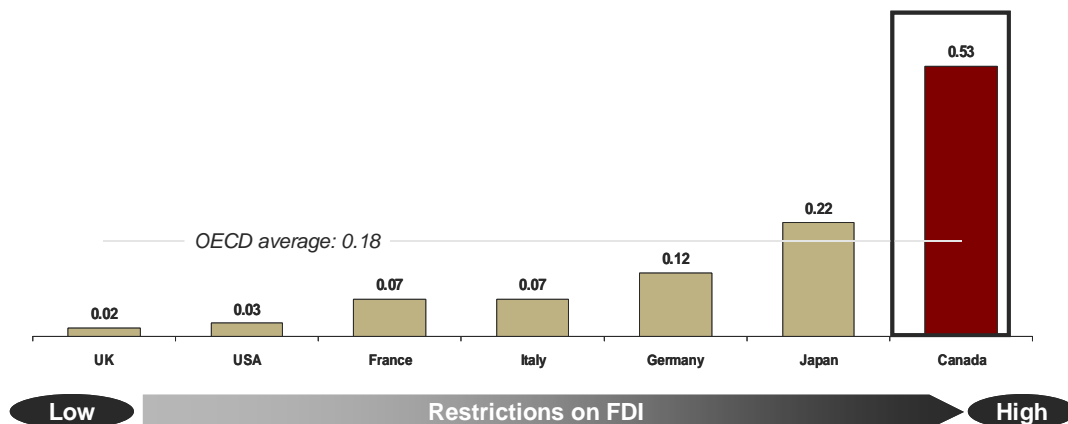
<sup>12</sup> TIA 2010 ICT Market Review and Forecast

<sup>13</sup> CRTC Monitoring Report, 2010

<sup>14</sup> Merrill Lynch 2007 Wireless Matrix

**Figure 7: G7 Index of FDI Restrictions on Telecom**

**G7 Index of FDI Restrictions on Telecom**  
1 = maximum restriction, 0 = no restriction; 2006



Sources: OECD, Direction générale des politiques stratégiques (Transport Canada)

## BASE CASE MARKET CONDUCT

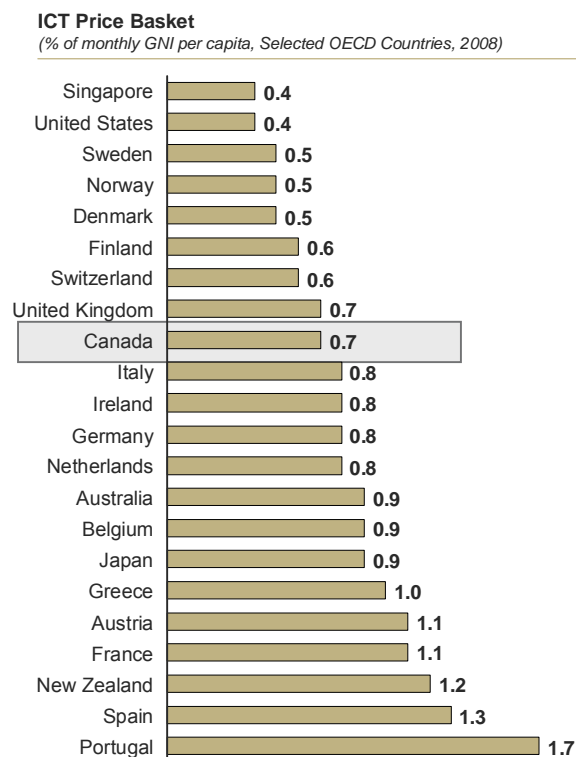
Conduct refers to how players respond to market incentives and competitive pressures. Key indicators of conduct include relative pricing, innovation, product and service offerings, and mergers and acquisitions (M&A) activity.

**Relative Pricing:** Several studies that compare Canadian telecom prices to global prices were examined. As prices vary significantly by service, bandwidth and usage, understanding the basket of services used in each study is important. Prices are further complicated by bundling of wireline, wireless and broadband internet access. For this reason, multiple studies are cited and price comparisons should be considered directional only.

**Based on the International Telecommunications Union’s (ITU) ICT Development Index Study,** Canada falls roughly in the middle of the rankings when comparing a basket of services across OECD countries (see).<sup>15</sup> Canada’s overall ICT price basket was 0.7% of monthly Gross National Income (GNI) per capita, while the overall range for all developed countries was 0 to 3% of monthly GNI. Canada ranked second lowest for broadband prices after the US, but 18th lowest in terms of wireless prices.

<sup>15</sup> The ITU uses only the least expensive offering from a national incumbent as the point of price comparison. The ratio of this low-cost price option is then ranked according to monthly GNI per capita. This is limited in that low-cost offerings from other competitors are not considered (which can be misleading) and GNI per capita is not necessarily an appropriate measure of relative affordability (compared to purchasing power parity).

**Figure 8: ITU Price Comparison for a Basket of Telecom Services**



Source: ITU ICT Development Index, SECOR Analysis  
\*The ICT Price Basket Value is the sum of the three sub-baskets (fixed telephone, mobile cellular, fixed broadband internet) as a percentage of GNI per capita, divided by 3.  
Price Basket Range: lowest = 0.4, highest = 72.4

Low telecom prices are not directly related to FDI openness, as several countries with more open FDI markets (UK, Italy, Germany, Japan and France) have the same or higher prices for the ITU basket of services than Canada (see Figure 7 and Figure 8). Other factors related to industry structure and conduct affect pricing as well, so it is important to look at the affect of FDI changes on industry structure and conduct to determine the potential affect on price.

Based on the **Wall Communications Study (2009)** conducted for the CRTC, Canada’s wireline and broadband service pricing compared favourably to other jurisdictions (see Appendix 2, Figure 24).<sup>16</sup> The Canadian high-usage broadband bundle (at \$62 per month) was priced lower than a high-usage bundle in the US, France, Australia and Japan, but the average advertized speed for a high-usage broadband offering was higher in those same countries.

For wireless services, relative prices are also dependent on usage. At low-usage, Canadian prices were lower than the US, but higher than other countries assessed. At medium- and high-usage levels, Canadian prices were in the middle of the group. At very high-usage levels, Canadian prices were among the highest.

<sup>16</sup> The Wall Communications Study compares average prices across different speed categories in select countries. This is limited in that speeds for each of the categories (especially high-usage) vary across the countries surveyed. For example, the high-usage broadband speeds were 12mbps in Canada, 12mbps in the US, 15mbps in the UK, 19mbps in France and 25mbps in Australia. Comparing pricing in Canada for a 25mbps connection against similar pricing in Australia would yield very different results. Note: The study covered the US, UK, France and Australia.

For bundled services (wireline, wireless, internet, television), Canadian prices were lower than the US, but higher than France and the UK. In France and the UK, basic digital television services were provided at no additional costs in the plans surveyed.

Based on the **OECD Study (2008)**, the price basket comparison showed that Canadian residential fixed-line prices were well below the OECD average.<sup>17</sup> Business fixed-line prices for the small or home office segment were above the OECD average, and fixed-line prices for small and medium size enterprises (SMEs) were slightly lower than the OECD average. Prices for both business segments were well above those for the same services in the US.

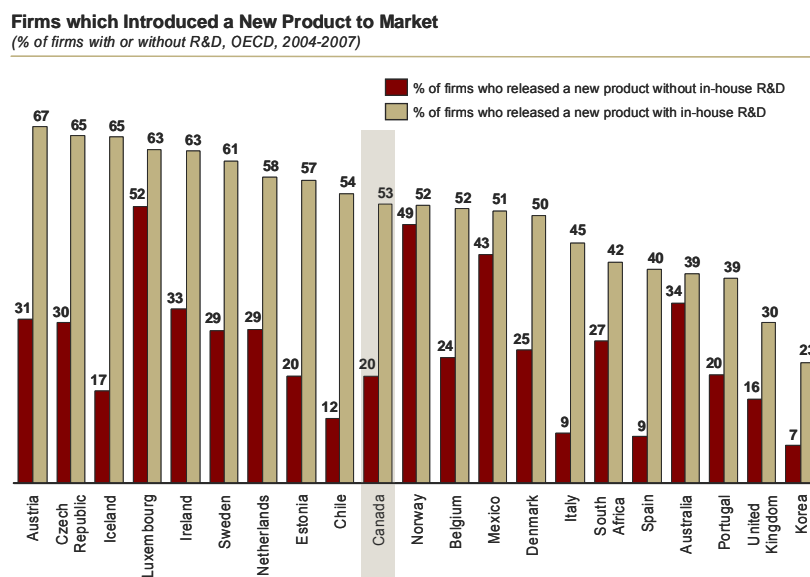
Canada’s broadband prices were slightly above OECD average for low and medium speeds, and lower than average for high speeds. For very high speed connections, however, Canada’s average monthly subscription prices were the second highest in the OECD (see Appendix 2, Figure 25). These very high speed services are often used by business customers, reflecting higher broadband access costs for SMEs in Canada.<sup>18</sup>

Canada’s wireless prices were consistently higher than the OECD average. In particular, for the medium-use basket Canada, Spain and the US had the highest average monthly prices ranging from USD \$42-53 per month for the identical basket of calls.

**Innovation:** SECOR defines telecom factors of innovation as new product and service introductions, network infrastructure upgrades, application development and digital technology development.

In terms of **new product and service introductions**, Canada ranks in the middle of comparable countries, based on the OECD’s “New-to-market” Product Innovators Index (see Figure 9). This index measures the percent of firms across a number of industries who introduced new products to markets within one country.

**Figure 9: OECD New-to-market Product Innovators Index**



Source: OECD 2009, Working Party of National Experts in Science and Technology (NESTI), SECOR Analysis

<sup>17</sup> The OECD collects and measures a range of price indicators from a wide range of providers in each country. They create an average offering price for different tiers of service: low speed (256kbps – 2Mbps), medium speed (2.5Mbps-10Mbps), high speed (10Mbps-32Mbps), and very-high speed connections (above 35Mbps). This is limited in that each tier of service contains a wide range of service offerings and these tiers of service also change dramatically from year to year as network infrastructure continues to improve.

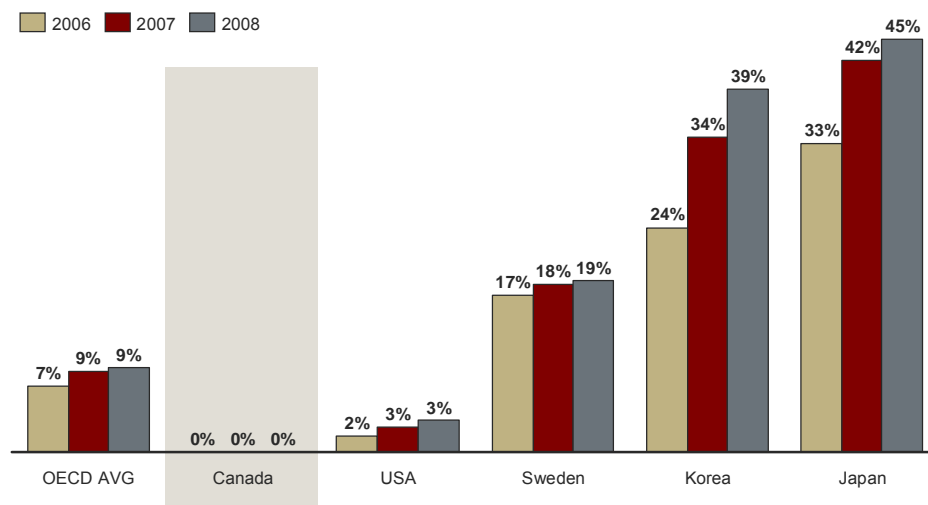
<sup>18</sup> Note: Large enterprise have access to custom price and are not available for comparison

In terms of **network infrastructure upgrades**, Canada’s performance has mixed results. In 1996 Canada became one of the first countries in the world to provide broadband access, and by 2008 achieved a 94% penetration rate in urban areas.<sup>19</sup> Over the past several years, Canada has lagged its OECD peers in the level of higher speed broadband access, dropping in rank from the top 25% in 2002 to the bottom 25% in 2009.<sup>20</sup> This is partially attributable to Canada’s very low penetration of fibre access technology (at 0.01%) compared to its peers (see Figure 10).

**Figure 10: Comparison of Fibre Access across Selected OECD Countries**

**Percent of Broadband Provisioned Through Fibre**

(2006-2008, % of total Broadband customers provisioned with fibre access, Selected OECD countries)



Source: OECD 2009, SECOR Analysis

Canadian consumers in most areas have access to broadband internet services through DSL and cable technologies. Remote areas in Canada such as Nunavut and the Northwest Territories have access to satellite broadband, however, this service is still limited. Large enterprises also have direct fibre access in most locations. SMEs, however, have more limited fibre access availability, especially outside urban centres. Incumbent players are making investments in fibre network upgrades, but have only recently released plans to roll out fibre-to-the-home (FTTH) services. This is initially targeted for multi-dwelling buildings such as condominiums and hotels.<sup>21</sup>

According to the Berkman Center (Harvard) 2010 report, Canada ranks in the middle of the OECD for broadband speeds. Based on current levels of investment, the report expects Canada’s position in network innovation and fibre infrastructure to decline over the next several years (see Figure 11).<sup>22</sup>

<sup>19</sup> CRTC Communications Monitoring Report 2009

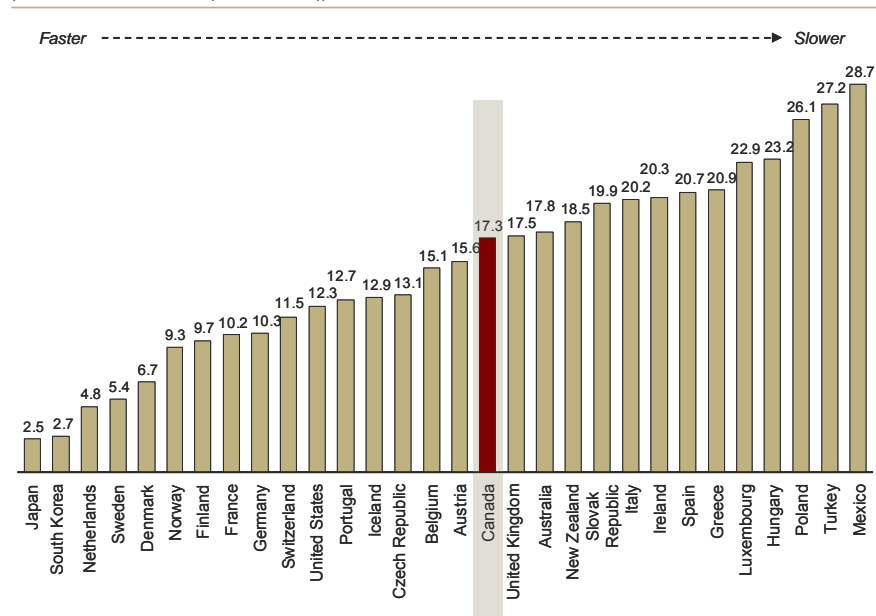
<sup>20</sup> OECD Communications Outlook 2009, Table 4.8

<sup>21</sup> TeleGeography, Global Communications Database, Berkman Center Broadband Report 2010

<sup>22</sup> Berkman Center Broadband Report, 2010

**Figure 11: OECD Top 30 Countries Speed Rankings**

**Average Broadband Speed Rankings**  
(OECD 30 countries, 2009 (lower is faster))



Source: Berkman Center Broadband Report 2009, SECOR Analysis

Canada also lags in broadband usage. Despite high availability, only 54% of households currently subscribe to broadband service.<sup>23</sup> This low usage is generally attributed to educational and social factors in Canada, rather than technology deployed.

In terms of **application development**, telecom innovation has traditionally been driven by the physical device and network hardware manufacturers such as handset companies or network switch manufacturers. Telecom providers’ role in application development is ensuring the new technology is integrated into the network and operating systems.

