

## Global Auto Sales Start A (Slow) Climb Back in October

- Global auto sales etched out a 3% m/m (sa) improvement in October. Sales still sat -18% below last October's level, but an end to the five-month streak of declines amidst inventory shortages was a welcomed development (chart 1).
- Purchase activity in the US (+6% m/m), China (+10% m/m), and Japan (+8% m/m) boosted global sales numbers, while sales in Europe contracted for the month led by -14% m/m and -11% m/m declines in France and Germany, respectively.
- Sales were supported by a pivot in global auto production as early data from North America and China saw vehicle production pick up in October after months of decline.
- Production levels are still seriously depressed—in North America seasonally adjusted October levels are about 30% below 2019 production levels—and there are still plenty of reasons to be guarded, but we are cautiously optimistic that a recovery is underway (chart 2).
- Strong demand-side conditions in markets including the US and Canada suggest that it will take time to rebuild vehicle inventories at dealerships given high turn-over rates.
- Auto production should accelerate through the first half of 2022, but capacity constraints in the auto sector will limit how quickly the sector can capitalize on mounting pent-up demand.
- We maintain our expectation that more balanced supply-demand conditions would only materialize into 2023. By extension, this suggests new (and used) vehicle price pressures would persist—though dissipate—over this horizon.
- Demand is expected to remain resilient to cost pressures including a rising rate environment over this horizon as pent-up demand is unwound. Unique factors of this downturn have translated into stronger credit quality and reduced exposure to negative equity risks, suggesting credit risks are better-contained, but these assumptions should be monitored over the horizon given potential spillovers from other obligations.

### GLOBAL AUTO SALES IN BRIEF

Global auto sales turned positive on a month-over-month basis in October for the first time in half a year. Purchases accelerated by 3% m/m (sa) offering hopeful signs that bottlenecks related to the semiconductor chip shortage are beginning to unwind. Sales were still down by -18% y/y at a depressed level of 59 mn saar units (annual sales tallied 75 mn in 2019). Asia led the recovery with Chinese sales posting a 10% m/m (sa) improvement for the month, along with an 8% m/m (sa) gain in Japan. A rebound in North America (4.5% m/m, sa) was driven by a 6% m/m (sa)

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Chart 1

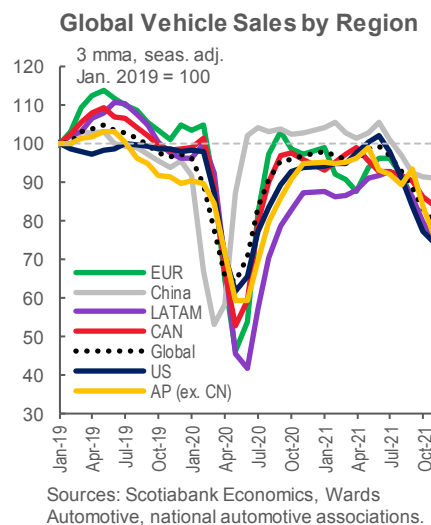
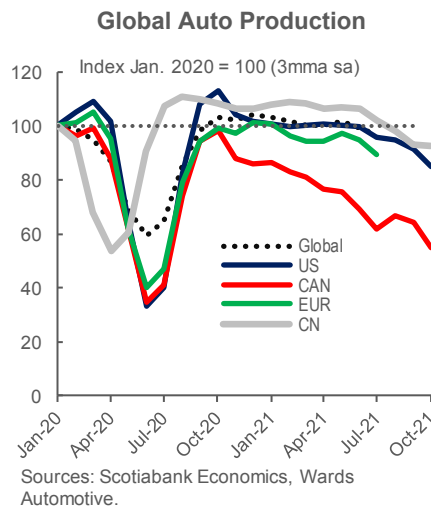


Chart 2



acceleration in US vehicle sales. European auto sales bucked the trend with a -9% m/m (sa) decline in Western Europe with most major markets posting commensurate declines, while recent COVID-19 outbreaks likely further dampen the recovery. Latin America also saw declines across the region in all but Chile for the month. *See Box 1 in the Annex for a more detailed view of global auto sales in October.*

### A MEASURED SIGH OF RELIEF FOR PRODUCTION

**Preliminary data suggests global auto production has pivoted.** North American production picked up by 9% m/m (sa) in October. Canada's rebound was the strongest—at 28% m/m—but this was more a factor of the steep declines in the -30–40% range in the two months prior. On a volume basis, the US recovery at 8% m/m drove the headline recovery. American auto production comprised 70% of the region's output for the month, well-above its pre-pandemic share of 64%. The only other major market with available October production data—China—also saw output pivot with a 6% m/m (sa) improvement producing 70% of the region's vehicles in October (chart 3). Based on the robust pick-up in Japanese auto sales for the month, we are likely to see production gains here when data is released.

