



**FINAL REPORT**  
V2.0

**Motor Vehicle Sales Authority  
of British Columbia (VSA)**

**ENVIRONMENTAL SCAN**

Prepared by:  
R.A. Malatest & Associates Ltd.

November 2009

858 Pandora Avenue  
Victoria BC V8W 1P4

300, 10621 – 100 Avenue  
Edmonton AB T5J 0B3

1206, 415 Yonge St  
Toronto ON M5B 2E7

400, 294 Albert Street  
Ottawa ON K1P 6E6

## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY .....</b>	<b>i</b>
<b>SECTION 1: INTRODUCTION .....</b>	<b>3</b>
<b>1.1 Overview of the Automotive Retail Sector in BC and VSA.....</b>	<b>3</b>
<b>1.2 Project Background .....</b>	<b>3</b>
<b>1.3 Methodology .....</b>	<b>4</b>
<b>SECTION 2: DEMOGRAPHIC AND ECONOMIC TRENDS .....</b>	<b>5</b>
<b>2.1 Demographic Trends.....</b>	<b>5</b>
<b>2.2 Economic Outlook.....</b>	<b>6</b>
<b>2.3 Motor Vehicle Sales Outlook 2009 and 2010.....</b>	<b>9</b>
<b>2.4 Trends in Used Car Sales .....</b>	<b>11</b>
<b>SECTION 3: INDUSTRY DATA .....</b>	<b>12</b>
<b>3.1 VSA Regulated Sales .....</b>	<b>12</b>
<b>3.2 Market Trends (BC, Canada and US).....</b>	<b>13</b>
3.2.1 <i>Average Prices .....</i>	<i>13</i>
3.2.2 <i>Registered Vehicles in BC.....</i>	<i>13</i>
3.2.3 <i>Consumer and Business Confidence .....</i>	<i>13</i>
3.2.4 <i>Brand Selection .....</i>	<i>14</i>
3.2.5 <i>Trade-in Vehicles.....</i>	<i>15</i>
3.2.6 <i>Scrappage and Disappearance Rates.....</i>	<i>16</i>
3.2.7 <i>Cross-Border Pricing Disparities.....</i>	<i>17</i>
3.2.8 <i>Cross Border Shopping .....</i>	<i>18</i>
<b>3.3 Impact of US Bailout .....</b>	<b>18</b>
<b>3.6 Impact of the Internet on Sales and Dealerships .....</b>	<b>21</b>
<b>3.7 Motor Vehicle Technology and Trends .....</b>	<b>22</b>
3.7.1 <i>Government Initiatives.....</i>	<i>22</i>
3.7.2 <i>Fuel Efficiency .....</i>	<i>23</i>
3.7.3 <i>Alternative Fuels.....</i>	<i>23</i>
3.7.4 <i>Hybrid Vehicles.....</i>	<i>24</i>
3.7.5 <i>Electric Car .....</i>	<i>24</i>

## **EXECUTIVE SUMMARY**

---

The key issues currently affecting the British Columbia 's economy and the province's automotive retail sector are highlighted below.

***British Columbia, along with most other Canadian provinces and the United States, witnessed a significant economic contraction in the latter part of 2008 and throughout 2009.***

- Total employment in the province declined by 2.6% during the first seven months of 2009. BC has yet to emerge from the recession in terms of employment growth, as the number of individuals employed in the province (on a year-over-year basis) has declined every month since January 2009. Most sectors experienced major declines in employment relative to 2008 levels.
- Economic forecast agencies, such as the Royal Bank, anticipate that BC will experience moderate economic growth in 2010, after experiencing a projected 2.6% decline in GDP in 2009. After declining by 2.6% in 2009, the Royal Bank expects BC's Real GDP to grow by 3.2% in 2010, which would be similar to BC's economic growth recorded in 2007 (3.0%).

***While little data exists as to forecasts of new vehicle sales at the provincial level, the Bank of Montreal forecast suggests that new vehicle sales in Canada will increase by 5.4% in 2010.***

In BC, new motor vehicle sales declined by approximately one-quarter (24.5%) during the first seven months of 2009. The decline in new motor vehicle sales began in the second quarter of 2008, and bottomed in the first quarter of 2009, at which time sales were down by almost 31% relative to 2008 Q1 levels. Analysis of new motor vehicle sales also underscores the considerable decline in the value of new vehicles sold in BC.

***Vehicle prices have been at near record lows in recent months.***

The average price for a new passenger car sold in BC declined from \$25,304 in 2007 to approximately \$23,558 in 2008 – a decline of 6.9%<sup>1</sup>. In 2008, car prices declined to a 23 year low as a ratio of personal disposable income reporting that “a vehicle purchased last year cost, on average, just 18.2 weeks of pre-tax income for the typical Canadian family. This is the lowest this ratio has been since 1985.”<sup>2</sup>

***About one out of every four new-vehicle transactions in Canada includes a trade-in vehicle, down from about one of every three transactions two years ago.***

The average age of trade-ins on new cars in 2008 (6.7 years) is up slightly from two years ago (6.3 years). The average odometer reading remained stable at 118,000 km. While the Canadian Federal government opted not to implement a sizable scrappage scheme similar to the United States government, sales of new passenger cars and light

---

<sup>1</sup> Statistics Canada. Consumer prices: The year 2008 in review. <http://www.statcan.gc.ca/daily-quotidien/090323/dq090323b-eng.htm>

<sup>2</sup> Canadian Driver, February 2009.

trucks rose to an annualized 1.56 million units in September 2009; the best sales since the sales crashed in October 2008. Individual manufacturers introduced their own trade-in-your-clunker programs in the past several weeks, resulting in an overall industry volume of 129,503 vehicles (3.5% fewer than in September 2008).

***Among late-model used vehicle buyers, the Internet has surpassed all other shopping methods as the source for locating the vehicle a buyer ultimately purchases.***

In 2007, 23% of buyers of late-model used vehicles used an Internet vehicle locator or online classified ad service to find the vehicle they ultimately purchased. This is a 44% increase since 2006. 2007 was the first year that Internet use surpassed all other shopping methods for finding the used vehicle that the buyer ultimately purchased.

***Six GM dealerships are slated for closure in British Columbia.***

The number of dealership closures in BC is far fewer than was first anticipated. DesRosiers Automotive Consultants reported that “GM, Ford and Chrysler are highly over-dealered”, although according to the New Car Dealers Association of BC, GM was not as “over-dealered in BC as it was in some markets, particularly in Eastern Canada.” This may account for a smaller number of dealership closures than had been anticipated.

***Many new car dealerships across BC have avoided layoffs by working to increase the servicing end of their business.***

Canadian vehicle owners are spending less on maintenance and repairs than they did in 2008. Average annual expenditures on vehicle maintenance and repairs decreased to \$856 in 2009 from \$920 in 2008. Analysts had assumed that because the economic downturn was resulting in consumers keeping their vehicles longer, they would spend more on repairs. However, a recent study shows that consumers are increasingly having their automotive maintenance and repairs done by mechanics that are not affiliated with an automaker. The primary source of service revenue for dealerships is from customers whose vehicles are still under warranty. According to the chief economist at the Canadian Automobile Dealers Association, as consumers keep their vehicles for longer in response to the weak economy, dealers’ share of the service market will be further reduced because a greater percentage of the life of the average vehicle will be outside of the warranty period.

***Hybrid systems and electric and battery technology were rated by automotive industry executives worldwide as the most important automotive technology initiatives.***

Fuel technology, ethanol and other alternative fuels and diesel dropped slightly in ranked importance from 2007 to 2008.

## **SECTION 1: INTRODUCTION**

---

### **1.1 Overview of the Automotive Retail Sector in BC and VSA**

Motor dealers include establishments primarily engaged in retailing new and used automobiles, motorcycles and recreational vehicles. The motor dealer industry of BC consists of approximately 1,600 licensed dealers<sup>3</sup> of new and used automobiles, light trucks, motorcycles, mopeds and RV's. There are approximately 7,000 automotive sales people in the province<sup>4</sup>.