In the past two years, there has been significant growth in software-focused application initiatives across the telecom industry. In 2010, an Alcatel-Lucent study found that 40% of network providers globally are already engaged in application development, and another 30% are planning to pursue application initiatives in the next 12 months.<sup>24</sup> Players entering the application marketplace include device manufacturers (e.g. Nokia developer community, Apple App Store), O/S vendors (e.g. Windows mobile developer community), and network providers (e.g. SK Telecom’s T-Store, BT’s Ribbit). While most Canadian telecom players are just entering the application marketplace, Bell, TELUS and Rogers have recently combined forces to host a developer community initiative called “GSMA OneAPI” which will provide a platform for a suite of application APIs for any GSM network.<sup>25</sup>

In terms of **digital technology development**, global telecommunications infrastructure and IP-convergence are breaking down the barriers to geographic creation of content and technologies. This is opening Canada to new, interactive, digital content from around the world, while at the same time, providing new markets to

<sup>23</sup> OECD Broadband Portal, Table 2a,

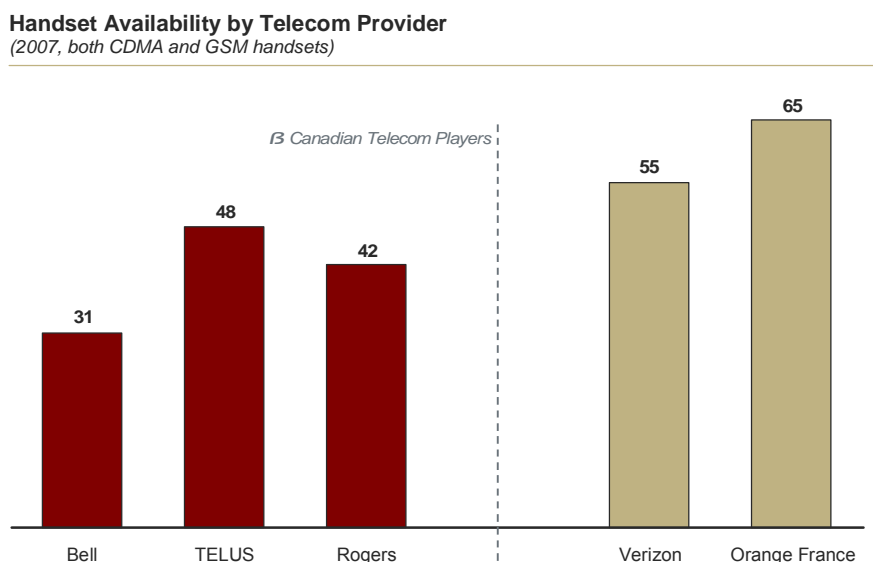
<sup>24</sup> Alcatel-Lucent, “Driving the Application Explosion” Strategic White Paper - 2010

<sup>25</sup> Wireless Industry Partnership, GSMA OneAPI 2010

share locally created technologies and content. Canadians are some of the heaviest internet users in the world (Canadians are using the Internet almost 27 days per year, spending 45 hours and viewing almost 4,000 pages every month) which creates a receptive environment for the creation and development of digital technologies and new, interactive digital content.<sup>26</sup>

**Product and Service Offerings:** Canadian consumers have traditionally had access to a broad choice of products from telecom players. For example, mobile handset availability in Canada is lower, but still comparable to global competitors (see Figure 12).

**Figure 12: Number of Handset Models Available**



Source: CompareCellular.com, Company Websites, SECOR Analysis

The pace of new product availability has lagged behind other countries. For example, Canada was one of the last OECD countries to adopt wireless number portability (see Appendix 2, Figure 26: Wireless Number Portability Adoption Timeline). Canada also lagged behind the US in recent releases of the iPhone 3G and 3GS by several months. Other examples include the current inability to consistently access mobile television, constraints on streaming IP-TV to PC's, and the lack of mobile payment options available in other countries.

**Capital expenditure:** The ratio of capex to revenue as a percentage for Canadian telecom companies is higher compared to other global companies (see Appendix, Figure 27).<sup>27</sup> Capital expenditure varies with market conditions and competitive intensity. In the late nineties and early 2000s, capital expenditures were high, coinciding with a strong economy and more competitive market. By 2001, capital investment in Canada had declined, following the economic downturn and telecom player consolidation (market exit of telcos such as Group Telecom, 360 Network). Capital expenditure has also increased when competition has intensified in the industry. For example, since the wireless spectrum auction, which introduced new wireless competitors, capital expenditures have increased, reflecting investments in wireless spectrum, HSPA technology and service capability.

<sup>26</sup> comScore Inc. Persons 15+, All Locations, May 2009

<sup>27</sup> Note: This indicator does not take into account differences in potential network geography or efficiency

**Mergers, acquisitions and divestitures:** Canadian telecom companies have not been active in global telecom M&A over the last ten years, in contrast to other global firms such as Vodafone, Deutsche Telekom and France Telecom (see Appendix 3). Canadian firms have instead focused investment on industry consolidation within Canada to expand their reach and customer base and to gain further scale. In addition, several foreign investors have divested their stake in Canadian companies, citing reasons such as the inability to gain control, perceived restrictive regulatory regime, as well as the limited size and growth prospects of the Canadian market. For example: <sup>28</sup>

- Y **Wireless player consolidation:** BCE acquired Virgin Mobile in 2009 for US\$121 million, TELUS acquired Clearnet in 2000 for US\$4,467 million, and Rogers acquired Microcell Telecommunications (known as Fido) in 2004 for US\$963 million.
- Y **Wireline player consolidation:** BCE acquired Aliant in 2006 for US\$2.4 billion, MTS acquired Allstream in 2004 for US\$982 million, and Shaw Communications acquired Moffat Communications in 2000 for \$992 million.
- Y **Foreign Investor Divestiture:** GTE (now Verizon) was invested in BC Tel and divested their stake to TELUS in 2004 for US\$1.88 billion.

## PERFORMANCE

Performance refers to the outcome resulting from the current market structure and conduct on industry players and customers. Key indicators of performance include industry and company EBITDA margins, customer choice and Canadian business economic productivity.

Canadian wireline and wireless revenues have increased from \$34.5 to \$41.0 billion between 2005 and 2009, representing a 4.4% CAGR. Canadian telecom players have stable cash flows and consistent margins. While wireline margins have been slowly declining, this has been offset by wireless margin growth. <sup>29</sup> The average EBITDA margin of the three largest integrated telecom operators was 39% in 2009 (see Appendix 2, Figure 28 and Figure 29).

Historically, EBITDA margins of Canada's top telecom players have been about 5% higher than other global players such as Verizon, AT&T and France Telecom. Return on Capital Employed (ROCE) at 15% to 25% is on par with other global players (see Figure 13).

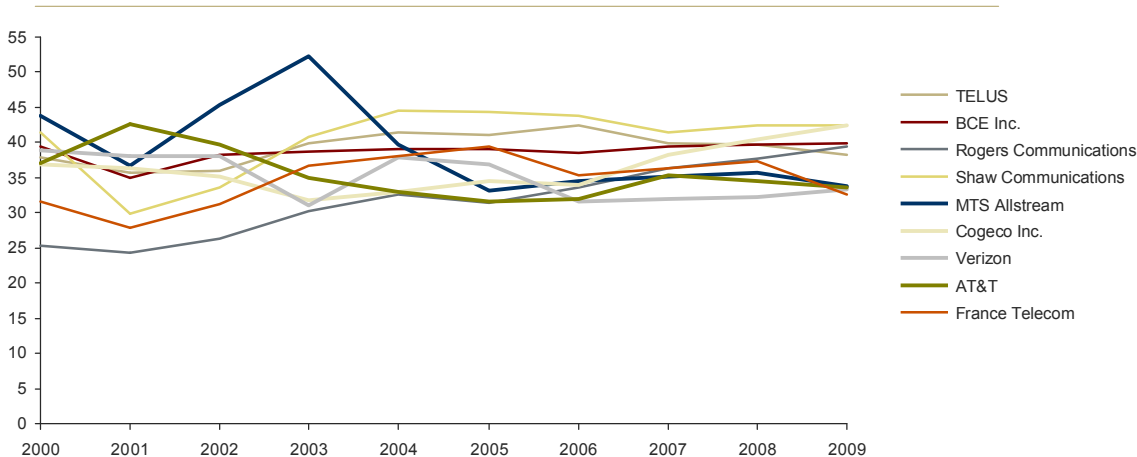
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<sup>28</sup> Source: Bloomberg 2010; TELUS press release Dec. 14 2004

<sup>29</sup> CRTC Monitoring Report, 2010

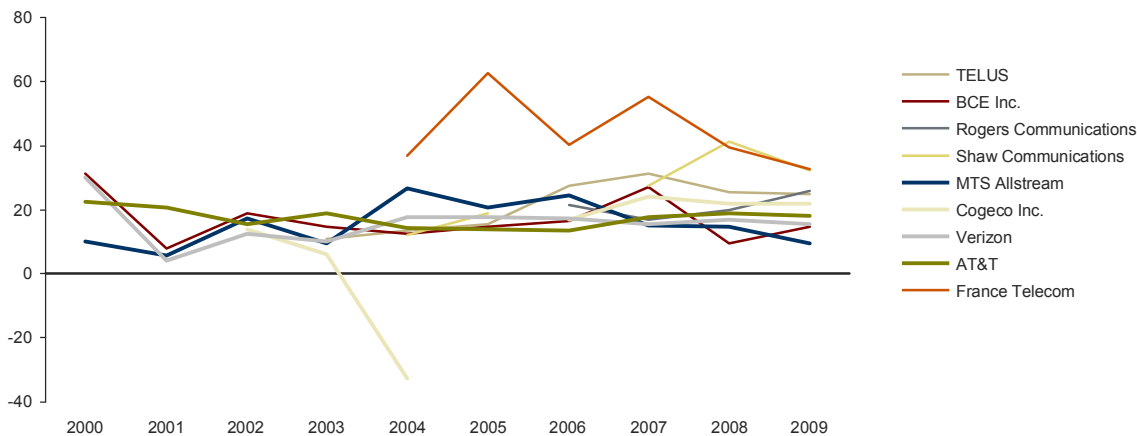
**Figure 13: EBITDA and ROCE Comparison**

**EBITDA Margin Comparison: Canadian Telecommunications Companies vs. International (2000-2009)**



Source: SECOR Analysis, Bloomberg

**ROCE Comparison: Canadian Telecommunications Companies vs. International (2000-2009)**



Source: SECOR Analysis, Bloomberg

**Access to Capital:** Major telecom providers have significant free cash flow from operations which provides capital to fund new investments. Investors view these players’ stable cash flow and established market position as lower risk which decreases their cost of capital. In contrast, smaller players and new entrants have lower cash flow levels and, for new entrants, higher business variability. Investors view these players’ investments as higher risk, resulting in a higher cost of capital.

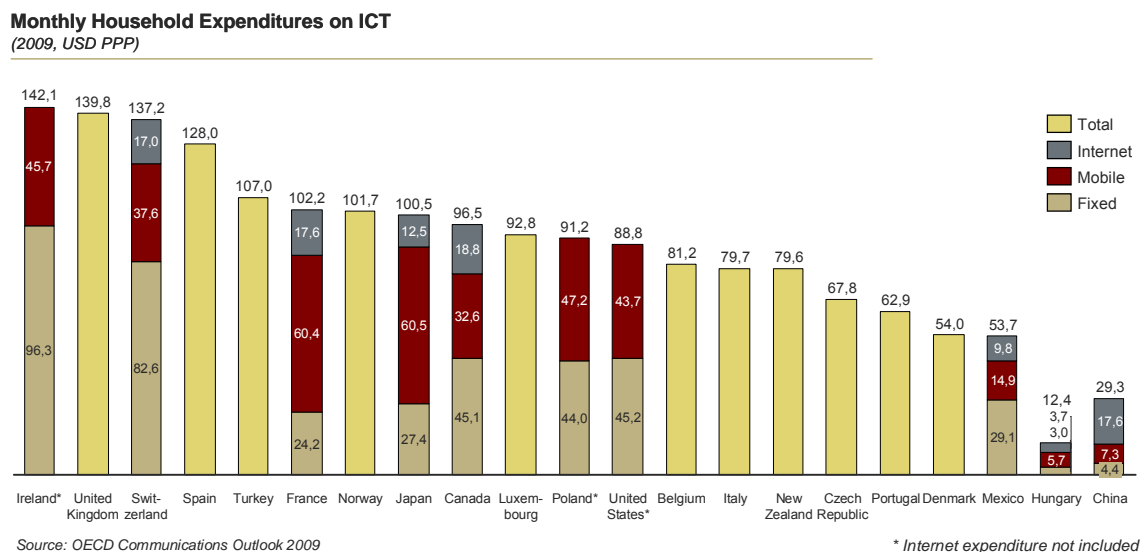
Investors looking to invest risk capital seek higher rates of return and often a controlling stake in the business. Given that Canadian investors have traditionally been more risk averse than international investors, Canada’s FDI restrictions limit the sources of lower cost capital available to small players and new entrants.

**Customer Access to Services:** Canada is a global leader in providing wireline services, with 54 fixed telephone lines (analogue and ISDN) per 100 inhabitants as compared to the OECD average of 41 lines per 100 inhabitants. Canada had 62.1 cellular mobile subscribers per 100 inhabitants in 2007, well below the

OECD average of 96.1 (see Appendix 2, Figure 30).<sup>30</sup> With 29 broadband subscribers per 100 inhabitants in 2008, Canada was above the OECD average of 22.4 broadband subscribers per 100 inhabitants.

**Customer Expenditure:** Canadian household spending on ICT services increased at a 2.5% CAGR between 2005 and 2007. In absolute terms, the monthly spending for Canada, France and Japan is about USD PPP 100. Spending on wireless services has increased steadily in the four countries while spending on fixed services has decreased. Overall, Canadian ICT spend is on par with other OECD countries, but slightly higher than the US (see Figure 14).

**Figure 14: Global Comparisons of ICT Expenditure**



**ICT Advancement:** Based on the ITU's ICT Development Index, Canada (at 6.34) is on par with other OECD countries, but lags behind the US (6.44), UK (6.78) and Sweden (7.5).<sup>31</sup> Canada has lost 10 places in the index, declining from 9<sup>th</sup> to 19<sup>th</sup> place between 2002 and 2007. Although Canadian businesses continue to invest in ICT, the integration of these technologies in daily activity and business practices lags other OECD countries, as evidenced by the decline in technology adsorption sub-index ranking from 4<sup>th</sup> to 21<sup>st</sup> (see Appendix 2, Figure 31). Where Canada was once seen as a leader, it is no longer keeping pace with other jurisdictions, a trend which could become worse if current conditions remain constant.

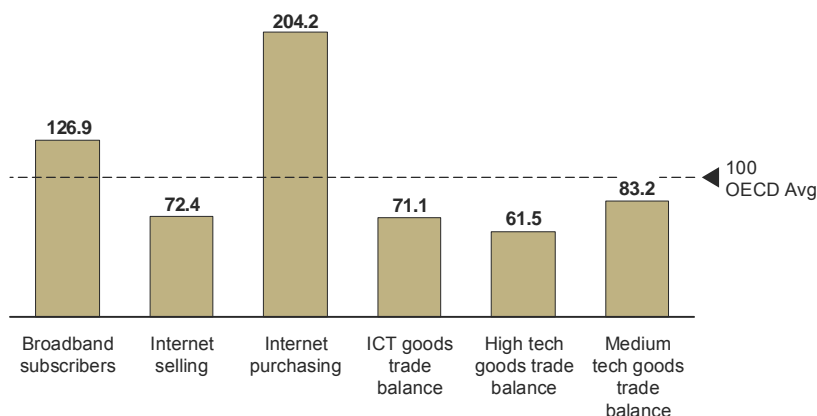
According to the OECD measure of ICT competitiveness, Canada currently has very high penetration for broadband and use of internet purchasing. Canada falls below the OECD average in the ICT balance of trade, reflecting a reliance on foreign imports of ICT products and services (see Figure 15).

<sup>30</sup> Many EU countries have mobile penetration above 100% as multiple SIM cards are common

<sup>31</sup> The index defines this using a model combining three factors (1) ICT readiness, reflecting the level of networked infrastructure and access to ICT, (2) ICT intensity, reflecting the level of use of ICT in the society, and (3) ICT impact, reflecting the result of efficient and effective ICT use.

**Figure 15: OECD Index for ICT Competitiveness**

**Canada's ICT Activity Compared to the OECD**  
(2007-08 OECD data, 100 represents the OECD average)

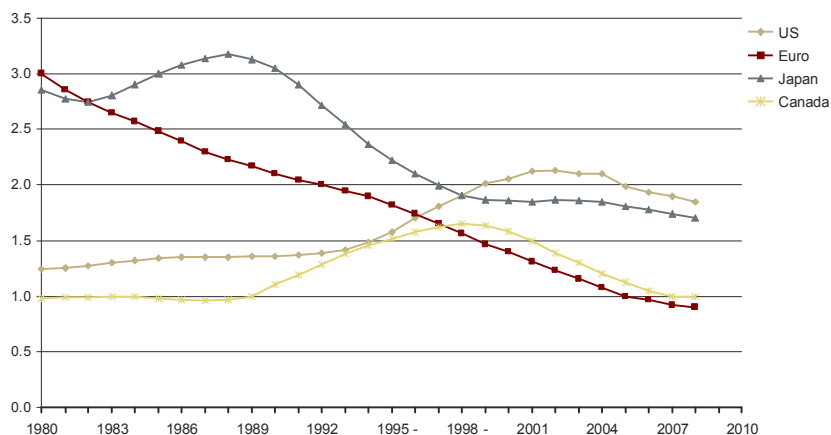


Source: OECD science and technology industry measures, SECOR Analysis

**Productivity:** Telecom is a key driver of productivity and competitiveness in the economy. Canada has experienced lower productivity growth than the US and Japan and slightly higher than the Euro Area 15 (see Figure 16). In 2008, Canada's GDP per hour of labour was US\$43.2 per hour, lower than the US (\$55.3) and the EU-15 (\$46.1), but higher than Japan (\$38.3).<sup>32</sup> Significant increases in US investment in machinery and equipment; particularly in ICT during the second half of the 1990s, fuelled U.S. productivity growth.

**Figure 16: Global Comparison of Labour Productivity Growth**

**Labour Productivity Growth**  
(Annual growth rate of trend in GDP per hour worked, 1980-2008)



Source: SECOR Analysis, The Conference Board of Canada - Productivity and Potential Output Growth to 2015: An International Comparison April 2009  
Note: Trend calculated with HP filter using a smoothness factor of  $\lambda = 100$

<sup>32</sup> OECD Database, extracted July 19, 2010 (GDP expressed in current prices)

## Base Case Summary:

Canada's current telecom market structure, conduct and performance can be used as a base case to assess potential changes to FDI restrictions. The criteria for assessing government priorities, identified in Section 1, can be summarized in terms of impact on consumers and businesses, the Canadian telecom industry, and the overall Canadian economy.

