



# Global Auto Report

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## The Auto Industry & The Broader Economy

### — Dramatic Sales Decline Leads To Sharp Cutbacks And A Slower Economy In 2009

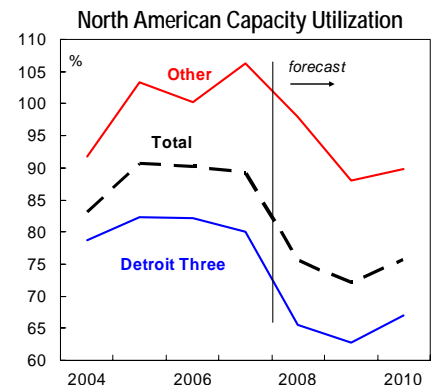
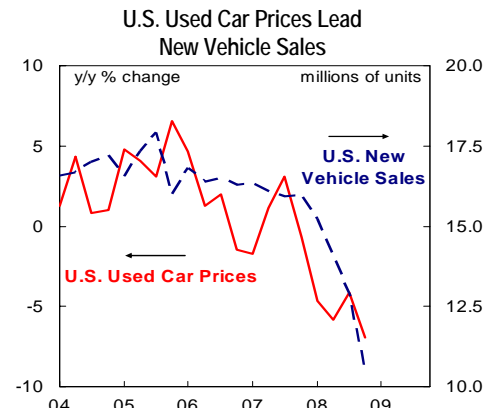
**G**lobal vehicle sales remain in the midst of a precipitous fall-off, led by sharp declines in the mature markets of the United States, Western Europe and Japan. Purchases have also lost momentum in emerging markets, which until recently cushioned the decline in global volumes. The slowdown reflects the intensifying global economic downturn and the sharp plunge in equity markets that has slashed valuations by nearly US\$30 trillion over the past year, undermining household wealth and confidence.

The fall-off is steepest in the United States, with vehicle purchases plunging 32% y/y in October to a 25-year low of 10.6 million units, down from an average of 14.1 million units during the previous nine months. (Preliminary data suggest that sales remained close to this level in November as well.) The drop is being reinforced by record-low U.S. consumer confidence and a rapidly deteriorating job market — that will likely get even worse in the months ahead. Given the sharp contraction in demand, automakers are slashing production and have moved forward their year-end clearance sales.

U.S. used car prices — a leading indicator of new vehicle demand — collapsed in October (falling a record 6% month-over-month), suggesting that the current downturn in demand will remain in place through much of 2009. We have reduced our 2009 U.S. vehicle sales forecast to 12.5 million units from our previous estimate of 13.5 million, and an average of nearly 17.0 million units so far this decade.

In contrast to the global downturn, vehicle sales in Canada continued to advance through October, climbing 2% y/y. Purchases totalled an annualized 1.64 million units last month, only marginally lower than the 1.70 million unit average through September, as both Mercedes-Benz and BMW set sales records for the month of October. Both automakers posted double-digit gains in the core luxury models, but the growth was led by their small car line-ups — the Smart car and the Mini. In fact, small cars accounted for all of the increase in overall sales last month. Preliminary estimates point to some softening in Canadian sales in November.

Used car prices are also holding up better in Canada and have actually edged up in recent months, as a lower Canadian dollar has cut into the number of vehicles imported from the United States. Imports slumped 35% y/y in October when the Canadian dollar fell below 90 cents(US), partly reversing the 84% surge during the previous nine months. Nevertheless, we expect the sharp erosion in global economic conditions and equity markets will increasingly take a toll on Canadian prospects. As a result, we are reducing our 2009 Canadian new vehicle sales forecast to 1.50 million units, down from 1.67 million this year and an average of 1.60 million so far this decade.



## AUTO INDUSTRY — A ROADMAP OF LINKAGES

**The auto sector is the largest manufacturing industry in the United States and Canada and its stability and future viability are crucial in insuring the health of both economies.** The auto industry accounts for 13.5% of overall Canadian manufacturing and more than 7% of factory output in the United States. However, in regions such as Ontario

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and Michigan, the auto industry is even more crucial. The sector dominates the Ontario economy, accounting for 26% of manufacturing output and 5% of overall economic activity.

Automakers in Canada and the United States directly employ roughly 240,000 workers at vehicle assembly plants and purchase more than US\$220 billion annually from North American parts suppliers — the backbone of the motor vehicle industry, with employment approaching 800,000. In addition to the direct employment in vehicle assembly and parts, estimates suggest that each auto industry job generates at least 1.5 jobs as spinoffs across the broader economy, leading to direct and indirect auto manufacturing jobs of roughly 3 million in Canada and the United States.