The Motor Vehicle Sales Authority of British Columbia (VSA) is an administrative authority delegated by the provincial government to administer and enforce the Motor Dealer Act and its regulations, the Business Practices and Consumer Protection Act as it relates to the sale of motor vehicles, and other related statutes. Founded in 2004 and formerly named the Motor Dealer Council of B.C. (MDC), the agency became one of the first examples of the B.C. government's new approach for administering public policy through a "delegated administrative authority."

The VSA regulates and licenses motor dealers, salespeople and consumer-related business staff of dealerships. The VSA works with both industry and the public with respect to business practices, regulation, enforcement, complaint resolution, dealership inspections, consumer services, legislation reviews, advertising guidelines and all related issues.

The provincial government maintains responsibility for all policy and legislation governing the licensing of motor dealers including any future changes to the Motor Dealer Act.

As a not-for-profit organization, the VSA is led by a Board of Directors made up of consumer and motor-dealer industry representatives and the general public. The 2008-09 Board is comprised of 11-members selected through an extensive nomination process that involves consumer and industry associations, government and the general public. The Board is responsible for establishing strategic direction and overseeing the operations of the VSA while ensuring its financial and organizational viability.

### **1.2 Project Background**

In October 2008, VSA released a report titled *Motor Vehicle Sales Authority of BC Environmental Scan*. The current report provides an update to and expands upon the 2009 report. Where possible and relevant, the current report makes comparison with the data contained in last year's report.

---

<sup>3</sup> VSA website.

<sup>4</sup> Ibid.

### **1.3 Methodology**

The information presented in this report is a synthesis of information obtained through a variety of sources. The environmental scan was completed utilizing an iterative process as detailed below:

- Known sources of publicly available data were reviewed and evaluated according to their relevance to the BC automotive retail sector;
- An additional extensive review of potential online resources was conducted; and
- Statistical data from BC Stats and Statistics Canada.

The current report is organized as follows:

Section 1: Introduction

Section 2: Demographic and Economic Trends

Section 3: Industry Data

## **SECTION 2: DEMOGRAPHIC AND ECONOMIC TRENDS**

---

### **2.1 Demographic Trends**

The population of BC increased by 5.3% between 2001 and 2006. This increase was slightly lower than the national average population growth rate of 5.4%<sup>5</sup>. As of July 1, 2007, BC has approximately 4,380,300 people (based on post-census population estimates)<sup>6</sup>.

The bulge of the BC population pyramid continues to shift up, as the baby boomers age. In 2006, for the first time, the median age of British Columbians went over 40 to 40.8. The median age was 38.4 in 2001<sup>7</sup>. These numbers were higher than the national median age reported for 2006 (39.5) and 2001 (37.6).

In 2008 seniors (age 65+) comprised 14.5% (636,400) of BC's total population<sup>8</sup>. BC Stats projects that the proportion of seniors will increase to 14.8% (656,900) in 2009, and will reach 18.6% (945,000) over the next 10 years. The proportion of British Columbians who are age 80 and over was estimated to be 4.1% in 2008, and projected to increase modestly over the next 10 years to 4.6%. BC Stats noted that primarily inter-provincial migration will drive population growth in the future and international migration, as the natural course of population change due to births and deaths continues to stabilize<sup>9</sup>.

On the other end of the age distribution, the younger working-age groups (15-44) actually decreased by 1.4% (from 43.2% in 2001 to 40.5% in 2006)<sup>6</sup>.

Data released from the 2006 Census shows that the median total income for individual British Columbians in 2005 was \$24,867<sup>10</sup>, which was slightly lower than the national median total income (\$25,615)<sup>11</sup>. The median after tax income was \$22,785 for BC and

---

<sup>5</sup> Statistics Canada. 2007. Population and dwelling counts, for Canada, provinces and territories, 2006 and 2001 censuses - 100% data (table). Population and Dwelling Count Highlight Tables. 2006 Census. Statistics Canada Catalogue no. 97-550-XWE2006002. Ottawa. Released March 13, 2007.

<http://www12.statcan.ca/english/census06/data/popdwel/Table.cfm?T=101&SR=1&S=0&O=A&RPP=25&PR=0&CMA=0> (accessed October 10, 2008)

<sup>6</sup> Statistics Canada, CANSIM, table (for fee) 051-0001. Last modified: 2007-11-29.

<sup>7</sup> Statistics Canada. 2007. Age and Sex, median age by sex along with age group ratios for both sexes, for Canada, provinces and territories - 100% data (table). Age and Sex Highlight Tables. 2006 Census. Statistics Canada Catalogue no. 97-551-XWE2006002. Ottawa. Released July 17, 2007.

<http://www12.statcan.ca/english/census06/data/highlights/agesex/index.cfm?Lang=E> (accessed October 10, 2008).

<sup>8</sup> BC Stats. Table 3 British Columbia Population by Selected Age Groups Estimated (1971-2008) and Forecasted (2009-2036). [http://www.bcstats.gov.bc.ca/DATA/POP/pop/project/BCtab\\_Proj0906.pdf](http://www.bcstats.gov.bc.ca/DATA/POP/pop/project/BCtab_Proj0906.pdf)

<sup>9</sup> BC Stats. Infoline. Issues 7-29. <http://www.bcstats.gov.bc.ca/releases/info2007/in0729.pdf> (accessed October 10, 2008).

<sup>10</sup> Statistics Canada. 2008. Presence of Income (9), Age Groups (5A) and Sex (3) for the Population 15 Years and Over of Canada, Provinces, Territories, Census Metropolitan Areas and Census Agglomerations, 2005 - 20% Sample Data (table). Topic-based tabulation. 2006 Census of Population. Statistics Canada catalogue no. 97-563-XCB2006013. Ottawa. Released May 01, 2008.

<http://www12.statcan.ca/english/census06/data/topics/Print.cfm?PID=94189&GID=838062&D1=0&D2=0&D3=0&D4=0&D5=0&D6=0> (accessed October 10, 2008).

<sup>11</sup> Statistics Canada. 2008. Presence of Income (9), Age Groups (5A) and Sex (3) for the Population 15 Years and Over of Canada, Provinces, Territories, Census Metropolitan Areas and Census Agglomerations, 2005 - 20% Sample Data (table). Topic-based tabulation. 2006 Census of Population. Statistics Canada catalogue no. 97-563-XCB2006013. Ottawa. Released May 01, 2008.

<http://www12.statcan.ca/english/census06/data/topics/Print.cfm?PID=94189&GID=837928&D1=0&D2=0&D3=0&D4=0&D5=0&D6=0> (accessed October 10, 2008).

\$23,307 for Canada. The median total income for economic families in BC (\$65,787) was also lower than the national median (\$66,343)<sup>12</sup>.

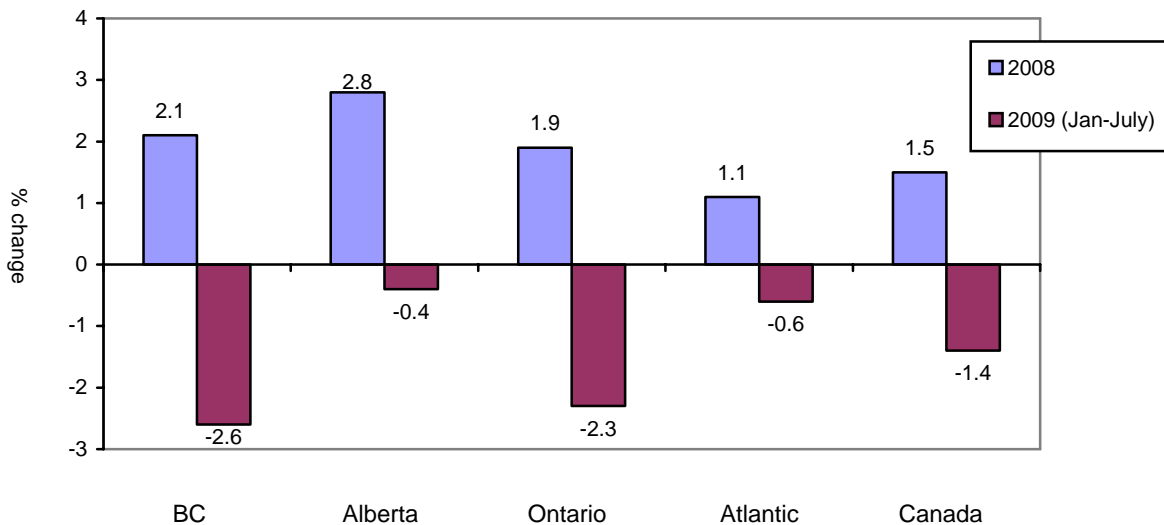
According to BC Stats<sup>13</sup>, in 2008, the provincial per capita personal income was \$36,457. This represented a 3.5% increase from 2007 (\$34,331). On average, British Columbians earned slightly less than Canadians as a whole, with the national per capita personal income in 2008 being \$36,862.