**Canadian consumers** are well served in internet access with a choice of cable, DSL, and some wireless and satellite broadband connections. For wireline, penetration rates in Canada are high and prices competitive, however, Canadian consumers pay more for wireless and high-speed wireline broadband services, and tend to see a delay in access to new and innovative products and services in comparison to other countries. Consumers will have increased choice with the introduction of new wireless players.

**Canadian businesses'** choice of providers varies by geography. Some businesses have limited choice of wireline providers, particularly for SMEs outside of major urban centres. Business customers also tend to lag their peers in other countries, in their opportunity to access new and innovative products and services.

Canada is no longer keeping pace in higher speed broadband services, dropping from the top quartile to the bottom quartile compared to its OECD peers (2002 to 2009).

The **Canadian telecom industry** has seen steady growth and service providers have consistently experienced high margins and stable cash flows. Major Canadian telecom players have invested in infrastructure upgrades funded through free cash flow and access to Canadian equity markets. Smaller players and new entrants, however, have less access to lower cost risk capital. Access to a greater variety of capital pools from foreign sources could lower the cost of capital for these small players and new entrants.<sup>33</sup>

Telecom is an important sector within the **Canadian economy**. Canada has lost its leadership in ICT advancement, dropping from 9th to 19th place in the ITU ranking (2002 to 2007). Canada is a net importer of ICT goods and services, and innovations from other jurisdictions, and lags behind the US in terms of labour productivity. A culture of innovation and continuous improvement in the level and quality of capital intensity is required to drive greater productivity in Canada.

Globally, Canada represents a small and mature market with relatively moderate growth prospects compared to other jurisdictions. FDI restrictions and high barriers to entry impede greater sustainable, long term competition from strong new entrants, smaller players or start-ups.

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<sup>33</sup> Industry Standing Committee on Science and Technology June 2010 Report

## 4. KEY TRENDS IMPACTING THE ANALYSIS

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Prior to assessing the potential outcomes of different FDI options, key trends in the telecom market were identified. The following high-level trends set the context for potential changes in the industry.

### **Impact of the recent economic crisis**

- Y The financial crisis over the past two years has constrained debt markets, impacting the global expansion and investment of several global telecom players:
  - Deutsche Telecom in Europe has cited strain on European debt markets and current debt levels as a barrier to further foreign investments;
  - Zain in the Middle East has sold their African holdings to cover debt obligations;
  - Orascom has noted its difficulty in raising debt in the Canadian market.

### **Convergence in the media and telecom sectors**

- Y Convergence has blurred the lines between media creation, distribution and connectivity, resulting in integrated players across sector boundaries under different regulatory frameworks:
  - In Japan, Softbank is a mobile broadband telecommunications provider, but also operates Yahoo! Japan's search portal, online gaming and social networking services;
  - In Canada, distribution and media companies such as Rogers and Videotron are under both telecom FDI restrictions and regulations protecting Canadian heritage content.

### **Telecom next generation network deployment**

- Y Next generation technologies are converging towards IP and cross-network connectivity, creating a need for large scale investment and making international platform compatibility important:
  - The majority of global telecom players (a notable exception being the USA) operate on IP-based GSM and DSL/fibre networks;
  - Next generation networks are already being deployed through the use of fibre and LTE, as was seen during Bell and TELUS's upgrade from CDMA to an IP based HSPA protocol.

### **Global M&A activity**

- Y While telecom M&A activity has been cyclical, trending with economic cycles, the trend over the past 15 years has been one of global industry expansion and consolidation:
  - Companies such as the UK-based Vodafone have minority shares in countries around the world, making them a global powerhouse, but not dominant in any one market outside the UK.

### **Increased activity from alternative players**

- Y Alternative players, such as internet majors (Google, Microsoft, etc.) or media companies (Disney, Time Warner, etc.) are increasingly showing interest in facilities-based telecommunications:
  - Google petitioned the US government to participate in the 2008 wireless spectrum auction and has connected over 10,000 homes with its high-speed fibre network;
  - IP TV, such as that offered by 3 UK and Apple, has allowed media companies such as Disney to provide content directly to consumers' homes.

These high level trends will have a major impact on the evolution of telecom industries globally and thus introduce a further degree of uncertainty in any analysis of the future.

## 5. OPTIONS AND SCENARIO ANALYSIS

### OPTION 1 – CANADIAN CONTROL (FOREIGN INVESTMENT RESTRICTED TO 49%)

#### DESCRIPTION:

Under the proposed Option 1, the foreign ownership limit on voting shares in telecom and broadcast companies would increase from 20% to 49%. This, however, can be considered an effective 2.3% increase from the combined regulations on voting shares and investor company ownership (cap of 46.7%).<sup>34</sup>

It is assumed that the intent under Option 1 is to retain Canadian control of companies, as opposed to allowing for control through a variety of voting shares, parent company ownership and debt ownership. This would require removing the holding company restrictions to ensure Canadian control is retained.

A scenario where new start-ups are created is not considered plausible in this option given the requirement for a Canadian partner with a minimum of 51% ownership, and thus has not been included in the analysis.

#### OPTION 1 – SCENARIOS OVERVIEW:

NUMBER	SCENARIO NAME	DESCRIPTION	LIKELIHOOD (L/M/H)
1.1	<b>No investment</b>	No interest from foreign investors in acquiring 49% of Canadian telecom and broadcast companies.	High
1.2	<b>Financial investments</b>	Equity changes hands as foreign investors seek financial return, e.g. private equity firm acquires 49% of a Canadian telco.  Investors look to acquire influence to increase efficiencies and optimize operations of Canadian telecom players.  Investors may also be motivated by the option value created by possible future easing of FDI restrictions.	Low
1.3	<b>Strategic investments</b>	Equity changes hands as foreign investors seek growth and synergies, e.g. global telco acquisition of 49% of a Canadian telco (potentially with a private equity partner).  Investors look to acquire influence to leverage strategic partnerships, deploy new technologies, and expand services.  Investors may also be motivated by the option value created by the potential for future easing of FDI restrictions.	Low

<sup>34</sup> Foreign investors can currently own up to 46.667% of a telecom carrier. This includes 20% direct investment in the carrier, plus one-third of a holding company, creating a total foreign investment cap of 46.667%.

## OPTION 1 – SCENARIO 1.1: NO INVESTMENT

In this scenario, increasing the limit on foreign ownership to 49% does not attract foreign investment in any Canadian telecom player. The inability of investors to gain a controlling position, coupled with a regulated and relatively small and mature market in a global context, makes investment relatively unattractive. SECOR rates the likelihood of this scenario as *high*.

**Evidence** supporting the plausibility of this scenario is found in foreign telecom player historic actions in Canada. During the early 1990's several global telecom players were minority investors in the Canadian telecom market. AT&T was invested in Unitel (AT&T Canada), SBC was invested in Bell Canada, GTE was invested in BC Tel, AT&T and BT were invested in Rogers Cantel and AT&T Canada, and Sprint was invested in Call-Net. While all of these significant stakeholders had a "place at the table", all have exited the market, citing the inability to gain control, coupled with a small market size, limited growth prospects, and restrictive regulatory regime as factors.

The plausibility of this scenario is also supported by SECOR interviews with experts in the investment community in Canada and abroad. Experts suggest that foreign investment in Canadian telecom players would be unlikely without a clear path to control, especially given the limited scale of our players and focus of many foreign firms on developing markets.

In this scenario, the **market structure** remains unchanged with the same number of firms, market share, and product/service differentiation. Barriers to entry remain high. **Conduct** and **performance** remain virtually unchanged. Overall, there is a *low* degree of change to structure, conduct and performance in this scenario.

## OPTION 1 – SCENARIO 1.2: FINANCIAL INVESTMENTS

In this scenario, non-telecom foreign investors purchase Canadian telecom company equity up to 49%. Canadian investors are replaced by foreign investors primarily seeking financial returns. Investors' actions could include restructuring to create increased cost efficiencies, improved operational effectiveness, and retaining the option value created by the potential for future easing of FDI restrictions. For example, a foreign private equity firm could invest in 49% of a major Canadian telco. SECOR rates the likelihood of this scenario as *low*.

**Evidence** of major restructuring under financial investor ownership is found in the case of Qwest in the US (see Appendix 3.1) and TDC in Denmark (see Appendix 3.2).

- Y Qwest, originally a fibre and data services company with a significant private ownership equity stake, completed a take-over of US West in 2000, in a deal valued at \$48B USD. Qwest continued to aggressively expand, gaining access to broad telecom services across 14 states. In 2008, Qwest was sold to a consortium of 10 private equity players who spun off its wireless unit to pay down debt. Qwest continued restructuring and paying out dividends. It was finally sold to CenturyLink for \$22B USD in 2010.
- Y TDC was taken over by a private equity group, the Nordic Telephone Co. (NTC), in a leveraged buyout in February, 2006. This was the largest takeover in Europe at the time. The acquisition at DKK 76 billion (about \$13.1B USD) for 88.2% of TDC shares was made with borrowed funds secured by TDC's assets. Following acquisition, TDC sold all business units in Denmark and Switzerland outside of its core holdings. The new owners remain a group of five private equity specialists.<sup>35</sup>

<sup>35</sup> The private equity players: Apax Partners; Blackstone; Kohlberg Kravis Roberts; Permira; and Providence Equity.

In Canada, the impact on **structure** for this scenario is minimal in terms of the change to number of firms, but may be more significant in terms of market share in selected service areas. At an FDI limit of 49%, investors would be less likely to fund risk capital for smaller players. If foreign investors purchase major players, as in the case of Qwest and TDC, this may result in sell-off of assets, exiting of businesses and retrenching to focus on protecting regional strongholds without going head-to-head in other markets.

Impact on **conduct** is similarly low. Greater focus on profitable business units and customers may generate additional returns, but reduce service levels for customers who are less profitable to service. This was the case for Qwest's business customers when it abandoned its aggressive fibre connectivity strategy to focus on stable, short-term cash flows. Restructuring may also reduce the number of services offered or geographies in which a major telecom company operates. In the long-term, more efficient competitors may emerge; however, motivation to aggressively compete is likely to remain low.

Price competition may decline in this scenario, as seen in the TDC case, where prices have remained stable or risen to meet regulatory maximums following the private equity takeover.<sup>36</sup>

Impact on **performance** at the company level is likely to be a reduction in cost structure and capital investment, increased debt levels, and higher operating margins. A potential risk is the diversion of income for shareholder returns instead of innovation or further investment, as demonstrated in the Qwest case. TDC also decreased its investment by approximately 60% annually and paid dividends at 57% of the share price.

Overall, there is a **low** degree of change to structure, conduct and performance in this scenario.

#### OPTION 1 – SCENARIO 1.3: STRATEGIC INVESTMENTS

In this scenario, foreign telecom investors or partnerships between telecom and private equity companies purchase Canadian telecom company equity up to 49%. Strategic investors' motivation could include leveraging product and service offers, technology knowledge, and the option value created by the potential for future easing of FDI restrictions. Examples could include AT&T, Orange or China Telecom acquiring 49% of Canadian telecom companies, potentially with a private equity partner. SECOR rates the likelihood of this scenario as **low**.

**Evidence** supporting the plausibility of a strategic investor acquiring an influential large equity ownership position can be found in the case of Vodafone's acquisition of 45% of Verizon Wireless for \$40 billion (see Appendix 3.3). Vodafone gained access to the US market and exerted strategic influence on decisions. For example, Verizon Wireless recently announced its intention to move from CDMA to LTE. While Canadian firms may not provide scale and size opportunities similar to Verizon in the US, they do provide strategic access to the Canadian market.

Impact on market **structure** in this scenario is likely low, especially if foreign investment is focused on existing major players. Foreign telecom strategic players are less likely to invest in small players due to their limited scale. No new competitors are created.

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<sup>36</sup> Note: prices in Denmark are regulated, similar to Canada's "universal service agreement"

Impact on **conduct** could include new products and services and additional capital for investment in infrastructure build-out or upgrades. US telecom investors may offer North America-wide service coverage, especially targeted towards large enterprise customers, as seen in CenturyLink’s acquisition plans for Qwest in the US. Telecom companies could leverage global economies of scale and potentially pass on savings to customers by lowering prices to gain additional share.

Impact on **performance** would be moderate as incumbent players would be influenced by strategic moves made by foreign telecom and/or private equity partnerships. Prices may become more competitive, as demonstrated by Rogers’ introduction of a new, low-cost brand “Chatr” in response to new Canadian wireless entrants’ aggressive pricing bundles.

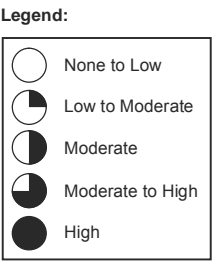
Overall, there is a **low to moderate** degree of change to structure, conduct and performance in this scenario.

**ASSESSING OPTION 1 - ABILITY TO ACHIEVE GOVERNMENT OBJECTIVES:**

The following chart assesses each scenario against the government’s criteria using the framework outlined in Section 2.

**Ranking: Ability to Achieve Government Objectives**

<b>Government Objectives:</b>	<b>1.1 No investment</b>	<b>1.2 Financial investments</b>	<b>1.3 Strategic investments</b>
1. Choice of service providers available to consumers	○	1. ○	○
2. Choice of service providers available to business	○	1. ○	○
3. Availability and selection of telecom products and services for consumers	○	1. ○	◐
4. Availability and selection of telecom products and services for business	○	1. ○	◐
5. Investment in telecom infrastructure	○	1. ○	◐
6. Innovation in the telecom industry	○	1. ○	◐
7. Adoption and use of digital technology in Canada’s economy	○	1. ○	◐
8. Level of foreign investment in the telecom industry	○	◑	◑
9. Distribution of capital in the telecom industry to those in need	○	◐	◐
10. Competitiveness and productivity of the Canadian economy	○	○	○
<b>LIKELIHOOD OF THE SCENARIO</b>	<b>High</b>	<b>Low</b>	<b>Low</b>



1. Ranges from low impact to potentially negative impact  
Source: SECOR Analysis

**Option 1 is unlikely to achieve the government’s stated policy objectives for a vibrant, sustainable market** (see Figure 17). Scenario 1.1, no investment, is the most likely scenario and has no impact compared to the base case. Scenarios 1.2 and 1.3 financial and strategic investment, have low likelihood and create only a low to moderate change in competitive factors.

For **consumers and business**, the choice of providers would remain the same. This option is unlikely to introduce changes that would spur increased interest in strategic investments and associated new products and services.

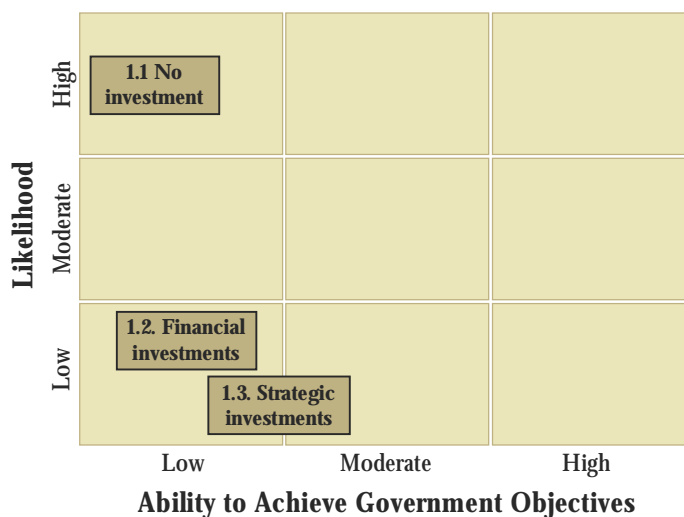
For the **telecom industry**, Canadian control would be maintained, but a lack of structural change would result in minimal change to current competitiveness of the industry. Increases in infrastructure investment and innovation levels would be minimal. It is also unlikely that new competitors would be created, as the barrier to entry of continued requirements for majority Canadian ownership still exists. If foreign investment does occur, it may be targeted to more regionally focused, cost-conscious companies or nationally focused companies looking to introduce new technologies and/or build globally compatible networks.

For the **Canadian economy**, changing FDI restrictions to allow for only 49% control of voting shares would be unlikely to attract higher than base case levels of foreign investment to Canada without a clear path to control. No change to Canadian productivity, ICT advancement, and adoption and use of new digital technologies is expected if Option 1 is implemented.

Option 1 allows the government the flexibility for further changes to FDI restriction, however, while some financial or strategic investments may occur, experience with prior FDI in Canada and global examples demonstrate Option 1 is unlikely to result in increased choice, competition, innovation or investment.

In addition, there is the risk that foreign investors purchase Canadian telecom assets, retrench to increase shareholder value, reduce customer choice and divert cash flow to fund dividends rather than innovation or further investment.

**Figure 17: Option 1 Scenarios Rated by Likelihood and Ability to Achieve Government Objectives**



Source: SECOR Analysis

## OPTION 2 – OPEN WINDOW (FOREIGN INVESTMENT RESTRICTIONS REMOVED FOR START-UPS AND COMPANIES WITH LESS THAN 10% SHARE)

### DESCRIPTION:

Under the proposed Option 2, ownership restrictions would be removed for start up telecom companies and small telecom common carriers with a market share of less than 10% of total telecom market revenues.

It is assumed that in this scenario, the total telecom market revenues would be defined as the total wireline, wireless and internet access revenues generated in Canada (excludes cable distribution). Players considered eligible for foreign ownership would therefore be those with revenues less than approximately \$4 billion.