**These are positive signs for auto production—and hence auto sales—but an abundance of caution is still warranted.** Auto production has had several false starts over the past year only to have new developments scuttle the recovery—the most recent being the Delta variant impacts on auto chip supply chains in South Asia. Canadian auto production faces some risk from devastating floods in British Columbia as about 15% of imports arriving at the Port of Vancouver are motor vehicles or parts, but, so far, work-arounds seem to be on the table. Also, several US automakers reportedly ramped up October production by inserting arriving chips in otherwise-assembled vehicles, which may have temporarily exaggerated the pace of recovery.

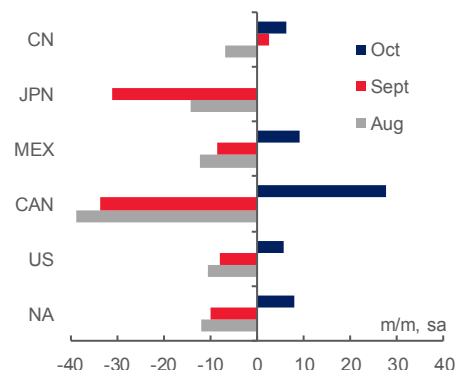
**The road to recovery is still long.** Wards Automotive forecasts North American auto production will finish the final quarter only slightly in the positive on a quarter-over-quarter basis. It has penciled in large rebounds in H1 2022—12% q/q (sa) and 10% q/q (sa) in the first and second quarters, respectively—but would see pre-pandemic output levels only towards the second half of 2023 (chart 4).

**It will also take time to rebuild vehicle inventory in an environment of pent-up demand.** The US inventory-to-sales ratio sank to a new low in October according to the Bureau of Economic Analysis (chart 5). Wards Automotive data was slightly more positive with a flat ratio on the back of commensurate pick-ups in inventory and sales levels (both around 4% m/m, nsa). Despite some data uncertainty, it underscores real-world limitations to how quickly sales can recover. Annualised inventory sits around 13.4 mn units in October.

**Limited supply against elevated demand continues to put pressure on prices.** According to J.D. Power, average transaction prices for new vehicles in the US are tracking about 18% higher this November versus November 2020—and about 1% above October prices. The effective cost for consumers is lower with stronger trade-in and lower financing costs offsetting some of the new vehicle price appreciation. This continues to feed inflationary pressures as new vehicle price appreciation in the US reached new heights in October (9.8% y/y, nsa) for a 1.4% m/m (sa) increase. Monthly increases have fairly steadily posted average upticks of 1.5% m/m since May

Chart 3

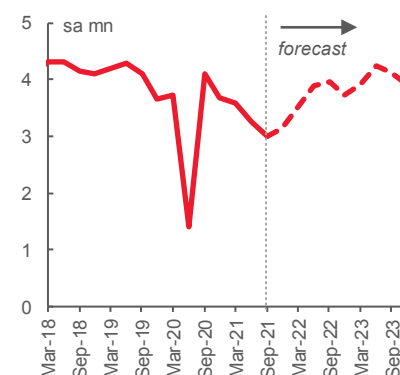
#### Global Auto Production



Sources: Scotiabank Economics, Wards Automotive.

Chart 4

#### Wards Automotive North American Auto Production Outlook



Sources: Scotiabank Economics, Wards Automotive.

Chart 5

#### US Domestic Auto Inventory-to-Sales Ratio



Sources: Scotiabank Economics, BEA.

and will likely continue to mount for a few months—with some upside risk from new-line model pricing that may opportunistically incorporate producer price pressures.

#### The inventory and pricing environment for used vehicles remains even tighter.

Black Book reports that used vehicle inventory in the US was down by -17% since the beginning of the year, while retail prices are now 33% above start-of-year prices. Both retail and wholesale prices have been trending stronger over the Fall, according to the same source, and this is showing up in still-escalating retention indices in the US and Canada (chart 6). On a month-over-month basis, used vehicle price appreciation has been highly volatile with a 2.5% m/m pick-up in October after pulling back the prior month, but average prices (in CPI terms) have been appreciating at twice the rate of new vehicles. Given the prolonged nature of the new-vehicle inventory recovery, used car markets are similarly likely to remain supply-constrained through 2022 and into 2023.

#### Price pressures for new and used vehicles are likely to persist over the coming quarters given the slower recovery in vehicle production and limited inventory.

Pent-up demand, still-elevated household savings on both sides of the border—along with mending labour markets (including appreciating wages) and trend improvements in consumer confidence suggest demand will persist through 2022 into 2023.