## 2.2 Economic Outlook

British Columbia, along with most other Canadian provinces and the United States, witnessed a significant economic contraction in the latter part of 2008 and throughout 2009.

As highlighted in Chart 2-1, while BC employment grew by 2.1% in 2008, almost all of the employment gains have been erased in 2009, as total employment in the province declined by 2.6% during the first seven months of 2009.

**Chart 2-1  
Employment Growth – Selected Jurisdictions  
2008 and 2009 (Jan-July)**



Source: BC Stats Labour Force Survey

<sup>12</sup> Statistics Canada. 2008. Earnings and incomes of Canadians over the past quarter century, 2006 Census. Statistics Canada catalogue no. 97-563-XIE2006001. Ottawa. Released May 01, 2008. <http://www12.statcan.ca/english/census06/analysis/income/pdf/97-563-XIE2006001.pdf> (accessed October, 10, 2008).  
<sup>13</sup> BC Stats. Economic Activity: British Columbia and Canada 1991-2008. [http://www.bcstats.gov.bc.ca/data/bus\\_stat/bcea/tab1.asp](http://www.bcstats.gov.bc.ca/data/bus_stat/bcea/tab1.asp) (accessed September, 18, 2008).



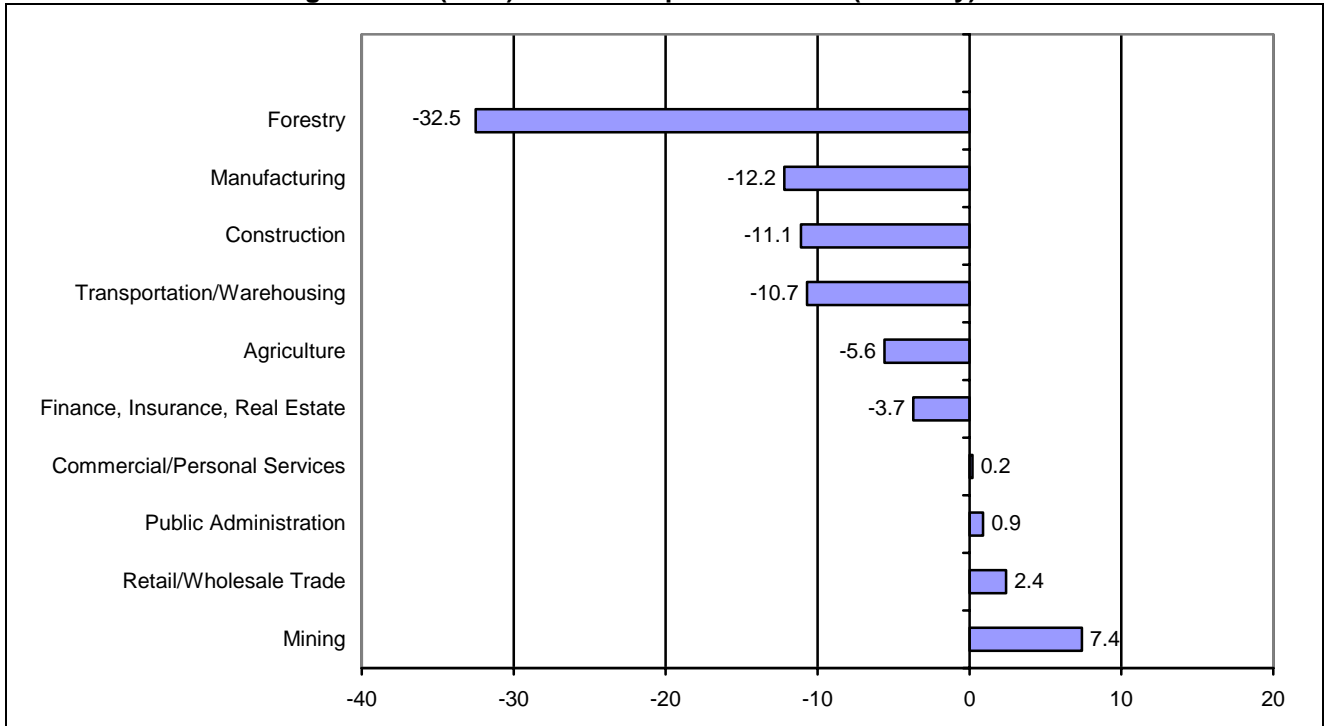
As indicated in Chart 2-2, BC has yet to emerge from the recession in terms of employment growth, as the number of individuals employed in the province (on a year-over-year basis) has declined every month since January 2009.

**Chart 2-2**  
**BC Employment Growth - Year-Over-Year Basis**  
**2009 (Jan-July)**

Source: BC Stats (Labour Force Survey)

Analysis of employment growth demonstrates the extent to which industries in BC have been affected by the recession. For example, in the first seven months of 2009, as compared to the same period in 2008, only four of the 10 major sectors in BC witnessed any growth in employment. In fact, most sectors experienced major declines in employment relative to 2008 levels.

**Chart 2-3  
Employment Growth by Industry  
% Change to date (2009) from same period in 2008 (Jan-July)**



The financial meltdown that precipitated the world economic recession occurred in the fall of 2008. Since that time, coordinated efforts by governments across the world have been implemented to provide economic support and serve as a stimulus to generate economic growth. Stimulus efforts include:

- easing of monetary policy, with record-low interest rates set by monetary authorities (Bank of Canada, US Federal Reserve)
- government support/loan guarantees for federal lending institutions (i.e., Fanny Mae, CMHC, other)
- fiscal stimulus packages announced in Canada and the United States (i.e., infrastructure spending, home renovation tax credits)
- other consumer support programs (i.e., “Cash for Clunkers” program in the United States)

British Columbia was not able to escape the economic recession, as major declines in forestry and energy prices contributed to an economic downturn. However, economic forecast agencies, such as the Royal Bank, anticipate that BC will experience moderate economic growth in 2010, after experiencing a projected 2.6% decline in GDP in 2009.

Key factors cited for stronger growth in 2009 include:

- improvement in the provincial housing market, as the number of units sold and an increase in the average selling price signals a rebound in consumer confidence
- the stimulus associated with the 2010 Winter Olympics

- stronger prices for most commodities, including lumber, oil and gas and minerals, which should support the mining sector
- increased infrastructure spending (provincial and/or federally funded)

As highlighted in Table 2-1, after declining by 2.6% in 2009, the Royal Bank expects BC's Real GDP to grow by 3.2% in 2010, which would be similar to BC's economic growth recorded in 2007 (3.0%).