This option includes references to an additional “major” competitor, which is defined in the scenarios as a telecom player able to compete across a wide enough geographic or product / service scale to provoke a significant competitive reaction from the major Canadian players, Bell, Rogers and TELUS. This is in contrast to “regional or smaller” players who would provoke a competitive response in a more focused or limited way.

### OPTION 2 – SCENARIOS OVERVIEW:

NUMBER	SCENARIO NAME	DESCRIPTION	LIKELIHOOD (L/M/H)
2.1	<b>No investment</b>	No interest from foreign investors in purchasing players with market share of less than 10% or creating new start-ups.	Low
2.2	<b>Buy and build to form additional major competitor(s)</b>	Foreign investors look to create a new major competitor through investment in organic growth and/or consolidation of smaller players.	High
2.3	<b>Buy and build regional or small competitors</b>	Foreign investors purchase smaller players who remain regional or focused on specific services in the telecom market (e.g. foreign purchase of a new Canadian wireless player).	Moderate
2.4	<b>Build new (greenfield) regional or small competitors</b>	Foreign investors enter the Canadian market through greenfield expansion and focus on service specific offerings or certain geographic markets (e.g. U.S. WiMAX player entering the Canadian market).	Low

## OPTION 2 – SCENARIO 2.1: NO INVESTMENT

In this scenario, removing FDI limits for smaller players does not attract foreign investment in any of Canada's telecom players. Canada is a small and mature market, making small Canadian companies or regional incumbents unlikely targets for global telecom players. Similarly, foreign investors may not invest in new wireless entrants in early stages of launching operations. SECOR rates the likelihood of this scenario as **low**.

Impact on **market structure** remains unchanged with the same number of firms, market share, and product and service differentiation. **Conduct** and **performance** remain unchanged as a result. Overall, there is a **low** degree of change to structure, conduct and performance in this scenario.

## OPTION 2 – SCENARIO 2.2: BUY AND BUILD TO FORM ADDITIONAL MAJOR COMPETITOR(S)

In this scenario, foreign investors purchase smaller players and build an additional major competitor either through organic growth or consolidation of other smaller players. Examples may include foreign players such as AT&T, Vodafone, Verizon, Orascom or private equity firms acquiring MTS Allstream, Cogeco, Globalive, Mobilicity or Public Mobile, and expanding to provoke a significant competitive reaction from the major Canadian players.<sup>37</sup> Examples may also include foreign global business service providers such as Global Crossing, Level 3, AT&T Global Services and Orange Business Services acquiring a Canadian player and creating a major national player in the business segment.<sup>38</sup>

Without changes to the broadcasting act in this option, foreign acquisition of small cable companies such as Videotron or Shaw would be unlikely as they would require restructuring to separate their telecom businesses.<sup>39</sup> Furthermore, an acquisition of Shaw is even less likely given its dual class share structure. Shaw and Videotron also have cash flow to fund expansion at this time without giving up control. SECOR rates the likelihood of this scenario as **high**.

**Evidence** supporting the plausibility of this scenario is Deutsche Telecom's acquisition of VoiceStream to enter the US market in 2001 under the T-Mobile brand (see Appendix 3.4); Orascom's interest in Globalive, a new player in the Canadian wireless market; and Global Crossing's acquisitions of Impsat in 2006 (a telecom network and internet services provider in Latin America) and Fibernet (an IP-based network service provider in the UK).<sup>40</sup>

Impact on market **structure** for this scenario would be the creation of an additional major competitor and a significant change in market share. This would likely increase the market share of individual or consolidated small players, and decrease the share of the three largest players. If a major wireless competitor is created, market share of the top three players could decline to approximately 80 to 85%, as in US and Germany.

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<sup>37</sup> Cogeco and MTS Allstream would require restructuring to separate cable distribution business.

<sup>38</sup> Global Crossing, Level 3 and AT&T Global Services provide wireline IP-based network services as well as other managed data and voice products for business customers. Although they currently own international cables landing in Canada, as non-Canadian carriers, they are currently limited to providing local services to customers as resellers.

<sup>39</sup> Note: Rogers would not be eligible under this option given its size and market share

<sup>40</sup> Global Crossing press release October 26, 2006 and October 11, 2006

Changes to FDI restrictions would also lower regulatory barriers to entry in the market, spurring greater access to capital for small players and new entrants, enabling them to increase their share of the market. For example, in Japan's intensely competitive market, Vodafone K.K. increased its market share to 16.8% by 2006 and following acquisition by Softbank, further increased share to 19.2% in 2009 (see Appendix 3.5). Another example is T-Mobile, which increased its presence in the U.S. market through spectrum purchase and consolidation to become a fourth national wireless player with approximately 12-14% market share. T-Mobile increased its base from 9.9 million to 33.7 million customers from 2002 to 2009.<sup>41</sup>

**Conduct** is also expected to change with the introduction of new competition. Investment by foreign telcos in Canadian new entrants and small players could bring new products and services to the market and create an environment where existing players launch innovative products and services more rapidly. An example is Softbank's entry into the Japanese wireless market and subsequent introduction of new products and services and technology such as innovative fixed mobile convergence (FMC) services. This type of innovation in the industry would likely increase the adoption and use of new digital technologies and promote ICT advancement.

With higher competition in Canada, price competition is expected to increase, triggered by new players targeting increased market share and incumbents responding to retain market share. For example, in Japan, Softbank used aggressive voice pricing strategies, inexpensive 3G mobile phones, and handset payment plans to attract subscribers.<sup>42</sup> NTT DOCOMO, the incumbent, responded by lowering prices and offering Smartphone discounts.<sup>43</sup>

The emergence of an additional major competitor in Canada could also challenge all players to improve service and invest in infrastructure. For example, T-Mobile US has become a customer service leader according to J.D. Power. T-Mobile US has also leveraged its strategic relationship with Deutsche Telekom to source new equipment and handsets. In 2009, T-Mobile invested US\$3.7 billion in National UMTS/HSDPA (3G) network expansion, which is now accessible to 208 million people.<sup>44</sup> In Canada, new investors could also expand into additional markets and increase high-speed broadband access.

Similarly, the business market would also see increased impetus to improve service and infrastructure as a result of new, global competitors entering the Canadian market. Orange Business Services recently increased its global Ethernet coverage and launched business VPLS services. This was in response competitive VPLS launches by Verizon Business, Telstra, Global Crossing and Tata Communications.<sup>45</sup>

**Performance** of the Canadian telecom industry is expected to change as a result of increased competition. Risk capital would be more available to small players. Existing players impacted by increased price competition may experience lower margins. Investment would likely increase to provide enhanced service offerings and new digital technologies. Increased foreign capital will be invested in Canada. Consumers and businesses would have increased choice of providers in both wireline and wireless and access to more

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<sup>41</sup> The Wall Street Journal, 02/10/10, ComScore May 2010, and Company Annual Reports

<sup>42</sup> Business Mode December 2009 Issue 53

<sup>43</sup> JP Morgan May 19 2010

<sup>44</sup> Note: Although T-Mobile has provided a strong source of competition in the market, it has recently experienced a net loss in customers.

<sup>45</sup> Current Analysis Report – 11/18/2009

innovative products and services. Global IP expansion would also enhance global connectivity for Canadian businesses, driving ICT advancement and increasing productivity.

New wireless entrants and smaller wireline companies will likely have greater access to risk capital. For example, Orascom was attracted by Canada's low wireless penetration, potential future cash flows, and potential capital appreciation from a future IPO or buy-out. According to HSBC analysis, Orascom's investment in Globalive is an NPV positive investment achieving positive EBITDA in the fourth year of operations. This would likely promote growth in wireless penetration rates as smaller players are able to generate positive financial returns.

Overall, there is a **high** degree of change to structure, conduct and performance in this scenario.

#### OPTION 2 – SCENARIO 2.3: BUY AND BUILD REGIONAL OR SMALL COMPETITORS

In this scenario, foreign investors purchase smaller players who remain regional (within specific geographies) or focused on specific services in the telecom market. Those that do achieve greater scale in this scenario would be purchased by larger players before they expand into major competitors. Examples include a US regional providers (e.g. Frontier Communications) acquiring existing Canadian regional wireline players; a foreign investor acquiring a new wireless entrant; or a PAETEC or Cogent acquiring MTS Allstream to expand IP-based network services in Canada. SECOR rates the likelihood of this scenario as **moderate**.

Target telcos for investment would likely be limited, as an acquisition of Videotron or Shaw is unlikely, SaskTel is currently not available for sale, and the new wireless players are limited in scale.

**Evidence** supporting the plausibility of this scenario can be drawn from historical acquisition activity:

- Y US regional providers such as CenturyLink and Frontier Communications acquired multiple wireline assets to expand their operations (see Appendix 3.6).
- Y Foreign investors have demonstrated interest in Canadian wireless new entrants, supporting the likelihood of further investment in these players.
- Y IP-based network players such as Cogent and PAETEC have expanded their US network reach through a number of acquisitions.

Impact on market **structure** for this scenario is moderate. Stronger regional or service specific competitors are created, however, a strong new major competitor is not created.

In the consumer market, revenue market share concentration for large players would likely remain high, based on outcomes in other jurisdictions. Market share, however, may shift to stronger, more competitive smaller players who have greater access to lower cost capital to invest in growth.

In the business market, new global telecom entrants could create a shift in market structure by expanding their current service offerings and gaining share from the current incumbents who dominate the business market. For example, Cogent has made several acquisitions in the US to expand network coverage and customer base.

Changes to **conduct** are expected, but not as significantly as in Scenario 2.2. Greater access to capital and stronger or regional or service specific competition would likely result in price competition, improvement in services and new innovative product introduction. Smaller players could be expected to leverage new digital technologies to offer competitive products and services. For example, during Fido and Clearnet's growth period, the conduct of both small and major players demonstrated changes in price competitiveness and improved service offerings. Fido focused on affordable plans for the urban population, offered "all in" rates and was the first Canadian mobile service provider to bill airtime by the second. Following acquisition of Fido, Rogers discontinued offering certain low "all in" rates such as Classic City Fido plans.

Incumbent players are expected to respond to increased competition through greater price competition and expanded product and service offerings. This has been the case in the UK, US and Japan. Expansion of a regional or small competitor in the business market could provide enhanced choice and service availability and selection for business customers. For example, in the US, PAETEC has positioned itself as a strong alternative provider to ILECs and targets the mid-to-large business segment. PAETEC competes on connectivity capability, customer experience, and custom solution development capability.<sup>46</sup>

**Performance** of the industry would change over time. In the short-term, as in the case of Fido and Clearnet, there would be improvements in customer choice and access to differentiated service offerings. Penetration rates would likely increase in certain areas, particularly in mobile. Services to the business market also improve with greater choice of wireline and wireless providers and potentially lower prices. With removal of FDI barriers, smaller players in this scenario would have greater access to capital and would be more likely to achieve sustainable levels of performance independently. Increased competition in the business market may put pressure on margins for certain services of the incumbent providers, but would also contribute to improved ICT advancement and productivity for Canadian businesses overall.

Overall, there is a *moderate* degree of change to structure, conduct and performance in this scenario.

#### OPTION 2 – SCENARIO 2.4: BUILD NEW (GREENFIELD) REGIONAL OR SMALL COMPETITORS

In this scenario, foreign investors enter the Canadian market through greenfield expansion and compete on a regional or service specific basis. Examples could include: ClearWire entry into Canada with the introduction WiMAX technology; Global Crossing, Level 3, AT&T Global Services and Cogent expanding fibre infrastructure in major Canadian cities;<sup>47</sup> resellers such as Primus expanding current offering; and Google or other a non-traditional players' entry into Canada (see Section 4, Key Trends). As this scenario requires either new spectrum or infrastructure build, SECOR rates the likelihood of this scenario as *low*.

**Evidence** supporting the plausibility of this scenario is Tele2 AB's entry into Eastern Europe, ClearWire and Sprint's US WiMAX deployment, and AT&T Global Services, Global Crossing, Level 3 and Cogent's global network and current operations in Canada.

Impact on market **structure** in this scenario is likely to be low to moderate, as a new player requiring spectrum and/or facilities will take time to build and successfully compete for market share. Structure change in specific regions or service areas, however, may be significant. For example, Tele2, from 2007 to 2008, sold its traditional Western European assets to finance its expansion into Romania, Poland, Russia and several other Eastern European countries as the lowest priced, pure play mobile entrant (see Appendix 3.7).

<sup>46</sup> Company website and annual reports

<sup>47</sup> US-based wireline business services providers with cross-border interconnection points of presence in Canada

**Conduct** could change with increased access to technology and the introduction of new services and innovation, depending on the scale and scope of the market entrant. Price competition, new service access and enhanced global connectivity in the targeted regions, markets or service areas are possible.

New players typically enter markets by leveraging new technologies. For example, ClearWire and Sprint partnered to deploy WiMAX infrastructure across the US for major global businesses (See Appendix 3.8). In 2010, they launched the first 4G capable mobile phone. WiMAX technology provides wireless broadband, and could be expanded into Canada by purchasing spectrum in future wireless auctions.

Additional access to wireline business services may also be available. For example, Global Crossing, Level 3 and Cogent have invested in building out their network infrastructure in multiple countries and offer improved global connectivity. AT&T Canada and BT also have current points of presence in Canada which could be expanded with changes to FDI regulations.

**Performance** of major players would likely change minimally, however, increased competition and improvements in product and service selection and availability for consumers and business could result in certain regions or service areas. For example, increased competition in the business market may put pressure on margins for certain services of the incumbent providers, but would also contribute to improved ICT advancement and productivity for Canadian businesses overall.

Overall, there is a **low to moderate** degree of change to structure, conduct and performance in this scenario.

**ASSESSING OPTION 2 - ABILITY TO ACHIEVE GOVERNMENT OBJECTIVES:**

The following chart assesses each scenario against the government’s criteria using the framework outlined in Section 2.

Ranking: Ability to Achieve Government Objectives

	2.1 No investment	2.2 Buy and build to form additional major competitor (s)	2.3 Buy and build regional or small competitors	2.4 Build new (greenfield) regional or small competitors
<b>Government Objectives:</b>				
1. Choice of service providers available to consumers				
2. Choice of service providers available to business				
3. Availability and selection of telecom products and services for consumers				
4. Availability and selection of telecom products and services for business				
5. Investment in telecom infrastructure				
6. Innovation in the telecom industry				
7. Adoption and use of digital technology in Canada's economy				
8. Level of foreign investment in the telecom industry				
9. Distribution of capital in the telecom industry to those in need				
10. Competitiveness and productivity of the Canadian economy				
<b>LIKELIHOOD OF THE SCENARIO</b>	Low	High	Moderate	Low

**Legend:**

- None to Low
- Low to Moderate
- Moderate
- Moderate to High
- High

Source: SECOR Analysis

**Option 2 is likely to achieve the government’s stated policy objectives for a vibrant, sustainable market** (see Figure 18). Scenarios 2.2 and 2.3 are the most likely outcomes and both create the conditions that would meet the government’s objectives. Scenario 2.1 would not achieve the government objectives, as there would be no change from the base case and the changes resulting from Scenario 2.4 create minimal improvements toward achieving the government objectives. However, these two scenarios are considered to have a low likelihood of occurring.

For both **consumers and business**, the choice of providers would likely increase with stronger, more competitive small telecom players. Broadband penetration would be expected to increase as competitors expand into new markets. As seen in both the U.S. and Japan, new and vibrant competition spurs new product introduction, increased service availability and price competition. For consumers, foreign investment in the new wireless players would likely improve services and price competitiveness. For businesses, foreign investment in new or existing wireline competitors would likely increase infrastructure, choice of service providers and access to business services. For multi-national corporations, improved access to global services is also likely.

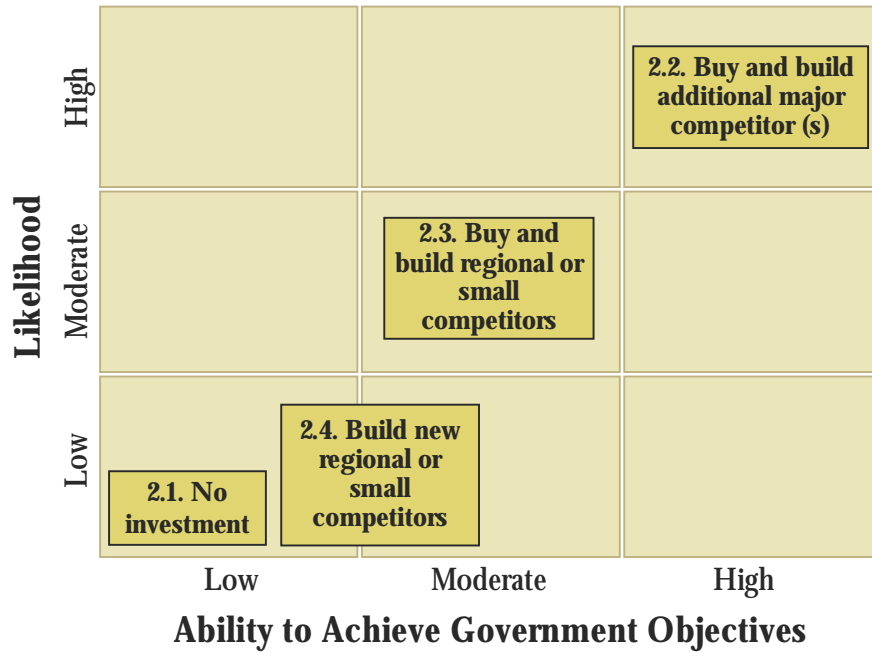
For the **telecom industry**, investment in infrastructure and innovation would likely expand, leveraging synergies in global provider technologies and supplier arrangements. Infrastructure, both in terms of speed and access, would be expected to improve. New digital technologies, including platforms to support smart appliances, will enable telcos to offer innovative new products and services to customers. Access to risk capital to fund expansion would be available to the small players and new market entrants, by providing buyers with the ability to gain full control.