Aside from manufacturing, there are also nearly 2 million people in Canada and the United States employed in the auto wholesale and retail channel. In the case of Canada, there are more than 3,400 auto dealerships, with the Detroit Three accounting for nearly half. In Ontario alone, there are more than 1,200 auto dealerships selling both domestic and imported models.

An extensive and diverse quantity of inputs, including steel, plastics, metals and electronics, are required to produce motor vehicles & parts. On average, a vehicle produced in North America weighs over 4,000 pounds and contains roughly 2,600 pounds of steel. We estimate that the 15.4 million vehicles produced in Canada, the United States and Mexico last year consumed 15.3 million tonnes of steel — roughly 15% of total end-market steel demand across North America.

Plastics (including paint) are also key inputs for the motor vehicle industry, with each new vehicle containing nearly 550 pounds of plastics — 13% of overall vehicle weight — and up from less than 400 pounds a decade ago. Plastics — especially engineering plastics — have become the fastest-growing material in

motor vehicles, with demand surging by more than 40% per vehicle over the past decade. Increased focus on improved fuel efficiency and safety will continue to boost the importance of plastics, as automakers attempt to reduce vehicle weight and introduce new technologies to protect drivers and pedestrians. Chemicals (excluding pharmaceuticals) and plastics are among the largest manufacturing sectors in North America, accounting for roughly 10% of industrial activity in both Canada and the United States.

In addition, each North American-built vehicle contains more than 300 pounds of aluminum, leading to an industry-wide consumption of more than 2 million tonnes of aluminum — more than 30% of overall North American aluminum demand. In fact, there are, on average, roughly 435 pounds of base metals (aluminum, copper and zinc) in a typical passenger vehicle.

The auto industry is also a key source of overall investment and innovation. For example, the industry has invested more than \$35 billion in Canada over the past decade — accounting for more than 17% of overall manufacturing investment. In fact, since 2003, auto industry investment on machinery and equipment has averaged roughly \$1,100 per vehicle assembled in Ontario, up from less than \$800 during the previous six years. Investment will peak at nearly \$1,300 per unit in 2008, as several automakers modernize their facilities to flexible assembly plants.

Despite these significant investments, the sharp fall-off in vehicle demand in recent months will reduce operating rates at assembly plants across North America to roughly 76% in 2008 — one of the lowest levels on record. Highlighting the difficult conditions facing automakers, operating rates at the Detroit Three will likely remain below 70% through the end of the decade, well below the 80% rate they were facing when they began to close plants earlier this decade.

### International Car Sales Outlook

	<u>1990-99</u>	<u>Peak 2000</u>	<u>2001-06</u> (millions of units)	<u>2007</u>	<u>2008f</u>	<u>2009f</u>
<b>TOTAL SALES</b>	<b>39.20</b>	<b>46.64</b>	<b>48.63</b>	<b>54.92</b>	<b>52.94</b>	<b>51.77</b>
<b>North America*</b>	<b>16.36</b>	<b>19.77</b>	<b>19.45</b>	<b>18.83</b>	<b>16.01</b>	<b>14.98</b>
Canada	1.27	1.55	1.60	1.65	1.67	1.50
United States	14.55	17.35	16.81	16.09	13.30	12.50
Mexico	0.54	0.87	1.04	1.09	1.04	0.98
<b>Western Europe</b>	<b>13.11</b>	<b>14.75</b>	<b>14.54</b>	<b>14.75</b>	<b>13.87</b>	<b>13.17</b>
Germany	3.57	3.38	3.32	3.15	3.15	3.09
<b>Eastern Europe</b>	<b>1.18</b>	<b>2.38</b>	<b>2.36</b>	<b>3.58</b>	<b>4.12</b>	<b>4.25</b>
Russia	0.78	1.03	1.25	2.31	2.89	3.12
<b>Asia</b>	<b>6.91</b>	<b>7.85</b>	<b>10.23</b>	<b>14.42</b>	<b>15.07</b>	<b>15.38</b>
China	0.33	0.61	2.26	5.15	5.66	6.06
India	0.31	0.60	0.75	1.18	1.27	1.32
<b>South America</b>	<b>1.64</b>	<b>1.89</b>	<b>2.05</b>	<b>3.34</b>	<b>3.87</b>	<b>3.99</b>
Brazil	0.94	1.17	1.30	1.98	2.33	2.45

\*Includes light trucks.