**Table 2-1**  
**BC Key Economic Indicators**  
**Year to Date, Forecasts for 2009 & 2010**

	2008	Current Year to Date (2009) (Jan-July)	Forecast-Royal Bank (2009)	Forecast Royal Bank (2010)
BC Real GDP	-0.3%	N/A	-2.6%	3.2%
Employment Growth	2.1%	-2.6%	-2.5%	2.1%
Unemployment Rate	4.6%	7.3%	7.7%	7.6%
Retail Sales	0.3%	-8.9%	-6.4%	6.0%
<b>New Motor Vehicle Sales</b>	<b>-10.2%</b>	<b>-24.5%</b>	<b>N/A</b>	<b>N/A</b>
Exports	5.1%	-21.6%	N/A	N/A
Housing Starts	-12.6%	-65.1%	-56.8%	62.2%
Inflation (CPI)	2.1%	0.3%	N/A	N/A

Sources: BC STATS (2008, 2009 YTD), Royal Bank Provincial Outlook, September 2009.

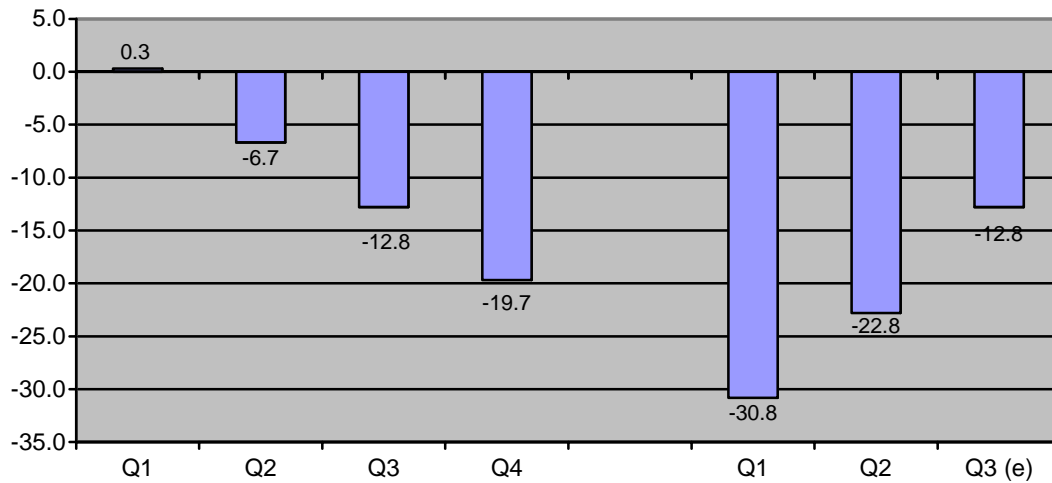
While little data exists as to forecasts of new vehicle sales at the provincial level, the Bank of Montreal forecast suggests that new vehicle sales in Canada will increase by 5.4% in 2010. The Bank of Montreal cites several factors for this relatively positive outlook, including renewed consumer confidence, continued low finance rates and manufacturer incentives.

### **2.3 Motor Vehicle Sales Outlook 2009 and 2010**

In BC, new motor vehicle sales declined by approximately one-quarter (24.5%) during the first seven months of 2009. As highlighted in Chart 2-4, on a year-over-year basis, it appears that the decline in new motor vehicle sales began in the second quarter of 2008, and bottomed in the first quarter of 2009, at which time sales were down by almost 31% relative to 2008 Q1 levels.

Highlighted in Chart 2-4 is the quarterly trend in new motor vehicle sales in BC, which includes a year-over-year comparison. Data for the third quarter of 2009 includes July sales only.

**Chart 2-4**  
**Change in New Motor Vehicle Sales**  
**British Columbia 2008 Q1 – 2009 Q3 (e)**



Source: BC Stats, 2009 Q3; includes only July-August sales

Analysis of new motor vehicle sales also underscores the considerable decline in the value of new vehicles sold in BC.

**Table 2-2**  
**New Motor Vehicle Sales in BC**  
**2008-2009 (Q3)**

Annual	Vehicles Sold	Value Sold (\$M)	Average Value/ Vehicle Sold
2006	194,648	6,587.7	\$33,844
2007	201,596	6,803.6	\$33,749
2008	182,080	5,837.4	\$32,060
2009 (YTD – annualized)	140,000 (e)	4,547.3	\$32,481
% change (2009-2008)	-23.1%	-22.1%	+1.3%
<b>Quarterly Data 2008</b>			
2008 Q1	44,315	1,443.4	\$32,572
Q2	56,661	1,764.0	\$31,133
Q3	45,226	1,436.1	\$31,755
Q4	35,878	1,193.7	\$33,272
<b>Quarterly Data 2009</b>			
2009 Q1	30,659	998.8	\$32,578
Q2	43,735	1,437.1	\$32,858
Q3 (e) (July-August)	39,436	1,318.1	\$33,297
Q4			

It should be noted that the data in this section refers to all new vehicle sales, including fleet, commercial vehicle and other sales that may or may not be regulated by the VSA. In this context, data in this section will differ from that of Section 3, which examines new vehicle sales that are regulated by the VSA.

#### **2.4 Trends in Used Car Sales**

There is little data as to the number of used car sales in British Columbia that is available on a current basis. It is possible, however, to discern some general trends by examining the total sales (\$ volume) among used and recreational motor vehicles and parts dealers in Canada. While it is recognized that this industry will represent only a portion of the used car market, it does provide some trends as to used car sales in Canada. Analysis of the data suggests that retail sales among used and recreational motor vehicle and parts dealers have declined by 5% to 7% in the first six months of 2009 relative to the same period in 2008. Again, it should be noted that this sector accounts for only a portion of the used car sales (in BC, this group accounts for approximately one-third of the sales (\$ volume) of used cars – see Table 3-1).

## SECTION 3: INDUSTRY DATA

### 3.1 VSA Regulated Sales

In 2008, it was estimated that there were 570,946 motor vehicles, motorcycles or recreational vehicles sold in British Columbia, which represents a 1.6% decline in total sales relative to 2007. It should be noted that while the actual number of sales declined by less than 2%, total sales volume declined by almost 5% (4.7%) during the same time period.). Analysis of the sales trends is as follows:

- Across all categories, the decline in sales was most pronounced for new light trucks, in which sales declined by more than 13%.
- The growth in sales of motorcycles reflects increased sales of scooters rather than a growth in larger machines, although at the national level there was an increase in both the number of street legal (+9.6%) and scooters (+19.6%) sold in 2008 relative to 2007 sales.
- In contrast to new vehicle sales, sales of used private vehicles witnessed little change from that of 2007 in terms of both the number of units sold and total sales volume.

**Table 3-1**  
**Sales Trends in British Columbia (2007 – 2008)**

Category	Units Sold		% Change	Total Sales (\$M)		% Change
	2007	2008		2007	2008	
New Passenger Cars (excl. fleet)	84,523	81,709	-3.3%	2,137.8	2,051.5	-4.0%
New Light Trucks (excl. fleet)	79,792	69,377	-13.1%	2,589.5	2,235.7	-13.7%
Used vehicles by new car dealers	138,267	136,647	-1.2%	2,094.0	2,055.0	-1.9%
Used vehicles – independent car dealers	115,514	117,401	+1.6%	1,436.0	1,449.2	+0.9%
Used vehicles – private sales	140,017	142,420	+1.7%	664.6	671.3	+1.0%
Motorcycles (street legal)	9,985	11,163	+11.8%	127.1	137.2	+6.6%
New & used RV's	11,965	12,229	+2.2%	375.1	380.7	+1.5%
<b>Total</b>	<b>580,063</b>	<b>570,946</b>	<b>-1.6%</b>	<b>9,424.1</b>	<b>8,980.6</b>	<b>-4.7%</b>

Source: Desrosiers Annual Report (cars, light trucks, used vehicles), Motorcycles and Moped Industry Council (Motorcycles), Statistics Canada (RV sales)

### **3.2 Market Trends (BC, Canada and US)**

A number of trends that have had or are expected to have an impact on the retail automotive sector in BC are outlined in this section.