For the **Canadian economy**, the possible introduction of stronger regional and smaller players, stronger new wireless entrants or an additional major competitor, would create significant structural change in the industry, increasing the level of competition overall. This would spur increased innovation and competitiveness of the Canadian telecom sector when compared globally. An increasingly competitive environment would also result in new product and service development, allowing Canada businesses to improve productivity, increase ICT advancement and adoption and employ new digital technologies.

Option 2 does, however, include the risk of a low level of investment (small player targets, more attractive growth markets in other countries), as well as industry reconsolidation over time, as has occurred the US.

In Option 2, the government retains the flexibility for subsequent changes to FDI restrictions in the future.

Figure 18: Option 2 Scenarios Rated by Likelihood and Ability to Achieve Government Objectives



### OPTION 3 – OPEN FIELD (ALL FDI RESTRICTIONS REMOVED)

#### DESCRIPTION:

Under the proposed Option 3, the Canadian market would be fully opened, removing foreign investment restrictions to allow foreign acquisitions of all telecom common carriers.

It is assumed that scenarios in this option will lead to greater access to capital for all players and that one or more of the major players would be purchased by a foreign investor. If no major players are purchased, the scenarios in Option 2 would apply.

Evidence supporting the scenario of a major player purchase in the global telecom industry is limited, as most jurisdictions have not experienced the acquisition of a major incumbent player.<sup>48</sup> Furthermore, many foreign jurisdictions' governments retained control over their national incumbents at the time that markets were opened to competition and to some extent today, with Japanese, French, Australian, and German governments holding shares in public telecommunication network operators. Other jurisdictions retain structures such as golden shares or foreign investment review regulation for national security, which can be used to prevent major telcos from being acquired by foreign buyers.<sup>49</sup>

#### OPTION 3 – SCENARIOS OVERVIEW:

NUMBER	SCENARIO NAME	DESCRIPTION	LIKELIHOOD (L/M/H)
3.1	<b>Major telco purchase(s) only</b>	Major player(s) are acquired by foreign investors, but there is no change to structure. No interest in small players from foreign investors.	Low to Moderate
3.2	<b>New major competitor(s) with major telco purchase(s)</b>	Major player(s) are acquired by foreign investors. Other foreign investors look to create a new major competitor through investment in organic growth and/or consolidation of smaller players.	Moderate
3.3	<b>Buy and build regional or small competitors with major telco purchase(s)</b>	Major player(s) are acquired by foreign investors. Additional foreign investors acquire smaller players, but focus on building them into regional or service specific competitors.	Moderate
3.4	<b>Build new (greenfield) regional or small competitors with major telco purchase(s)</b>	Major player(s) are acquired by foreign investors. Other foreign owned companies invest in the Canadian market, through greenfield expansion in regional or service specific competitors.	Low

#### OPTION 3 – SCENARIO 3.1: MAJOR TELCO PURCHASE(S) ONLY

In this scenario, controlling interest in Canadian telecom player(s) is acquired by foreign investors, but the actions of these investors do not create a change to market structure. Investors look to benefit from the

<sup>48</sup> Ireland and Denmark are exceptions, but are not comparable case studies as they involved financial buyers at the time of industry privatization. Telefonica purchased O2 (UK), but this was limited to BT's incumbent wireless business only.

<sup>49</sup> OECD Telecommunications Outlook 2009

major players' already strong market positions, steady cash flows and established infrastructure. In this scenario there is no interest in small players for the same reasons cited in Scenario 2.1.

Examples of possible acquirers in this scenario include, but are not limited to, AT&T, Vodafone, Verizon, China Telecom, China Mobile or China Unicom. Deutsche Telekom and Telefonica are also candidates, but are less likely at this time given their publicly stated constrained financing situations following the recent financial downturn. Bell and Rogers are possible acquisition targets, however, would need to be restructured to separate telecom and broadcasting assets. TELUS is a more likely acquisition target.<sup>50</sup> SECOR rates the likelihood of this scenario as *low to moderate*.

Impact on market **structure** if both Bell and TELUS are acquired by foreign investors is likely to be low, as status quo strategies and level of investment would be maintained. Evidence supporting this scenario from outside the telecom industry can be found in the Canadian brewery market. Both Labatt and Molsons, representing 84% Canadian revenue market share, were purchased by Interbrew InBev (Interbrew) and Coors respectively. While ownership and some aspects of the internal operations changed, the market structure, distribution network and competitive behaviour in the Canadian brewery market did not.

Impact on **conduct** would also be low, as new telecom players and increased competitive pressures would not be created. As seen in the brewing industry, a change in equity from Canadian to foreign ownership occurred without a significant change in players' operating, distribution or investment strategies. Prices and profits remained high and innovation in products and distribution is low. Smaller players continue to play niche roles, however, a new dominant player has not been created.

**Performance** would change very little from the base case. For example, in Ireland there was little change to the performance of incumbent eircom following its purchase by a group of PE firms (see Appendix 3.9). Observed changes were primarily seen in a focus on internal efficiencies and renewed local focus as opposed to global expansion.

Overall, there is a *low* degree of change to structure, conduct and performance in this scenario.

### OPTION 3 – SCENARIO 3.2: NEW MAJOR COMPETITOR(S) WITH MAJOR TELCO PURCHASE(S)

In this scenario, controlling interest in Canadian telecom player(s) is acquired by foreign investors, and other investors buy and build an additional major competitor. Foreign investors look to expand the market share of the target companies and improve existing operations. As in Scenario 3.1, potential acquirers include AT&T, Vodafone, Verizon, China Telecom, China Mobile or China Unicom. As in Scenario 2.2, potential acquisitions and growth options for small Canadian players could include large foreign telecom players, global business service players, investors such as Orascom and private equity firms. SECOR rates the likelihood of this scenario as *moderate*.

**Evidence** supporting the plausibility of this scenario is the highly competitive U.K wireless market involving multiple foreign entrants. In 1999, Deutsche Telekom purchased One 2 One (previously operated by

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<sup>50</sup> Interviews with experts in the Canadian investment community have indicated that the significance and integrated nature of Bell and Roger's broadcasting assets increase the complexity required in restructuring in comparison to TELUS.

Mercury Communications); in 2000, France Telecom purchased Orange from Vodafone; and in 2005, Telefonica purchased the wireless business unit O2 from BT.

Impact on market **structure** for this scenario is high, given changes in the number and share of major and small competitors. Foreign ownership of Canadian major players could create a situation where a new player achieves significant market share at the expense of incumbent competitors. As in Scenario 2.2, the creation of an additional major Canadian competitor has the potential to lower level of market share concentration of the three largest wireless operators to approximately 80-85%. For example, in 2009, the major UK wireless players O2, Vodafone, Orange and T-Mobile had market shares of 27%, 25%, 22% and 15% respectively.<sup>51</sup> Vodafone's market share dropped from about 37% in 1999.<sup>52</sup> It is also reasonable to expect that market share in other segments such as wireline and business services in Canada would also change, with a new major competitor competing for share with the current players.

Impact on **conduct** in Canada is high with likely price competition, investments in infrastructure, innovative product and service offers, and new digital technologies and applications. A UK example is Orange, which leveraged operational synergies across all of France Telecom's wireless assets to expanded product and service offerings for UK customers (see Appendix 3.10). Orange invested heavily in wireless infrastructure in 2008 and became the UK's largest 3G/2.5G network. The company brought new and innovative services to customers, developing IPTV, mobile broadband and a Livebox ADSL product, which was the first of its kind when it launched in 2004.<sup>53</sup> Acquisition by global players in the wireless market also offered customers better roaming and services globally. Since acquisition, Orange UK increased from 8 to 16.5 million mobile customers and 0.8 million ADSL broadband customers.

Price competition in Canada could result from cost and procurement synergies created through an acquisition by a larger global telco that are passed on to the consumer. For example, when Telefonica acquired O2, the proposed annual synergies were US\$353 million.<sup>54</sup> The UK experienced high price competition in wireless such as new entrant 3 UK's announcement in 2003 that it would undercut similar priced offers on the market by up to 50% by launching two new price packages for its 3G phones to gain market share.<sup>55</sup>

Incumbent conduct is expected to intensify in response to competitive threats. For example, incumbent wireless player Vodafone faced significant competitive and financial challenges, experiencing a 4.7% decline in service revenue with lower voice revenue primarily due to competitive pressure and a mobile termination rate reduction effective from July 2009.<sup>56</sup> Recently, price competition over mobile data price plans and sales of the iPhone has intensified in the UK. Vodafone has focused its strategy on increasing customer retention and reducing churn. It also recently announced the first "SIM only" contract offer for the Apple iPhone to attract new customers.<sup>57</sup>

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<sup>51</sup> BBC News 09/08/10

<sup>52</sup> Ofcom Market Information

<sup>53</sup> France Telecom Annual Report 2009

<sup>54</sup> Montreal Gazette 01/11/2005

<sup>55</sup> BBC News 06/06/2003

<sup>56</sup> Vodafone Annual Report 2010

<sup>57</sup> [www.wired.com](http://www.wired.com) 02/12/2010 (Note: a SIM only contract offers a bundle of minutes and text messages but no handset for a monthly subscription)

Competition is expected to intensify particularly in the wireless segment. Increased investments in wireline could also be expected where the economics for further network build out make sense. Global business service players could enter the market and expand IP-based network services to create an additional major competitor in this segment. Product bundling in the market creates a natural fit for expansion of wireline services. For example, O2 has recently launched fixed-line telephony in the UK in order to attract additional customers to their broadband services.<sup>58</sup>

**Performance** in this scenario would be similar to that in 2.2. While increased price competition might reduce some companies' margins, access to capital would increase. Customers would see improved service offerings and a wider choice of providers offering innovative products and services. For example, broader wireless access and attractive pricing in the UK stimulated consumer demand, resulting in a 137% mobile penetration rate in 2009.<sup>59</sup> The UK wireless telecom services market generated total revenues of \$29.7 billion in 2008, representing a CAGR of 6.6% for the period spanning 2004-2008.<sup>60</sup> As in the UK, penetration rates in Canada would be expected to increase under this scenario. Increased adoption and use of ICT and new digital technologies would also be expected, as innovation is expected to increase overall and there is increased ability for Canadian players to leverage foreign technology.

Overall, there is a *high* degree of change to structure, conduct and performance in this scenario.

### OPTION 3 – SCENARIO 3.3: BUY AND BUILD REGIONAL OR SMALL COMPETITORS WITH MAJOR TELCO PURCHASE(S)

In this scenario, foreign investment is directed towards major Canadian telecom players, as well as small players and new entrants. Smaller players gain access to foreign investment, but focus on regional or service specific markets. No additional major player is created. As in Scenario 2.3, smaller player acquirers could include U.S. regional LECs, foreign investors such as Orascom, and US business segment service providers such as Cogent and PAETEC. Major telco acquirers would be similar to Scenario 3.1. SECOR rates the likelihood of this scenario as *moderate*.

**Evidence** supporting this scenario includes historical acquisition activity by U.S. rural LECs, foreign investors such as Orascom, and global business service providers as outlined in Scenario 2.3.

The impact on market **structure** would be moderate. The number of players would be expected to change slightly in the case of creation of new regional or service specific competitors. The market share of current players could also change, as competition would intensify between major players for dominant share, and in certain areas where there would be competition with smaller regional or service specific players. Smaller players, however, may have more difficulty in gaining market share from stronger major players when compared to Scenario 2.3, where major players do not have access to foreign investors and synergies created through acquisition by global telecom players.

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<sup>58</sup> V3.co.uk 01/15/2010

<sup>59</sup> France Telecom Annual Report 2009

<sup>60</sup> Datamonitor United Kingdom Telecommunications Industry Guide 2009

Impact on **conduct** is also moderate. Stronger major players supported by larger global telecom companies as investors competing for market share and increased competition levels where there are stronger regional or service specific competitors could create increased price competition, greater availability of new and innovative products and services, as well as increased infrastructure investment. This is supported by examples of competitive markets with multiple players in the US, UK as well as Japan, Germany and France in some service areas, as outlined in Scenario 2.2 and 2.3 and 3.2.

**Performance** would be similar to Scenario 2.3. Customers, however, would see improved service offerings and a wider choice of providers employing digital technologies to offer innovative products and services. Broadband penetration rates could be expected to increase in certain areas. Foreign investment in Canada would be material, providing access to capital for both major and small players, however, improvements in ICT advancement and productivity would be minimal.

Overall, there is a **moderate** degree of change to structure, conduct and performance in this scenario.

#### OPTION 3 – SCENARIO 3.4: BUILD NEW (GREENFIELD) REGIONAL OR SMALL COMPETITORS WITH MAJOR TELCO PURCHASE(S)

This scenario is similar to that described in Scenario 2.4. New entrants would make greenfield investments in the Canadian telecom market, but at the same time foreign investors would acquire one or more major players in the market.

SECOR rates likelihood of this scenario as **low**. Foreign investors may not be as interested in entering the market with greenfield investment strategies when the market is wide open to foreign investment for both large and small players.

Structure, conduct and performance would be similar to that described in Scenario 2.4. New entrants, however, may have more difficulty in gaining market share from stronger major players with access to foreign investors and synergies created through acquisition by global players.

Overall, there is a **low to moderate** degree of change to structure, conduct and performance in this scenario.

#### ASSESSING OPTION 3 - ABILITY TO ACHIEVE GOVERNMENT OBJECTIVES:

The following chart assesses each scenario against the government's criteria using the framework outlined in Section 2.

**Ranking: Ability to Achieve Government Objectives**

<b>Government Objectives:</b>	<b>3.1 Major telco purchase(s) only</b>	<b>3.2 New major competitor(s) with major telco purchase(s)</b>	<b>3.3 Buy and build regional or small comps. with major telco purchase(s)</b>	<b>3.4 Build new regional or small comps. with major telco purchase(s)</b>
1. Choice of service providers available to consumers				
2. Choice of service providers available to business				
3. Availability and selection of telecom products and services for consumers				
4. Availability and selection of telecom products and services for business				
5. Investment in telecom infrastructure				
6. Innovation in the telecom industry				
7. Adoption and use of digital technology in Canada's economy				
8. Level of foreign investment in the telecom industry				
9. Distribution of capital in the telecom industry to those in need				
10. Competitiveness and productivity of the Canadian economy				
<b>LIKELIHOOD OF THE SCENARIO</b>	<b>Low</b>	<b>Moderate</b>	<b>Moderate</b>	<b>Low</b>

**Legend:**

- None to Low
- Low to Moderate
- Moderate
- Moderate to High
- High

Source: SECOR Analysis

**Option 3 is likely to achieve the government’s stated policy objectives for a vibrant, sustainable market, but with higher risk of investment occurring without affecting the market** (see Figure 19).

Scenarios 3.2 and 3.3 are the moderately likely outcomes and both create conditions that would meet the government’s objectives. Scenario 3.1 would not achieve the government objectives, as there would be little to no change from the base case. The changes resulting from Scenario 3.4 create only minimal improvements toward achieving the government objectives. However, these two scenarios are considered to have a low likelihood of occurring.

For both **consumers and business**, choice of providers would increase with the creation of an additional major competitor and stronger regional and smaller new entrants. Broadband penetration would be expected to increase as competitors expand into new markets. Products and service availability and selection would expand and competitive pricing would intensify, as seen in markets such as the US, UK and Japan. For consumers, foreign investment in major players or the new wireless players would likely improve wireline and wireless speeds, services and price competitiveness. For businesses, foreign investment in wireline competitors would likely reduce the price of wireless services and increase infrastructure, choice of service provider and access to business services. For multi-national businesses, improved access to global services is also likely.

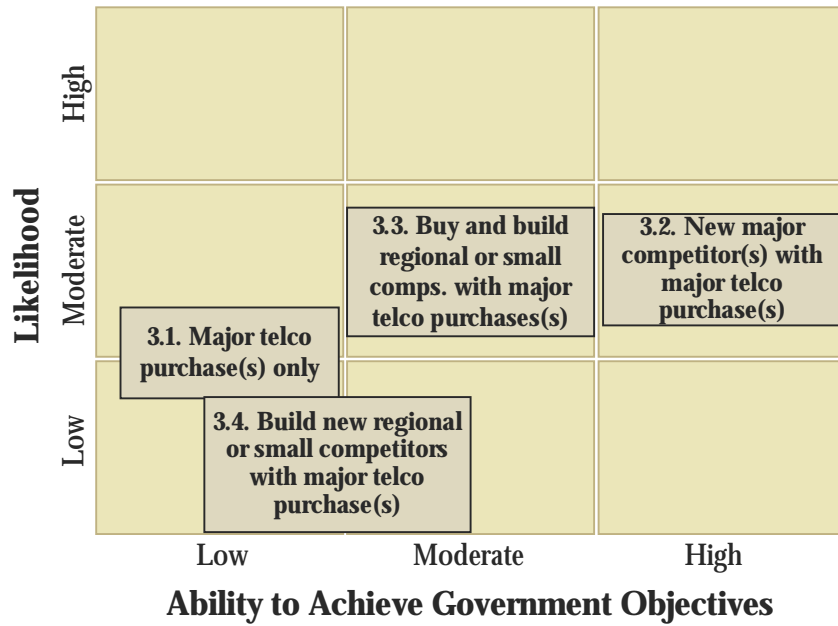
For the **telecom industry**, investment in infrastructure and innovation would increase, leveraging synergies in global provider technologies and supplier arrangements. Infrastructure, both in terms of speed and access, would be expected to improve. The level of competition would be the highest in the case where an additional major competitor is created and where smaller players are sustainable through increased access to risk capital creating a structural change in the telecom industry.

For the **Canadian economy**, lifting FDI restrictions would attract investment in Canada in all scenarios, increasing the level and distribution of capital in the industry. Increased competition in the telecom industry would drive further innovation and productivity of Canadian economy, through increased ICT advancement, adoption and use of new digital technologies.

Option 3 does, however, include the risk of a low level of investment (globally, Canada as a small, mature market) and reconsolidation of the industry over time, as seen in the US and UK. In Option 3, major Canadian telecom companies could be purchased by foreigners who introduce little changes to the Canadian market. This risk could result in loss of corporate control, head quarters and jobs, without the benefits brought by increased competition.

In this option, the government does not retain the option value for subsequent changes to FDI restrictions.

**Figure 19: Option 3 Scenarios Rated by Likelihood and Ability to Achieve Government Objectives**



Source: SECOR Analysis

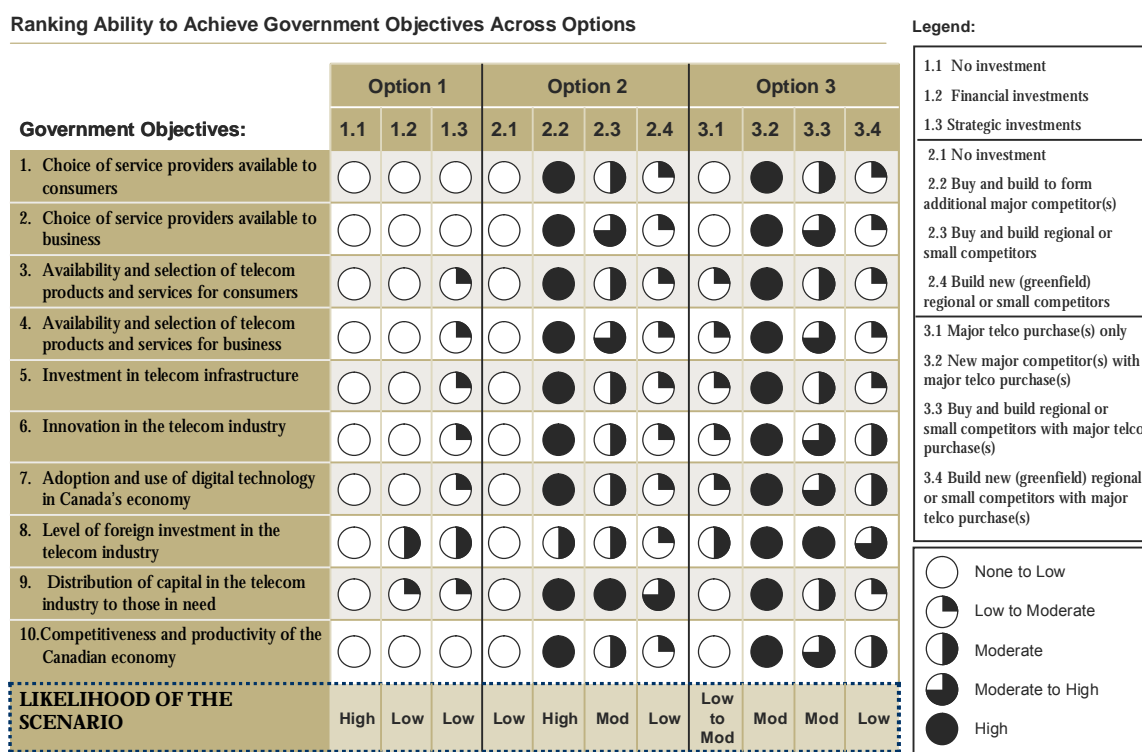
## 6. OPTION COMPARISON

Based on the option and scenario analysis in Section 5, each option can be evaluated to identify the most likely outcomes, implications for the government’s stated policy objectives, and the risks.

### CROSS-OPTION EVALUATION - ABILITY TO ACHIEVE GOVERNMENT OBJECTIVES:

Each option varies in its ability to achieve the specific government objectives defined in Section 2 (see Figure 20). Potential option outcomes must also take into consideration the relative likelihood of the scenarios.

**Figure 20: Option Scenario Comparisons Rated by Likelihood and Ability to Achieve Government Objectives**



**Canadian Control: Option 1, increasing FDI limits to 49%, is not expected to achieve the government’s objectives.** The most likely outcome is no investment, as this change in regulation represents an effective increase in foreign control limits of only 2.3%. Financial or strategic investments are unlikely without the path to control. Even in scenarios where investment increased, there is minimal change to market structure. As the number of players remains constant, the impetus to change conduct is low. Performance for consumers and business, industry players, and Canadian productivity remain virtually unchanged. Investment in new products, services, infrastructure, innovation and digital technology is possible in the strategic investment scenario, however, this remains a low likelihood scenario.

**Open Window: Option 2, removing FDI limits for players with less than 10% market share, creates the conditions for achieving the government’s objectives and retains the flexibility for a staged increase in FDI limits.** In this option, the most likely outcomes (buying and building regional or service specific competitors, or creating an additional major competitor), would result in changes to market structure. This in turn provides the impetus for change in conduct, such as availability of new products and services and infrastructure build-out. Under this option, it is more likely that smaller players would be better able to access risk capital, strengthening their ability to compete with major players. Competitive response from major players and overall more aggressive competition would stimulate greater price competition, innovation and digital technology advancement.

**Open Field: Option 3, removing FDI limits for all players, also creates the conditions for achieving the government’s objectives.** In this option, the variability of possible outcomes is higher than in Option 2, as foreign investment could be focused on major players, smaller players or start-ups. As in Option 2, changes in market structure create the conditions for changes in conduct and competitiveness. Synergies with global players could bring new products and services, global connectivity for multi-national businesses, access to economies of scale (e.g. supplier partnership), and innovative services. While Option 3 may create more opportunities for market change, it does have the greatest uncertainty in the range of outcomes. Stronger major players such as Bell, Rogers and TELUS may be acquired and reduce the attractiveness of further investment in smaller players.

#### POTENTIAL RISKS:

Three types of risks have been identified that will impact the options to varying degrees:

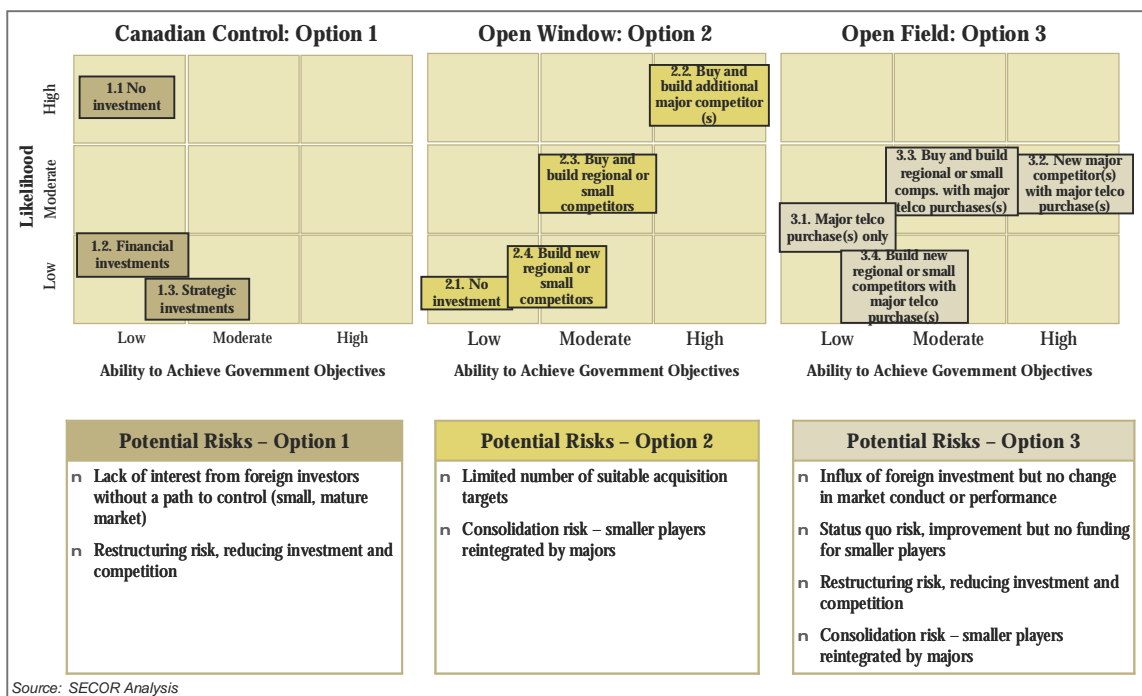
- Y **“Status quo” risk** results in minimal change to current structure, conduct and performance. This includes a lack of interest from foreign investors in the Canadian market, a limited number of suitable acquisition targets, or an influx of foreign investment without a substantial change in conduct or performance. In this latter case, there may be a potential loss of Canadian control, jobs and headquarters without the benefits of an increase in competitiveness. In all cases, the government’s objectives are not achieved.
- Y **Consolidation risk** results from secondary effects where higher growth players are acquired by major telcos, or where major players merge. A change in market structure, conduct and performance may result in behaviour that achieves the government’s objectives in the short-term, but reconsolidation may reduce choice and competitiveness in the long-term.
- Y **Restructuring risk** results from secondary effects where foreign investment or private equity acquisitions are made for financial goals, and where restructuring reduces infrastructure investment, divests businesses or reduces innovation to fund shareholder dividends. In this case, the conditions required to meet the government’s objectives are not likely.

Some of these risks may be mitigated by specific government decisions. Where possible, risk mitigation strategies are identified in Section 7 - Recommendations.

SUMMARY:

Figure 21 provides a summary of each option, rated by likelihood, ability to achieve government objectives and potential risks:

**Figure 21: Summary of Options by Scenario Likelihood, Ability to Achieve Government Objectives and Potential Risks**



## 7. RECOMMENDATIONS

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Other jurisdictions, particularly the US and UK, have demonstrated that greater liberalization of regulations and openness to foreign direct investment have changed market structure. This in turn changed conduct and resulted in improved conditions for customers, the industry, and the economy.

Based on the analysis of potential to achieve government objectives and risks for each FDI option, **Option 2, removing FDI restrictions on players with less than 10% market share**, represents the best choice as it:

- Y Provides the highest likelihood of substantial changes in market structure, conduct and performance that could create the conditions to achieve the government's objectives; and,
- Y Retains the flexibility for staged changes to FDI regulations.

If Option 2 is not pursued, Option 3 provides similar conditions and benefits to Option 2, but presents a higher variation of outcomes and a lower probability of achieving government objectives on balance.

To mitigate the potential risks in Option 2, the following strategies should be considered:

- Y Create conditions for investment transactions such as requirements for maintaining Canadian centres of innovation, local presence of offices, and investment in facilities-based infrastructure;
- Y Leverage the Competition Bureau as a mechanism to mitigate conduct or prevent M&A activity that would not be beneficial to Canadian consumers or businesses;
- Y Add requirements on investment in infrastructure and constraints on reconsolidation for foreign acquisitions and participants in future wireless spectrum auctions (similar to those placed on the 2008/09 auction); and,
- Y Implement changes to FDI restrictions prior to the proposed 2011/2012 wireless spectrum auction to attract additional competitors to the market.

If mitigating conditions are reasonable to foreign investors, this would encourage foreign investment while providing benefits to Canadian consumers and businesses, the telecom industry, and Canada's economy.

# APPENDICES

**Appendix 1: References**

**Appendix 2: Base Case Telecom Market Exhibits**

**Appendix 3: Global Telecom Examples**

## APPENDIX 1: REFERENCES

The purpose of this report is to provide a strategic and comparative analysis of the potential outcomes of the three options proposed by the government for changes to FDI restrictions in the telecom industry. To support the analysis, SECOR conducted a review of relevant literature, supplemented with targeted research and interviews with industry experts in areas requiring further analysis and recent trends.

Sources for our review include:

**Table 1: Literature References**

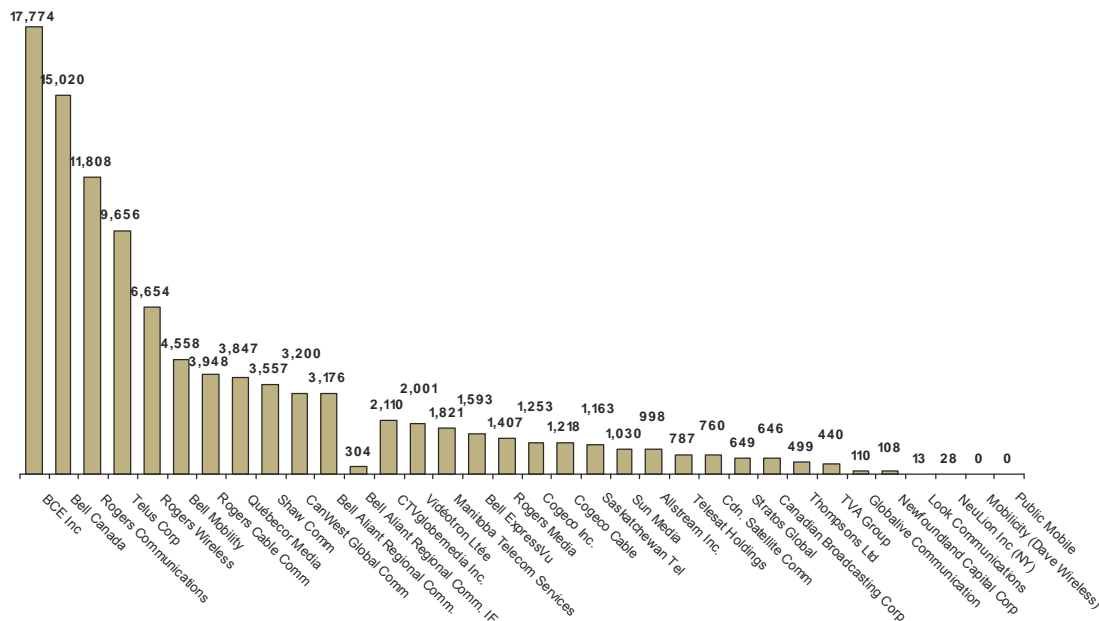
1. Industry Canada	1A. Opening Canada’s Doors to Foreign Investment in Telecommunications: Options for Reform (June 2010) 1B. Industry Canada Policy Framework
2. SeaBoard	2A. Wireless Pricing (March 2007)
3. Merrill Lynch	3A. Global Wireless Matrix (2007)
4. SECOR	4A. Canada’s Competitiveness in the Market for Corporate Control – Telco Case Studies (2007) 4B. A Perspective on Competitiveness in the Canadian Wireless Sector (2008)
5. OECD	5A. Telecommunications Outlook (2009) 5B. Science and Technology Industry Scoreboard (2009) 5C. Broadband Portal: Speed, Pricing and Access Data (2010)
6. CRTC	6A. Telecommunications Monitoring Report (2009 and 2010)
7. Canadian Government	7A. Report of the Standing Committee on Industry, Science and Technology “Canada’s Foreign Ownership Rules and Regulations in the Telecommunications Sector” (June 2010) 7B. Telecommunications Policy Review Panel Final Report (2006) 7C. Competition Policy Review Panel “Compete to Win” (2008) 7D. Company Submissions to the Competition Policy Review Panel 7E. Telecommunications Act (2003)
8. Canadian Wireless Telecommunications Association	8A. CWTA Industry and Subscriber Data (2009)
9. International Telecommunications Union (ITU)	9A. Measuring the Information Society: The ICT Development Index (2009)
10. Analyst Coverage of Telecom Companies	10A. Various Reports: HSBC, Scotia Capital, TD Newcrest, Morgan Stanley, J.P. Morgan, Credit Suisse, Northland Capital, BMO Weekly Credit Edge
11. Telecom Company Annual Reports and Press Releases	11A. Various Reports
12. Analysys	12A. Talk is cheap in Canada: an inter-country comparison of mobile wireless prices (2007)
13. Wall Communications	13A. A Study on the Wireless Environment in Canada (2006)
14. Berkman Center	14A. Berkman Center Broadband Report (2010)
15. TeleGeography	15A. TeleGeography, Global Communications Database (2010)

16. Conference Board of Canada	16A. Recent Productivity Developments in the World Economy (Spring 2010) 16B. Productivity and Potential Output Growth to 2015; An International Comparison (April 2009)
17. Datamonitor	17A. Datamonitor United Kingdom Telecommunications Industry Guide (2009)
18. Nielsen	18A. Three-Screen Report: Television, Internet and Mobile Usage in the US (2009, 2010) 18B. The Communications Audit: Communication Trends (2009) 18C. The Shifting Media Landscape: Integrated Measurement in a multi-screen world (2009)

## APPENDIX 2: BASE CASE TELECOM MARKET EXHIBITS

**Figure 22: Canadian Telecom Companies by Revenue**

Top Canadian Telecom, Media, Cable and Broadcasting Companies by Revenue  
(C\$ millions, list is not MECE)



Source: SECOR Analysis, Globe and Mail ROB Top 1000 (2010)

\*Note: List does not include all Telecommunications Common Carriers or new entrants.