#### **3.2.1 Average Prices**

The average price for a new passenger car sold in BC declined from \$25,304 in 2007 to approximately \$23,558 in 2008, a decline of 6.9%<sup>14</sup>. The Canadian Automotive Dealers Association (CADA) reported that car prices have been at near record lows in recent months. According to CADA's chief economist, in 2008, vehicle prices declined to a 23 year low as a ratio of personal disposable income reporting that "a vehicle purchased last year cost, on average, just 18.2 weeks of pre-tax income for the typical Canadian family. This is the lowest this ratio has been since 1985."<sup>15</sup>

#### **3.2.2 Registered Vehicles in BC**

The number of registered vehicles in BC increased slightly in 2009, to 2,688,527 in 2008, up from 2,658,841<sup>16</sup>.

#### **3.2.3 Consumer and Business Confidence**

Much of the reason for the significant decline in economic activity in late 2008 and most of 2009 stemmed from a considerable downturn in consumer and business confidence. This reduced confidence resulted in sharp declines in retail sales, new home purchases, and new car purchases. As discussed previously, most economic indicators in BC posted sharp declines in 2009, although there are indications that consumer and business sentiment is improving. For example:

- In September of 2009, the Conference Board of Canada reported that consumer confidence was steadily increasing. After plunging to a level not seen since the 1982 recession in December 2008 (67.7), the index has climbed in almost every month starting in the early Spring of 2009. In September, the level of consumer confidence reached 90.9 – which was 2.5 points higher relative to August 2009. (this is an index measure where the benchmark is set to 2002 at which time the confidence level is established at 100);
- The BC housing market has witnessed a significant improvement underscoring renewed confidence in the provincial economy as well as recognition of the attractiveness of very low interest rates. For example, BC MLS® residential sales are forecast to increase 15 per cent to 79,400 units this year, just shy of the ten-year average of 82,800 units. Home sales are also forecast to climb a further 6 per cent to 84,200 units in 2010 (Source: BC Real Estate Association).

---

<sup>14</sup> Statistics Canada. Consumer prices: The year 2008 in review. <http://www.statcan.gc.ca/daily-quotidien/090323/dq090323b-eng.htm>

<sup>15</sup> Canadian Driver, February 2009.

<sup>16</sup> BC Stats

In the December 2008 *Consumer Reports* Car Brand Perceptions Survey almost one-half of respondents indicated that they will delay purchasing a new vehicle. The leading reasons given for delaying a vehicle purchase were weak economy (30%); high interest rates for vehicle financing (18%), waiting for new fuel-saving technologies to become more affordable (18%). For 13% of the respondents, obtaining financing was an issue.

**3.2.4 Brand Selection**

Japanese vehicles continue to be rated as most reliable<sup>17</sup>. Of the domestic brands, Ford is rated as most reliable and continues to pull ahead of the other domestic automakers. In terms of brand selection, Honda and Toyota continue to be ranked as the top automotive brands in consumer perception<sup>18</sup> and in fact saw increases as compared to the previous year. Despite the continued improvement of domestic brands, Chevrolet, Dodge and Ford saw decreases in consumer perception.

The Auto Pulse Survey<sup>19</sup> looked at the ways consumer perception and ranking of vehicles in seven categories. Identified in Table 3-2 below are the five brands that scored highest and lowest in overall brand perception. The scores reflect a brand’s total perception level across seven areas including safety, quality, value, performance, environmental friendliness, design and technological innovation.

**Table 3-2  
Overall Brand Perception**

Strongest		Weakest	
Brand	Score	Brand	Score
Toyota	193	Jeep	21
Honda	149	Hummer	19
Ford	109	Saab	18
Cadillac	102	Mazda	17
Mercedes-Benz	100	Suzuki	7

Source: Consumer Reports, 2009 Car Brands Perceptions Survey

Despite Toyota and Honda being rated highest in consumer perception, a US Survey by Consumer Reports National Research Centre released in September 2009 found that 81% of new car buyers said they were likely or very likely to consider a domestic brand.

<sup>17</sup> Consumer Reports 2008 Car Reliability Survey

<sup>18</sup> Consumer Reports, Car Brand Perceptions Survey.

<sup>19</sup> Consumer Reports National Research



### 3.2.5 Trade-in Vehicles

About one out of every four new-vehicle transactions in Canada includes a trade-in vehicle, down from about one of every three transactions two years ago. The average age of trade-ins on new cars in 2008 was 6.7 years, up slightly from two years ago (6.3 years). The average odometer reading of a trade-in vehicle remained stable from 2006 to 2009 at 118,000 km. About 17% of trades in 2008 have been “upside-down” trades, whereby the payout exceeds the value of the trade-in. This percentage is similar to that of two years ago. The trade cycle differs across regions, with the lowest rate of new vehicle trade-ins seen in Calgary/Edmonton and the highest rate seen in Vancouver<sup>20</sup>.

While the Canadian government opted not to implement a sizable scrappage scheme similar to that implemented by the US government, sales of new passenger cars and light trucks rose to an annualized 1.56 million units in September 2009; the best sales since the sales crashed in October 2008. Individual manufactures introduced their own trade-in-your-clunker programs in the past several weeks, resulting in an overall industry volume of 129,503 vehicles (3.5% fewer than in September 2008). It is speculated that the recovering economy allowed an upturn in the housing market, enabling Canadians to continually borrow against the value of their homes, without which these results would not have occurred.<sup>21</sup>

In BC, the government has been under pressure by new car dealers to renew the provincial “Scrap-It program”, designed to give drivers incentives to scrap older vehicles for greener rides. According to New Car Dealers Association of BC, the provinces \$15 million grant will be used up within weeks but should be renewed because the provincial sales tax on new vehicle sales resulting from the program have paid almost all of it back<sup>22</sup>.

---

<sup>20</sup> Canadian Driver, September 29, 2008. <[www.canadiandriver.com](http://www.canadiandriver.com)>

<sup>21</sup> driving.ca. October 2, 2009. <<http://autos.canada.com/news/story.html?id=2058851>>

<sup>22</sup> Times Colonist, September 17, 2009.

3.2.6 Scrappage and Disappearance Rates

Between 2007 and 2008 the number of light vehicles on the road in Canada increased by 4.7% from \$20.2M to \$21.2M. During the same period, the light vehicle disappearance rate<sup>23</sup> decreased by 3.7% from 778,149 units to 774,381. The disappearance rate for passenger cars was higher at 4.6% than the disappearance rate for light trucks (2.8%).