**Figure 23: Global Wireless Market Share Concentration**

Market Share of the Three Largest Mobile Network Operators in Selected Countries

(2007, percentage market share based on the number of subscribers)

Country	Market Share of Three Largest Operators
Korea	100.0%
New Zealand	100.0%
Finland	97.9%
Canada	95.7%
France	94.7%
Australia	92.6%
Norway	89.7%
Germany	86.7%
United States	81.1%
United Kingdom	73.2%

**Figure 24: Price Comparisons for Telecom Services**

**International Pricing Comparison for a Basket of Services**  
(average price, \$Cdn per month)

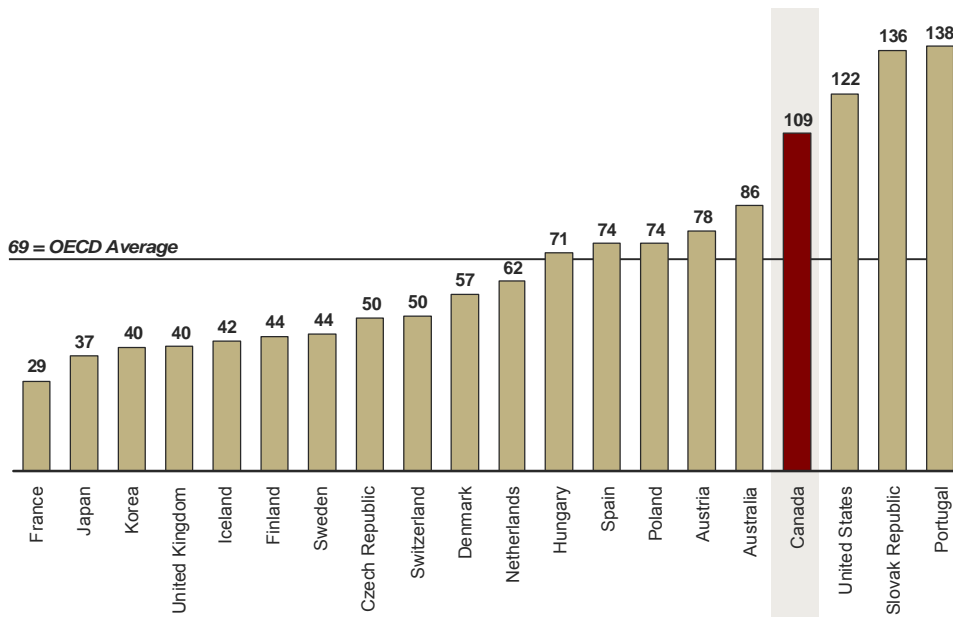
	Canada	United States	United Kingdom	France	Australia
<b>Wireline service</b>					
Low-usage	30	39	35	31	45
Medium-usage	50	71	50	56	87
High-usage	62	82	69	67	96
<b>Wireless service</b>					
Low-usage	33	43	24	25	20
Medium-usage	58	66	45	62	37
High-usage	103	133	76	109	93
<b>Broadband service</b>					
Low-usage	31	40	n/a	45	41
Medium-usage	47	58	30	49	64
High-usage	60	70	36	48	78
<b>Bundled services</b>					
Above services plus television	173	213	134	153	190

Source: Price comparison study conducted for the CRTC in April 2009 by Wall Communications Inc.

Note: Figures are in Canadian dollars adjusted for purchasing power parity differences across the countries.

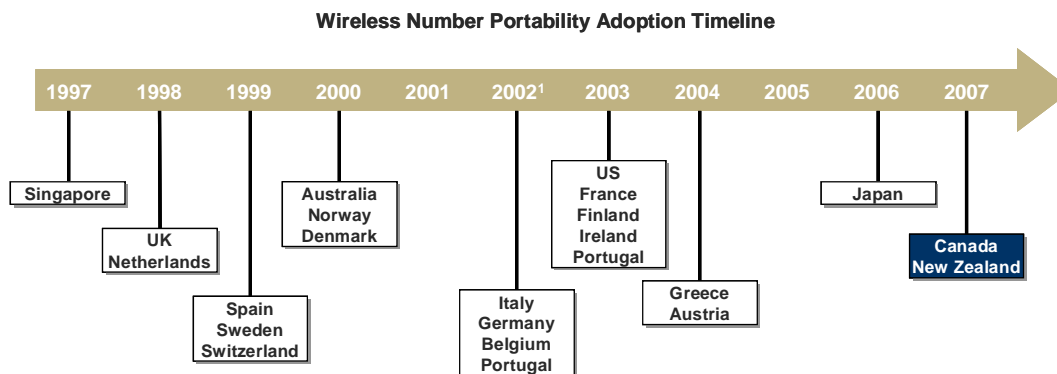
**Figure 25: OECD Average prices for high-speed connections**

**OECD average monthly price for very high-speed connections**  
Speeds greater than 35 000 kbit/s advertised, USD PPP, October 2009



Source: OECD 2009, SECOR Analysis

**Figure 26: Wireless Number Portability Adoption Timeline**

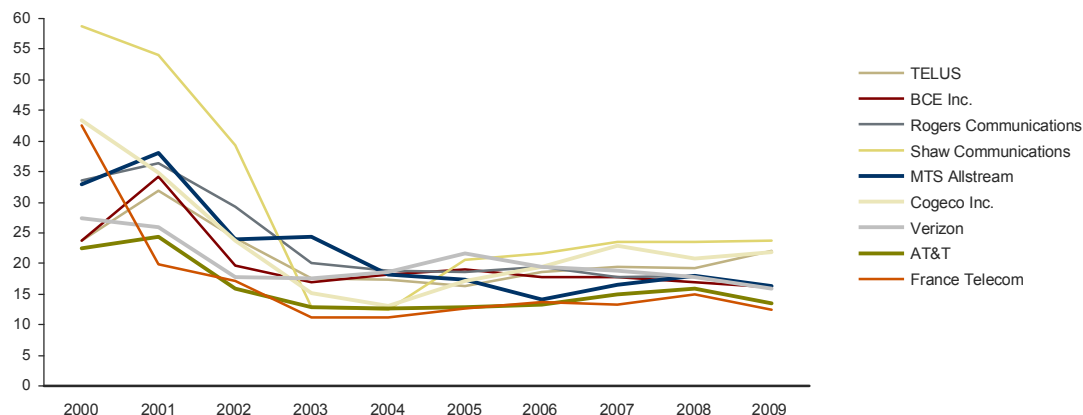


Sources: Syniverse Technologies, KPMG, PWC, International Herald Tribune

1. In 2002, the European Union instituted a Universal Services Directive requiring all mobile carriers to offer number portability

**Figure 27: Capital Expenditure to Sales for Major Telecom Players**

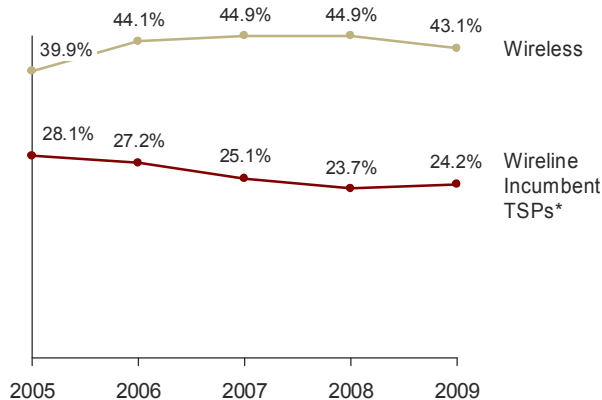
**Capital Expenditure to Sales Comparison: Canadian Telecommunications Companies vs. International**  
(Capital expenditure as a percent of total sales, 2000-2009)



Source: SECOR Analysis, Bloomberg

**Figure 28: Canadian Wireline and Wireless Industry Margins**

**Telecommunications EBITDA Margins**  
(%, 2004-2008)



Source: SECOR Analysis, CRTC 2010, Bloomberg

**Figure 29: Key Player Margins and Returns**

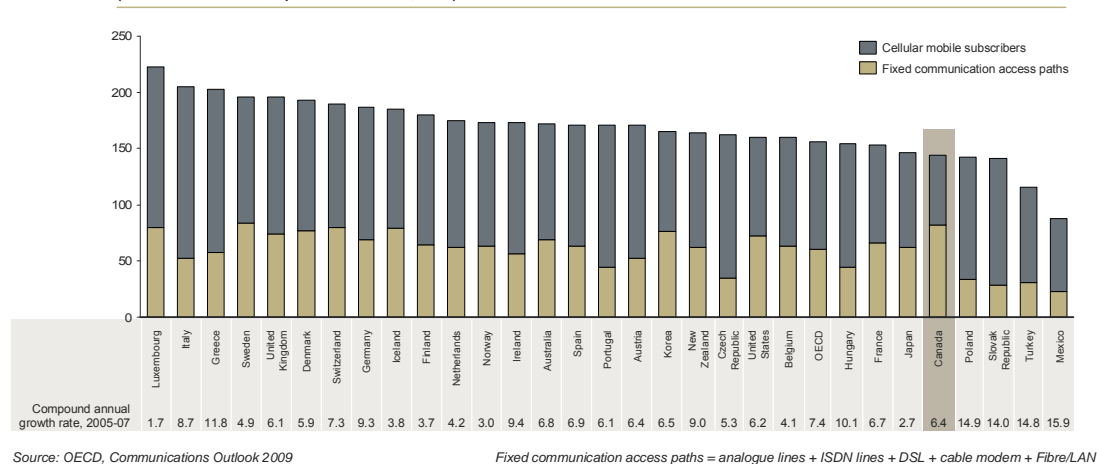
**EBITDA Margins and Return on Capital Employed (ROCE) of Canada's Largest Telecom Players\*\***

	Bell Wireless		Rogers Wireless		TELUS Wireless	
	2009	2008	2009	2008	2009	2008
<b>EBITDA Margin</b>	40.0%	39.7%	39.5%	37.7%	38.3%	39.8%
<b>ROCE</b>	14.6%	9.7%	25.8%	19.8%	24.8%	25.2%

*\*\*including out-of-territory*  
\*\* ROCE = earnings to capital (Trailing 12m Net Income+ minority interest + interest expenses)\*(1-effective tax rate)/ avg. capital employed (net fixed assets+ current assets – current liabilities)

**Figure 30: Global Comparison of Communications Access**

**Communication Access Paths in OECD Countries**  
(fixed and cellular mobile per 100 inhabitants, 2007)

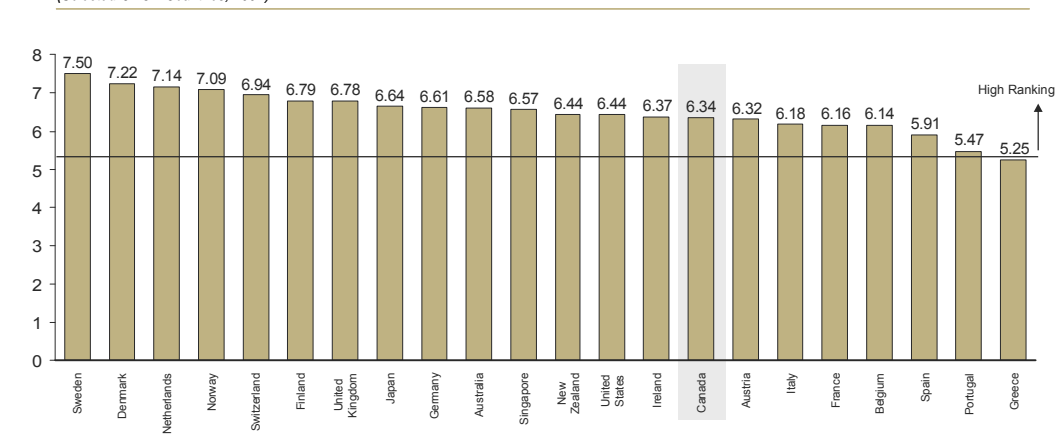


Source: OECD, Communications Outlook 2009

Fixed communication access paths = analogue lines + ISDN lines + DSL + cable modem + Fibre/LAN

**Figure 31: Global ICT Development Index**

**ICT Development Index Ranking**  
(Selected OECD Countries, 2007)



Source: ITU ICT Development Index, SECOR Analysis

\*High IDI Value = above 5.29, Upper = 3.41-5.29, Medium = 2.05-3.34, Low = 0.82-2.03

## APPENDIX 3: CASE STUDIES

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### CASE STUDY: FINANCIAL INVESTORS AT QWEST

Qwest was formed in 1996 and grew to be the fourth largest telecom provider in the US through the acquisition of US West in 2000, one of the “Baby Bells” created as part of the AT&T antitrust breakup in 1983. Initially, Qwest expanded aggressively by investing in fibre high-speed data infrastructure and acquiring adjacent service providers (long distance and web service providers) across 14 states in the midwest and western US. At the end of 2000, Qwest operated the only coast-to-coast 10gbps IP-data network. By 2009, Qwest had expanded from just over 3 million to 6.47 million customers.

During 2007 the company shares were divested by the original owners, the Anschutz family<sup>61</sup>. This was also the year the company began issuing quarterly dividends of \$0.08 per share<sup>62</sup>. As of 2008, a combination of 10 private equity firms and mutual funds owned 96% (24.5% owned by 3 global institutional investors) of the shares in Qwest<sup>63</sup>.

Qwest exited the wireless market after selling its wireless infrastructure in 2004 and declining to participate in the 2008 700 MHz spectrum auction due to lack of shareholder approval,. In May of 2008 Qwest ceased operations as an MVNO wireless operator and began reselling Verizon Wireless services.<sup>64</sup>

### CASE STUDY: STRATEGIC INVESTING – DENMARK’S INCUMBENT TELECOM TDC

On 1 February 2006, TDC, Denmark’s incumbent telecom operator and by far the largest player in the Danish market, was taken over by a private equity group the Nordic Telephone Co. (NTC) in a leveraged buyout. In the largest takeover in Europe at the time,, the DKK 76 billion (about USD\$13.27 billion) purchase of 88.2% of TDC shares was made with borrowed funds secured by TDC’s assets. The new owners are a group of five private equity specialists: Apax Partners; Blackstone Group; Kohlberg Kravis Roberts; Permira; and Providence Equity<sup>65</sup>.

The new owners stated their plans to change the financial structure of the company, reduce operating costs where possible (including staff reductions of 5-6% a year), maintain ownership for about five years and then sell the company<sup>66</sup>.

As well as continuing dominance of the Danish market, where it owns both the major telecom and cable TV transmission and distribution infrastructure, TDC expanded its investment portfolio to include significant holdings in nine other European countries, as well as Oman. In 2005, TDC purchased additional operations in Hungary, Sweden and Switzerland. It is also co-owner of several international partnerships with services in other countries. At end 2005, it had 20,225 employees. Revenue stood at DKK 46.6 billion (\$7.9B USD)

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<sup>61</sup> Vickers Stock Research and Argus Research Group, SEC Filings, as reported May 31, 2007

<sup>62</sup> Qwest board of directors announcement: 2007

<sup>63</sup> Vickers Stock Research and Argus Research Group, SEC Filings, as reported March 31, 2008

<sup>64</sup> Qwest press releases: May 5, 2008

<sup>65</sup> ITST, Denmark national telecom regulator <http://itst.dk>

<sup>66</sup> TDC and NTCH financial 2000-2006 available at <http://tdc.dk> and <http://tdc.com>

while net income was DKK 4.7 billion (\$0.8B USD). International operations contributed nearly half of TDC revenues. Capital expenditures were about DKK 5.6 billion (\$0.95B USD).<sup>67</sup>

On 5 April 2006, TDC declared a special dividend of DKK 219.50 per share (\$37.4 USD). The total payout was DKK 43.481 million (\$7.4M USD), more than 57% of the share price paid by the new owners, about 47% of TDC total assets, and more than twice the equity investment of the NTC investors. It was funded by TDC's cash reserve, sales of some of TDC's investments in other countries, and additional debt<sup>68</sup>.

TDC's net debt increased to DKK 55.2 billion (\$9.4B USD) in 2006, while equity investment was reduced to DKK 3.6 billion. The debt ratio is now 94% of total capitalization. As TDC is the only revenue producing investment of NTC and NTCH, the most appropriate data for financial analysis is that of NTCH. For 2006 NTCH had DKK 69.8 billion (\$11.9B USD) in net interest-bearing debt, a debt ratio of 82.8%, and a net debt/EBITDA ratio of 5.1.4. This yields a sustainable investment capacity deficit between DKK 35.7 and 55.3 billion (\$6.1B USD and \$9.4B USD) for NTCH<sup>69</sup>.

TDC continues to be held by private investment companies, now through a holding company called Angel Lux Common S.A.<sup>70</sup>

## CASE STUDY: STRATEGIC INVESTING – VODAFONE AND VERIZON

In 1999 Vodafone, a UK-based global telecom player entered the US market through a merger with AirTouch Communications. Shortly thereafter, Verizon Communications and Vodafone announced a \$90 billion joint venture to create the second largest US wireless carrier (after AT&T), branded Verizon Wireless. Vodafone controlled 45% and Verizon maintained a controlling share of 55%. This joint-venture resulted in an infusion of approximately \$40B in exchange for the 45% stake in Verizon's wireless business.

Using the additional investment, Verizon was able to expand/upgrade its wireless infrastructure nationally, to launch mobile broadband and grow its customer base from 20 million in 2000<sup>71</sup> to 92.8 million in 2009<sup>72</sup>.

Vodafone has stated three reasons limiting the effectiveness of their partnership with Verizon Wireless, all of which they believe stem from their lack of effective control due to their minority 45% stake<sup>73</sup>:

1. Lack of dividends: The \$40B investment in Verizon Wireless represents almost 37% of Vodafone's EPS and currently generates 0% of its cash flows<sup>74</sup>. Verizon Wireless' decision to withhold redistribution of cash flows as dividends limits Vodafone's profitability.
2. Technological barriers: Vodafone's global network utilizes GSM technology, whereas Verizon Wireless' US infrastructure is based on CDMA and does not allow for cross-network roaming<sup>75</sup>.

<sup>67</sup> TDC annual reports 2004 to 2006

<sup>68</sup> William H. Melody, *The World Dialogue on Regulation for Network Economies*, 2007

<sup>69</sup> TDC and NTCH financial 2000 to 2006 available at <http://tdc.dk> and <http://tdc.com>

<sup>70</sup> ITST, Denmark national telecom regulator <http://itst.dk>

<sup>71</sup> Verizon Wireless news release – April 4, 2010

<sup>72</sup> Verizon Wireless Annual Reports

<sup>73</sup> 2008/09 Vodafone Annual Report

<sup>74</sup> November 2009, Vittorio Colao, Vodafone CEO

Vodafone hopes to see better integration through compatible selection of LTE as a next generation network technology.

3. Branding: Vodafone's global strategy is to either have majority control or to utilize "Partner Networks" where services are sold to local markets under the Vodafone brand name<sup>76</sup>. Minority control is avoided as it does not allow for use of their corporate branding. In the US, Verizon Wireless utilizes Verizon's logo and branding rather than Vodafone.

#### ONGOING DEVELOPMENTS:

Vodafone has been able to exercise strategic influence on Verizon's decision making as can be seen in Verizon's transition from CDMA to the GSM compatible LTE next generation network (mirroring Vodafone's planned upgrades)<sup>77</sup>.

From 2000 to 2005, the Verizon and Vodafone partnership distributed a dividend of 70% of adjusted net income<sup>78</sup>. The partnership, however, has not paid a dividend since; something which Vodafone has increasingly been pressuring Verizon to provide<sup>79</sup>. Verizon Wireless has confirmed its intention to begin providing a dividend in 2012<sup>80</sup>.

#### CASE STUDY: GLOBAL M&A - DEUTSCH TELECOM / T-MOBILE US

In 2001, Deutsche Telekom entered the US mobile telecom market with the acquisition of VoiceStream Wireless (also known as Powertel in some regions) for US\$50.7 billion, forming the first transatlantic GSM wireless operator. At the time, Voice Stream's service coverage reached more than 273 million people, representing 97% of the U.S. population.<sup>81</sup> The merger provided both strategic and consumer benefits. The company rebranded under the T-Mobile name and began offering new products and services to consumers.<sup>82</sup>

T-Mobile US also leveraged its strategic relationship with Deutsche Telekom in equipment purchase and handsets sourcing. For example, when T-Mobile launched in California and Nevada, it was the only wireless provider to offer the BlackBerry 5810, as well as the Nokia 3390 and Samsung R225m with AOL Instant Messenger directly integrated into the user interface. T-Mobile also committed to bringing services to rural America, expanding coverage of advanced GSM/GPRS 1900 MHz services in 2003 to customers in rural western markets.<sup>83</sup>

Deutsche Telekom later expanded its network coverage through spectrum auctions and the acquisition of SunCom Wireless for US\$2.4 billion in 2007. In 2009, T-Mobile invested US\$3.7 billion in National

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<sup>75</sup> SEC filings, Vodafone and Verizon company reports

<sup>76</sup> Vodafone Partner Networks, 2001-2009 Annual Reports

<sup>77</sup> As reported in PC World, December 9, 2008

<sup>78</sup> 1999 Vodafone and Verizon agreement

<sup>79</sup> Vodafone public address 2009, Bloomberg Analysts, Down Jones

<sup>80</sup> Verizon Communications, June 2010, 2009/10 Bloomberg analyst Reports

<sup>81</sup> Deutsche Telekom Company Press Release 06/01/2001

<sup>82</sup> Services included international short-code dialing, international single-rate roaming, mobile SMS messaging (Ping-Pong), and high-speed data and internet access (iStream) with consistent throughput of 28-56Kbps

<sup>83</sup> Deutsche Telekom Company Press Release 05/01/2003

UMTS/HSDPA (3G) network expansion, which now reaches 208 million people. T-Mobile has increased its customer base from 9.9 million to 33.7 million customers from 2002 to 2009, and now represents approximately 14% US market share.<sup>84</sup> The company has also become a leader in customer service, ranking first in J.D. Power and Associates Wireless Customer Care Performance Study for the eleventh consecutive reporting period. T-Mobile has challenged its competitors to improve services and contributed to a higher level of competition in the US market. For example, AT&T, Verizon, Sprint and T-Mobile aggressively compete on new Smartphone offerings and mobile plan prices.

## CASE STUDY: JAPANESE MARKET EXPERIENCE – VODAFONE AND SOFTBANK

In 1999, Vodafone entered the Japanese market through direct shareholdings in nine regional operating telecom companies. Vodafone sought to increase their stake and restructure their interests and rapidly achieved 69.7% controlling interest in J-Phone Group. In 2001 they purchased fixed line operator Japan Telecom which was merged with J-Phone Vodafone. Following further investment in 2002, Vodafone had controlling interest in both J-Phone Vodafone (renamed Vodafone K.K.) and Japan Telecom.

From 2002 to 2005, Vodafone faced intensive competition and a declining subscriber base. It invested heavily, increasing GSM technology spend by 50% to US\$2.4 billion per year to compete with rivals NTT DOCOMO and KDDI.<sup>85</sup> It also imported European handsets, however, these were not well received by Japanese customers who had very different preferences from Vodafone's European customers. In 2006, after significant customer losses, Vodafone exited the Japanese market, selling Vodafone K.K. to Japanese media company, SoftBank, for US\$17.5 billion.

SoftBank, a Japanese media and internet company with \$32 billion (2006) of assets in cable, Yahoo Japan, eTrade, Morningstar and online entertainment purchased Vodafone's Japanese telecom business as an entry into the telecom market, with a focus on the mobile broadband growth opportunity. Softbank leveraged Vodafone K.K.'s 16.8% market share, 3G infrastructure and its own local market expertise to quickly expand into innovative fixed mobile convergence (FMC) services with integrated mail services to attract existing broadband subscribers. These services included seamless integration of the Yahoo! Keitai Portal, stylish handsets and creation of the first 3D mobile virtual community (S!Town). In addition, SoftBank attracted subscribers with a very aggressive voice pricing strategy, inexpensive 3G mobile phones and 24-month instalment plan to ease the financing burden of buying a high-end phone.<sup>86</sup> Softbank also acquired the Japanese licence for Apple (iPhone and iPad), a strong factor contributing to recent growth.

Rebranded as mobile internet company, Softbank currently offers services in eCommerce, cloud computing services, online games and applications. Globally, Softbank is the only foreign operator with a mobile licence in China and has recently acquired a 14% option in Ustream, a US broadcast live media streaming company, with an option to increase to 30%. Although 30% of SoftBank is Japanese-controlled, with a 24.5% share owned by president Masayoshi Son, SoftBank is a public company and is unrestricted in its access to foreign capital.

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<sup>84</sup> The Wall Street Journal, 02/10/10 and Company Annual Reports

<sup>85</sup> Source: China Communications Network 08/06/2005

<sup>86</sup> Business Mode December 2009 Issue 53

In this intensely competitive Japanese market, SoftBank mobile has continued to enjoy faster subscriber growth than its competitors, with year over year growth of 8.3% in Q4 2009 compared to 4% industry-average subscriber growth.<sup>87</sup> It is the third largest telecom provider behind NTT DOCOMO and KDDI, who have responded to competition with their own service improvements. For example, NTT DOCOMO offered lower prices and smartphone discounts. NTT is also looking to licenses for the iPhone and iPad.<sup>88</sup>

Going forward, Japan's mobile subscribers are projected to increase from 112.8 million in 2009 to 120 million in 2014. SoftBank is expected to increase market share from 19.2% in 2009 to over 23% in 2014, which may result in NTT DOCOMO's market share dropping one to two percentage points.

## CASE STUDY: REGIONAL ACQUISITIONS – CENTURYLINK

CenturyTel, a pure-play rural local exchange carrier, has pursued an aggressive growth strategy, executing multiple acquisitions and partnerships over the past decade. For example, CenturyTel:

- Y Acquired approximately 900,000 Verizon access lines in Missouri and Alabama for \$2.8B USD<sup>89</sup> which increased total access lines to approximately 3 million<sup>90</sup> (2002);
- Y Acquired Digital Teleport Inc. for \$38M USD<sup>91</sup> (2003), Midwest Fiber Optic Network for \$17M USD<sup>92</sup> (2003) and KMC Telecom Holdings Inc. for \$65M USD<sup>93</sup>(2005), and Madison River Communications for \$830M USD<sup>94</sup> (2007) to significantly expand its fibre network; and,
- Y Partnered with EchoStar (digital TV) and Cingular Wireless (wireless voice) to offer a full suite of bundled product and service offerings;

On July 1, 2009 CenturyTel acquired EMBARQ (formerly Sprint local telecom division) in a \$5.8B USD merger to create a new fixed line ILEC and wholesale Network Company rebranded as “CenturyLink”. Currently, CenturyLink is in the process of acquiring Qwest for \$10.6B<sup>95</sup>. CenturyLink is now the fourth largest wireline telecom provider in the US based on access lines, serving 37 states with 5 million broadband customers, 17 million access lines, 1.4 million video subscribers, 850,000 wireless clients and over 17,000-miles of core fiber network.

## CASE STUDY: NEW ENTRANTS– TELE2 IN CENTRAL AND EASTERN EUROPE

Tele2 is a European telecommunications operator with 28 million customers and operations in 10 countries and 2009 revenues of approximately \$5.3B USD<sup>96</sup>. Tele 2 became a Swedish integrated telecommunications company in 1997 through the merger of a fixed line player (Tele2), mobile player (Comviq) and a cable player

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<sup>87</sup> Research and Markets, Mobile Operator Forecast June 2010

<sup>88</sup> JP Morgan May 19 2010

<sup>89</sup> New York Times – 2002

<sup>90</sup> CenturyTel “About Us” company information

<sup>91</sup> Digital Teleport Inc (now Lightcore) – 2003

<sup>92</sup> Reuters – 2003

<sup>93</sup> Bloomberg News Service – 2005

<sup>94</sup> Triangle Business Journal – 2008

<sup>95</sup> New York Times – 2010

<sup>96</sup> Tele2 2010 interim report

(Kabelvision)<sup>97</sup>. Tele2 pursued aggressive expansion into Europe through a combination of mobile spectrum purchase and network infrastructure upgrades, however, during 2007 and 2008 Tele2 sold off most of its Western European and fixed line holdings, focusing on mobile operations in developing countries in Central and Eastern Europe as well as Russia.<sup>98</sup>

Tele2 enters new markets either through the acquisition of a smaller player with spectrum assets or by purchasing wireless spectrum directly. Its main differentiators are advanced network technologies and its “Best Deal” platform where it seeks to compete as the lowest priced competitor<sup>99</sup>.

For example:

- Y In Estonia Tele2 has introduced 3.5G networks to rural areas, covering approximately 75% of the country with mobile broadband capabilities and is already testing 4G networks there.
- Y In Croatia, Tele2 is experiencing 20% quarterly customer growth (currently they have 650,000 customers) through their positioning as the lowest cost provider.
- Y In Kazakhstan, Tele2 purchased a controlling interest in mobile operator NEO in 2009 for \$77M USD. Over the following year, it invested an additional \$50M USD to upgrade the company’s mobile infrastructure and has recently rebranded and begun new campaigns to gain market share as the lowest priced competitor in the country. The company is expected to achieve approximately 20% market share by the end of 2010<sup>100</sup>.

#### CASE STUDY: NEW ENTRANT – WiMAX FROM CLEARWIRE AND SPRINT

ClearWire is a Wireless Internet Service Provider with operations in the United States, Ireland, Belgium, Spain, Denmark (through a partnership with Danske Telecom), and Mexico (in partnership with MVSNet)<sup>101</sup>.

In 2008, Sprint (\$40B in 2007 revenue) and ClearWire USA (\$151M in 2007 revenue) merged their WiMAX networks, with \$3.2B in financial support from a collection of strategic technology investors,<sup>102</sup> to create a national US WiMAX company branded CLEAR. In 2009, the company introduced service to 27 markets in the US, bringing coverage to a total of 50 cities, focused primarily in Texas and across ClearWire’s existing footprint<sup>103</sup>. 2010 plans include roll-out to another 15 major US markets and a targeted coverage expansion of an additional 120 million people<sup>104</sup>.

WiMAX is an acronym for “Worldwide Interoperability for Microwave Access” and is an IP based, wireless broadband access technology that provides performance similar to 802.11/Wi-Fi networks with the coverage and QOS (quality of service) of cellular networks. While it can run on any available spectrum, current standards are for 2.3 GHz, 2.5 GHz and 3.5 GHz spectrum<sup>105</sup>.

<sup>97</sup> Tele2 company history – tele2.com, en.tele2.sk

<sup>98</sup> Various news sources including company reports and Tele2 annual reports

<sup>99</sup> Tele2 Interim 2010 report – Central and Eastern Europe

<sup>100</sup> DowJones report 2010, Tele2 Interim 2010 report – Central and Eastern Europe

<sup>101</sup> ClearWire annual reports

<sup>102</sup> Investors include: \$1.05B from Comcast, \$1B from Intel, \$650M from Time Warner Cable and its subsidiaries, and \$500M from Google

<sup>103</sup> ClearWire annual report 2009, Connected planet news reporting March 2010

<sup>104</sup> Sprint news announcement 2010

<sup>105</sup> WiMAX Forum, Intel Technologies

While the economics of WiMAX compared to other next-generation network technologies such as LTE continue to be debated, as a technology WiMAX has demonstrated that wireless broadband is possible today.

#### CASE STUDY: STRATEGIC INVESTING – IRELAND'S INCUMBENT TELECOM EIRCOM

The former national operator in Ireland, now branded eircom, was the principal provider of fixed-line telecom services with a 75% share of fixed line revenues, and an even greater share of infrastructure network facilities. Following privatization by the government in 1998, the Valentia private equity consortium acquired eircom through a leveraged buyout in late 2001<sup>106</sup>.

After the acquisition, eircom repaid Valentia's investment by issuing bonds which increased its debt from about 25% to 70% of its capital structure. Its net debt/EBITDA ratio increased from less than one to more than three.

Capital expenditures for eircom's network expansion declined dramatically from about EUR 600 million per annum in 2000 and EUR 700 million in 2001 before the Valentia takeover, to EUR 300 million in 2002 and EUR 200 million in 2003 and 2004<sup>107</sup>.

Between 2002 and 2004, after the Valentia takeover, eircom's investments were EUR 450 million less than its internally generated cash flow from depreciation allowances. It did not invest enough to replenish its asset depreciation. This provided funds for payment of a EUR 400 million special dividend to Valentia<sup>108</sup>. The focus during this time period was on optimizing internal efficiency and strengthening its presence in the Ireland home market.

A second public stock offering was successfully floated in 2004. During the ensuing 2004 to 2006 period of publicly held stock ownership, the financial structure did not change, and eircom's 70% debt ratio was maintained. Capital expenditure stayed relatively unchanged at EUR 200 million in 2004 and 2005, increasing slightly to EUR 250 million in 2006.

#### CASE STUDY: GLOBAL M&A – ORANGE / FRANCE TELECOM IN THE UK

In 2000, France Telecom entered the UK market through the purchase of Orange from Vodafone for US\$41.6 billion, becoming the second largest European wireless operator. The new Orange combined France Telecom's wireless assets and provided significant operating synergies to the company.

Orange invested heavily in wireless infrastructure in 2008, creating the UK's largest 3G/2.5G network. The company has brought new and innovative services to customers, developing IPTV, mobile broadband and Livebox product (an ADSL wireless router), which was the first of its kind when it launched in 2004. Responding to the economic recession, Orange offered the first pay-as-you-go offer for Blackberry and an

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<sup>106</sup> William H. Melody, *The World Dialogue on Regulation for Network Economies*, 2007

<sup>107</sup> eircom Annual Reports, 2001-2005

<sup>108</sup> *Ibid*

aggressively low cost play for £5 per month. The company has also developed multimedia content and new store concepts which combine mobile music, games and video delivered over handsets.<sup>109</sup>

As the result of new foreign market entrants (France Telecom, T-Mobile, and 3 UK (owned by Hutchison Whampoa)), the UK mobile market has become one of the most competitive in Europe with five operators. The market has faced high price competition such as new entrant 3 UK's announcement in June 2003 that it would undercut similar priced offers on the market by up to 50% by launching two new price packages for its 3G phones to gain market share.<sup>110</sup> The UK market also has a high mobile penetration rate, reaching 137% at the end of 2009.<sup>111</sup>

Since acquisition, Orange UK increased from 8 to 16.5 million mobile customers and also has 0.8 million ADSL broadband customers. In 2009, Orange was the third largest player in the market with 22% market share, with O2, Vodafone and T-Mobile representing 27%, 25%, and 15% respectively.<sup>112</sup>

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<sup>109</sup> France Telecom Annual Reports

<sup>110</sup> BBC News 06/06/2003

<sup>111</sup> France Telecom Annual Report 2009

<sup>112</sup> BBC News 09/08/10