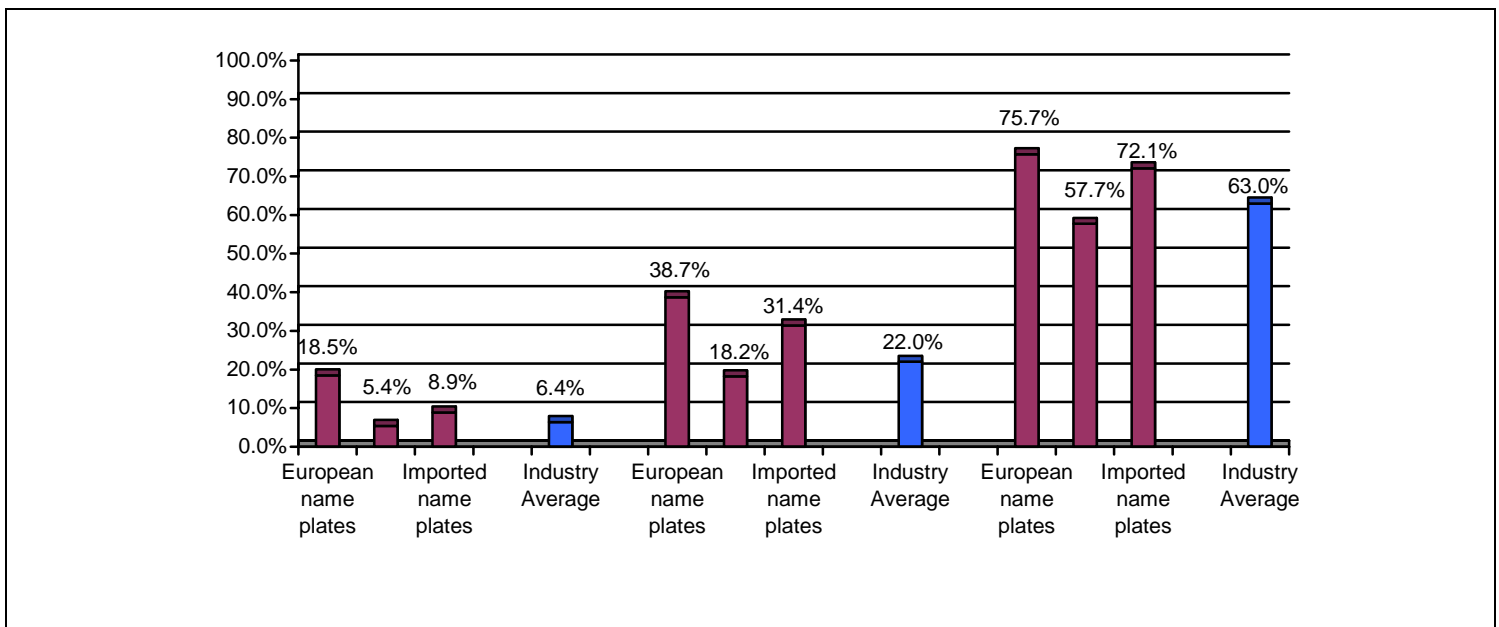
**Figure 3-3  
Light Vehicle Disappearance Rates (2004-2005)**

Year	Disappearance # of Units	Passenger Car Disappearance Rate	Light Trucks Disappearance Rate	Overall Disappearance Rate
2004	933,726	5.8%	4.1%	5.1%
2005	1,274,521	7.7%	5.5%	6.8%
2006	1,060,392	6.5%	4.4%	5.6%
2007	778,149	4.9%	2.9%	4.0%
2008	774,381	4.6%	2.8%	3.7%

Source: DesRosiers Automotive Consultants Inc.

While scrappage rates data broken down by vehicle category are not available, the passenger vehicles sold within three distinct time period that were still on the road in 2008.

**Figure 3-4  
Average Age of  
Passenger Cars On Road**



Desrosiers Reports. August 15<sup>th</sup>, 2009

<sup>23</sup> Note that disappearance includes vehicles scrapped as well as used vehicle exports.

### 3.2.7 Cross-Border Pricing Disparities

Automotive pricing disparities between Canada and the US received a great deal of media and consumer attention in the last quarter of 2007 and first half of 2008 but much less since that time as the automotive industry was faced with other challenges. Desrosiers reported that 2007 MSRP differentials are actually quite small for all but the high-end luxury vehicles that represent just 6% of the market, arguing that the perception of huge price differentials was fueled by the media<sup>24</sup>. In fact, Desrosiers reported that MSRP for compact cars decreased from 2006 to 2007. The average MSRP declined \$400 in 2007 as compared to 2006<sup>25</sup>. However, significant pricing disparities in the luxury vehicle segment persisted through 2007.

---

<sup>24</sup> Desrosiers Reports.

<sup>25</sup> *ibid*

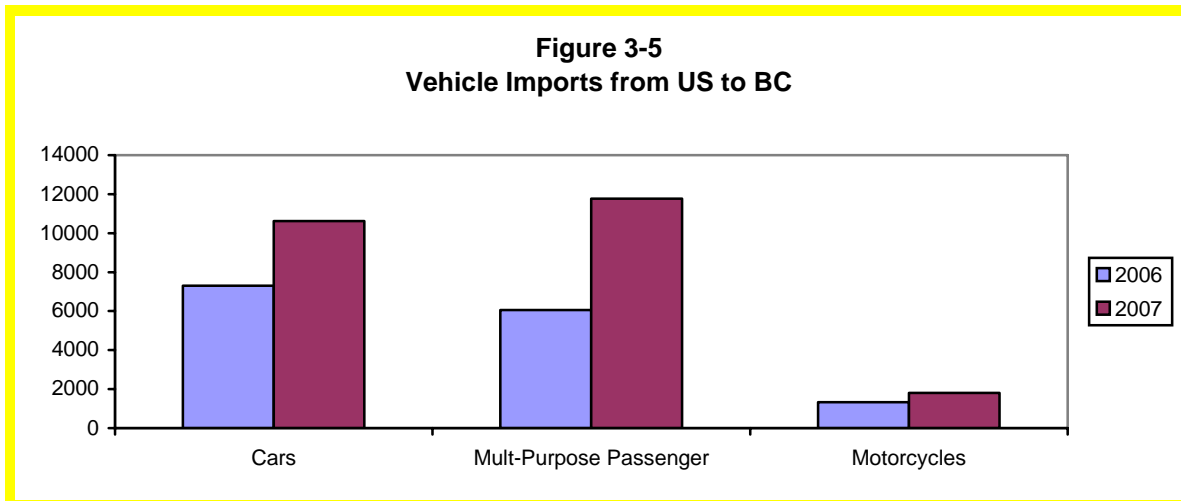
**Table 3-5  
Average Price Differential Between  
Canadian-sold and American-sold Vehicles  
Luxury Vehicle Segment**

<b>Overall</b>	20.56%
<b>Compact</b>	11.76%
<b>Sedan</b>	23.29%
<b>Van</b>	22.24%
<b>SUV</b>	26.68%
<b>Truck</b>	22.34%
<b>Hybrid</b>	20.63%
<b>Canadian Built</b>	21.53%

MSRP's are based on the exchange rate and prior to the second half of 2007, the Canadian and US dollars had not been close to parity for years. By the second quarter of 2008, however, manufactures had responded and MSRP's in Canada had started to come down. In the last quarter of 2008, however, the US dollar has risen in value which may affect MSRP's. At the time of this report data for 2008 Q4 and 2009 Q 1, 2 and 3 was not yet available.

**3.2.8 Cross Border Shopping**

The number of vehicles being imported into British Columbia from the US, increased substantially between 2006 and 2007. While Desrosiers reported that 2007 MSRP differentials were actually quite small for all but luxury vehicles there was a considerable increase in the import of US vehicles into BC. With the significant depreciation of the Canadian dollar in September-October 2008, it s expected that cross-border vehicle purchases will decline in 2009.



**3.3 Impact of US Bailout**

The government bailouts of both the US and Canadian automotive manufacturing sector will have both short and long-term implications for BC's automotive retail sector. In the

short term, it is expected that there will be an improvement in new vehicle purchases among North American brands as consumers gain confidence that the brands will remain and that they can access parts & service in the future. In addition to supporting the manufacturing activity of both Chrysler & GM operations, a major support provided to the sector was that the governments (US and Canada) would support the warranty component of new car sales.

As discussed previously, another short term impact of the bailout is that both GM and Chrysler are required to demonstrate a viable plan for economic recovery. In addition to the closure of several manufacturing plants, both GM and Chrysler will rationalize their respective dealership networks, which will likely result in a decline in the number of salespeople involved in new/used vehicle sales in British Columbia.

Chrysler's future has also been linked to the technology developed by Fiat. Both GM and Chrysler are mandated in the United States to develop vehicles that will reach ambitious energy efficient targets. This implies that an increasing proportion of sales in Canada/US will be of smaller, more fuel efficient models. This will likely result in further reduction in average selling prices of new vehicle sales, as sales of larger sedans and SUV's are replaced by smaller (and likely less expensive) vehicles.

A further element of the bailout has been the support provided to the financing arms of GM, Ford and Chrysler. Both Canada and the US have developed programs to support the asset-backed securities sector, which would facilitate the use of automotive collateral among the automakers to acquire funds to finance vehicle sales. In late 2008/early 2009, the financing arms of the major car manufacturers were effectively "frozen" as banks refused to accept automotive assets as collateral for financial loans. With the governments now providing assurances that such loans will be partially guaranteed, there will be the ability of the financing arms of the Big Three to extend credit to promote increased vehicle sales.

### **3.4 Dealership Closures**

In January 2009 there were approximately 3,000 new car dealerships in Canada<sup>26</sup> and 374 of these were in British Columbia<sup>27</sup>. In August 2009 RBC reported that GM will terminate its relationship with 245 dealers across the country. This represents 35% of all dealers in Canada. At the time of this report, six General Motors dealerships are slated for closure in British Columbia. This is far fewer than was first anticipated when General Motors of Canada announced upcoming dealership closures in May 2009. Although DesRosiers Automotive Consultants reported that "GM, Ford and Chrysler are highly over-dealered", according to the New Car Dealers Association of BC, GM was not as "over-dealered in BC as it was in some markets, particularly in Eastern Canada." This may account for a smaller number of dealerships closing than had been anticipated.

Although Chrysler in the US is closing dealerships, Chrysler Canada currently has no plans to terminate its relationship with any Canadian dealers in its dealer network.

---

<sup>26</sup> Business Edge News Magazine, June 2009, Vol. 5, No. 3..

<sup>27</sup> New Car Dealers Association of BC.

### **3.5 Service Trends**

According to the president of the New Car Dealers Association of BC, many new car dealerships across BC have avoided layoffs by working to increase the servicing end of their business<sup>28</sup>. However, the Customer Commitment Index Study<sup>29</sup>, shows Canadian automobile owners are spending less on maintenance and repairs than they did in 2008. Average annual expenditures on vehicle maintenance and repairs decreased to \$856 in 2009 from \$920 in 2008. Analysts had assumed that because the economic downturn was resulting in consumers keeping their vehicles longer, they would spend more on repairs. However, a study by JD Power and Associates suggests that the trend is not sustainable and will likely change by early in 2010. Consumers may currently be deferring non-essential maintenance but cannot do so indefinitely.

It is important to note, however, that even if the trend reverses, consumers may not have vehicle maintenance and repairs done at dealerships. Results from the study show that consumers are increasingly having their automotive maintenance and repairs done by mechanics that are not affiliated with an automaker. The study found that in 2008, 59% of the \$11.2 billion annual service market for vehicles between 3 and 12 years old was held by aftermarket service and repair shops, up from 57% in 2007. This represents a reduction of \$220 million. The study also notes, however, that the trend toward using aftermarket mechanics is not new.

The study notes that the primary source of service revenue for dealerships is from customers whose vehicles are still under warranty. In fact, “most” switch to an aftermarket shop when their warranty expires. According to the chief economist at the Canadian Automobile Dealers Association, as consumers keep their vehicles for longer in response to the weak economy, dealers’ share of the service market will be further reduced because the a greater percentage of the life of the average vehicle will be outside of the warranty period.

Dealership closures may contribute to this trend as some customers will now have to travel further distances to have maintenance and repair done at a dealership and may, therefore, start to use non-dealer shops.

Current data from Statistics Canada with respect to automotive repair and maintenance services is not yet available. Data for 2007 was released in April 1, 2009.

---

<sup>28</sup> Times Colonist.

<sup>29</sup> JD Power and Associates, August 2009

### **3.6 Impact of the Internet on Sales and Dealerships**

While rates of Internet use among Canadians increased in every province between 2005 and 2007, the rate in British Columbia was higher than the national average of 73%<sup>30</sup>. In Victoria for example, 83% of people aged 16 and over used the Internet and 78% of people aged 16 and over in Vancouver use the Internet<sup>31</sup>. The 2007 Canadian Internet Use Survey was conducted as a supplement to the Labour Force Survey and will be conducted every two years. The next Canadian Internet Use Survey will be conducted in October and November 2009. According to the recent Canadian Internet Project report from the second phase of a study on Canadian Internet habits, Canadians continue to be among the heaviest Internet users when compared to other countries. The study found that Internet penetration increased by 6% between 2004 and 2008 from 72% to 78%. The average number of hours spent online also increased during this period from 13 hours per week in 2004 to 17 hours per week in 2008. Canada ranks number one for Internet use by its eldest citizens with more than half of Canadians over 60 using the Internet regularly<sup>32</sup>.

The survey also showed that e-commerce (shopping on the Internet) has increased. More than 8.4 million Canadians made online purchases in 2007, up from nearly 6.9 million in 2005. Overall, Canadians placed almost \$12.8 billion worth of orders in 2007, up 61% from 2005. While 32% of Canadians made an online purchase in 2007, 44% made an online order. Demographically speaking, Canadians between the ages of 25 and 34 made the heaviest use of the Internet for placing orders with more than one-half (51%) ordering online.

The Internet has had a significant impact on how Canadians shop for both new and used vehicles. Many new car shoppers read car reviews, view photos, and price cars before ever entering a dealership<sup>33</sup>. Overall, manufacturer and dealer Internet sources are the most widely used sources on the Internet for new car buyers<sup>34</sup>. Used car shoppers are also spending more time online but tend to concentrate more on independent websites<sup>35</sup>.

Consumers who use the Internet are better informed when they first visit a dealership. For new car buyers, online research has largely supplanted time spent at dealerships, time spent negotiating, and the use of third party sources of information such as Consumer Reports. However, the *overall* time buyers spend searching for a car has increased with Internet research.

According to one study, buyers who used the Internet, spent an average of 80 minutes less at dealerships during the course of their search for a car and spent 25 minutes less negotiating prices and on test drives. However, use of the Internet did not seem to have

---

<sup>30</sup> Canadian Internet Use Survey.

<sup>31</sup> Statistics Canada, The Daily June 12, 2008.

<sup>32</sup> CNW Group <[www.newswire.ca/en/releases/archive/September2008/24/c7832.html](http://www.newswire.ca/en/releases/archive/September2008/24/c7832.html)>

<sup>33</sup> Edmunds <<http://www.edmunds.com>>

<sup>34</sup> Ratchford, Brian T., Talukdar, Debabrata and Myung-Soo Lee (2007). The Impact of the Internet on Consumers' Use of Information Sources for Automobiles: A Re-Inquiry. *Journal of Consumer Research*, v. 34, no. 1, pp. 111-119. Chicago: University of Chicago Press.

<sup>35</sup> Road and Travel. <[roadandtravel.com](http://roadandtravel.com)>

an impact on the extent to which buyers turn to friends and family for information when buying a car<sup>36</sup>.

Among late-model used vehicle buyers, the Internet has surpassed all other shopping methods as the source for locating the vehicle a buyer ultimately purchases. In 2007, 23% of buyers of late-model used vehicles used an Internet vehicle locator or online classified ad service to find the vehicle they ultimately purchased. This is a 44% increase since 2006. In fact, 2007 was the first year that Internet use surpassed all other shopping methods for finding the used vehicle that the buyer ultimately purchased<sup>37</sup>.

### **3.7 Motor Vehicle Technology and Trends**

Automotive technology continues to change rapidly due to a number of factors. Consumers are demanding the latest technologies and latest vehicle designs, climate change and the environmental agenda are having a large impact on vehicle design and the pace of new technologies has accelerated<sup>38</sup>. An 2008 annual global survey by KPMG LLP found that when automotive industry executives worldwide were asked to rate the importance of automotive technology initiatives over the next five years, 91% in 2008 (up from 78% in 2007) of respondents said hybrid systems, 82% said electric and battery technology (up from 60% in 2007), 76% said fuel technology (dropping from 78% in 2007), 53% said ethanol & other alternative fuels (dropping from 56% in 2007), and 49% said diesel (dropping from 50% in 2007)<sup>39</sup>.

Outlined in the sub-sections below are key highlights of technology-related initiatives and trends which are expected to impact the automotive retail sector in Canada and BC.

#### **3.7.1 Government Initiatives**

In September 2008, the National Research Council of Canada (NRC) mapped out a comprehensive automotive R & D strategy focused primarily on increasing fuel efficiency and reducing emissions. NRC has engaged with the automotive sector in several key areas to develop unique solutions and capabilities. The strategy is based on identification of the need to help the Canadian automotive industry develop solutions to the challenges of today's global marketplace. NRC is thought to be ideally positioned to help the industry benefit from strategic technological growth and capture a greater share of the international market.

The NRC automotive strategy will focus primarily on increasingly fuel efficiency and reducing emissions. Several NRC institutes will work on developing lightweight materials and structures, aerodynamic enhancements, alternative propulsion vehicles including plug-in hybrids, and the integration of information technology in vehicles.

---

<sup>36</sup> Ratchford, Brian T., Talukdar, Debabrata and Myung-Soo Lee (2007). The Impact of the Internet on Consumers' Use of Information Sources for Automobiles: A Re-Inquiry. Journal of Consumer Research, v. 34, no. 1, pp. 111-119. Chicago: University of Chicago Press.

<sup>37</sup> Used Autosopper Study (2007). JD Power.

<sup>38</sup> Industry Canada.

<sup>39</sup> KPMG Global Auto Executive Survey Highlights Impact of Downturn on Industry; Increasing Importance of Hybrid Electric and Battery Technologies. < <http://www.greencarcongress.com/2009/01/kpmg-global-aut.html> >



Through the automotive strategy, over the next five years, NRC will be investing \$30 million in automotive R&D making NRC one of five major players in industry Canada's five year, \$145 million Automotive R&D Partnership Initiative to help the automotive sector address its innovation, productivity and competitiveness challenges<sup>40</sup>.

The British Columbia provincial government has its own transportation rebates and incentives. The *Scrap-it* program offers older-vehicle owners incentives to trade in their old vehicle for a newer, low emission vehicle<sup>41</sup>. The ecoAuto Rebate, which ran from March 20, 2007 to December 31, 2008, was a program where applicants who purchased or leased a 2006, 2007 or 2008 fuel-efficient vehicle were eligible to receive rebates ranging from \$1,000 - \$2,000<sup>42</sup>.

### 3.7.2 Fuel Efficiency

Two recent initiatives to improve fuel-efficiency include the use of low-rolling resistance tires which have been used on hybrid vehicles and are now starting to be used in non-hybrid applications and advanced technology to improve the aerodynamics of vehicles. Engineers now use computer simulation to determine the best streamlined shapes for a vehicle. Other options for fuel efficiency include aluminum wheels, which reduce total weight of the vehicle, and heavy-duty suspension systems that improve handling, are stronger and have a longer life span.<sup>43</sup>

### 3.7.3 Alternative Fuels

The National Resources of Canada lists two main Alternative Fuel Programs:

*The Future Fuel Initiative:* is aimed at increasing the use of ethanol as a renewable transportation fuel by promoting the use of ethanol-blended gasoline, both low-level (up to 10% ethanol) which most vehicles use and high-level (up to 85% ethanol) blends that flexible-fuel vehicles use.

*The Natural Gas for Vehicles market Transformation Pilot Project:* provides financial contributions toward the purchase of vehicles that use natural gas - \$3,000 for a medium-duty vehicle, \$2,000 for a light-duty vehicle and \$500 for a vehicle converted to natural gas. The program also provides a \$500 contribution to the dealer selling the vehicle.<sup>44</sup>

The US alliance of automotive manufacturers (AAM) reports that by the end of 2008, about 2 million of the 17 million vehicles sold in the US will be alternative fuel vehicles. This would represent 12% of total sales. Alternative fuel vehicles are growing in popularity in fleet markets as well<sup>45</sup>.

---

<sup>40</sup> A Technology Boost for Canada's Automotive Industry, National Research Council, September 2008 <[http://www.nrc-cnrc.gc.ca/highlights/2008/0809auto\\_e.html](http://www.nrc-cnrc.gc.ca/highlights/2008/0809auto_e.html)>

<sup>41</sup> BC Strap-it Program. <<http://www.scrapit.ca/index.htm>>

<sup>42</sup> ecoAuto Rebate. <[http://www.livesmartbc.ca/transportation/t\\_rebates.html](http://www.livesmartbc.ca/transportation/t_rebates.html)>

<sup>43</sup> The National Resources Canada. Options for fuel efficiency. <<http://oee.nrcan.gc.ca/transportation/personal/buying/vehicle-selection-tips.cfm?attr=8#fueloptions>>

<sup>44</sup> The National Resources Canada. Federal Alternative Fuel Program. <<http://oee.nrcan.gc.ca/transportation/personal/buying/vehicle-selection-tips.cfm?attr=8#fueloptions>>

<sup>45</sup> auto-facts.org

### 3.7.4 Hybrid Vehicles

Residents of British Columbia have two different tax reduction benefits available to them when purchasing a hybrid vehicle. The first is a *Reduction of Social Service Tax*, commonly known as Provincial Sales Tax (PST). When a qualifying hybrid electric passenger vehicle is purchased, 100% of the point of sales tax is reduced (maximum of \$2,000). The second is a *Tax Rate Reduction*; this reduction is only applied to hybrid vehicles that cost more than \$49,000. The applicable tax rate is determined by subtracting a government determined factor of \$7,000 from the purchase price of the vehicle, then applying to the full tax amount (10%) to the altered price, in turn lowering how much tax consumers pay.

While in the summer of 2008, hybrid sales were at an all time high, sales of hybrids had dropped substantially in the US by December. As the economy worsened and fuel prices decreased, consumers seemingly became less willing to pay the extra money required to purchase hybrid vehicles. According the Edmunds.com, hybrid sales in the US dropped over 43% in December, while overall automotive sales dropped by 36%. While hybrids have been on Canadian roads since 1999, they have still not expanded beyond their market share of roughly 2%. Cost is considered a major factor and some manufactures are starting to introduce lower cost hybrids<sup>46</sup>.

According to research by Experian Automotive<sup>47</sup>, when it comes to the make of a vehicle, hybrid car owners are most loyal with 47% purchasing a vehicle of the same make compared with 35% of consumer loyalty to all vehicle classes combined.

### 3.7.5 Electric Car

The Chevy-Volt is expected to be the first rechargeable car and was introduced as a concept car at the 2007 Detroit Auto Show. GM reports that it is on track to start selling the Chevy Volt in 2010. Toyota is also pushing to get a plug-in electric vehicle to market in 2010.<sup>48</sup> Ford has introduced it's Transit Connect Van, which will be mainly for package delivery or for passenger use, expected to be available in 2010, followed by a passenger sedan in 2011<sup>49</sup>. Nissan has chosen BC for its Canadian launch site for their Nissan LEAF electric passenger vehicle. Partnering with the B.C. government, the city of Vancouver and BC Hydro, this vehicle is expected to be unveiled in Vancouver in 2011<sup>50</sup>.

Companies like Better Place have started partnering with Canadian provinces- most notably Ontario- in creating infrastructure, such as fueling stations, for the incoming electric car.<sup>51</sup>

---

<sup>46</sup> Canadian Press. April 15, 2009.

<sup>47</sup> Mississauga News

<sup>48</sup> Autonet.ca (Aug 14, 2008)

<sup>49</sup> cartech blog. "Ford's first all-electric vehicle will be a van". <[http://reviews.cnet.com/8301-13746\\_7-10159600-48.html](http://reviews.cnet.com/8301-13746_7-10159600-48.html)>

<sup>50</sup> The Vancouver Sun. October 6, 2009 <

<http://www.vancouversun.com/technology/Nissan+rolls+electric/2074999/story.html>>

<sup>51</sup> Better Place. Ontario paves the way for Electric Car. <<http://www.betterplace.com/global-progress/canada/>> News Release. <[http://www.betterplace.com/canada\\_20090115/canada\\_presskit/01\\_15\\_09\\_Better\\_Place\\_NR\\_EN.pdf](http://www.betterplace.com/canada_20090115/canada_presskit/01_15_09_Better_Place_NR_EN.pdf)>