Preliminary data put fleet sales still about a third below pre-pandemic levels (in both US and Canada) as they compete for limited inventory. Persistently depressed fleet sales over the past twenty months mean the flow of used vehicle supply will remain low for several quarters yet, exacerbated by lease extensions in light of new vehicle shortages.

#### Potentially faster policy rate tightening could provide some headwinds in 2022.

Scotiabank Economics' latest [forecasts](#) anticipate the Bank of Canada would begin hiking rates by mid-2022 and the US Federal Reserve later in the year, with developments since then reinforcing upside pressures for potentially earlier hikes in both countries. Markets have already been pricing-in both inflation premia as well as rate-hike expectations. In Canada, the average interest rate of newly originated auto loans has been trending up over the course of 2021, closely following the 2-year GoC bond yield (chart 7), which is translating into higher financing costs for consumers. Bankers Acceptance rates—an important short-term debt instrument for auto dealers—tracks the overnight rate closely, but can be expected to increase with the policy rate path putting upward pressure on dealer financing down the road.

**Typically, auto demand softens as the economic cycle matures.** Policy rate tightening plays one factor through pricing channels, pushing some new vehicle demand to used markets. Given the extraordinary pent-up demand in Canada and the US—and limited inventory and consequent pricing pressures also in used vehicle markets—we expect the downturn in the new vehicle demand may lag the economic cycle. We currently forecast auto sales to strengthen in the range of 8–9% y/y in 2022 with only a very modest deceleration in 2023 sales at around 7–8% y/y (US sales forecasts are on the higher end of these ranges and Canada the lower end).

#### Loan volumes of late have reflected inventory shortage rather than underlying demand.

Loan volumes surged in Canada and the US towards the end of last year and into the first half of 2021, lifted by broad-based economic rebounds in both markets. Volumes have since pulled back in both markets in recent quarters, though levels are still elevated in the US (chart 8).

Chart 6

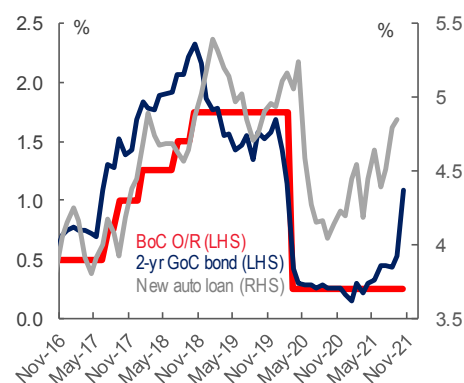
#### Black Book Used Vehicle Retention Indices



Sources: Scotiabank Economics, Black Book, Canadian Black Book.

Chart 7

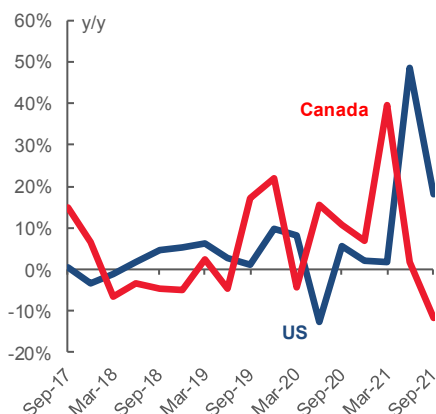
#### Markets Starting to Price In Inflation and Expected Overnight Rate Shifts



Sources: Scotiabank Economics, BoC, Bloomberg.

Chart 8

#### Auto Loan Growth in US and Canada



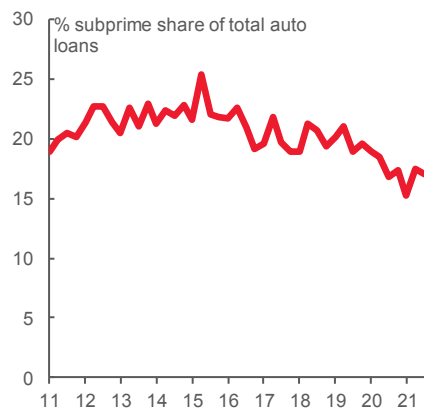
Sources: Scotiabank Economics, FRBNY, Bank of Canada.

**Unlike past downturns, loan quality has strengthened.** In the US, the share of newly originated subprime loans (e.g., with credit scores below 660) hit a record-low in the first quarter of 2021. It has since picked up but still remains historically low (chart 9). The same trend is observed in Canada according to TransUnion. This continued drop in subprime loans has helped keep the delinquency rates subdued in both markets (charts 10 & 11—note the difference in axes scales!). In Canada, exceptional loan forbearance and government transfers to households have contributed to a reversal of the uptrend in auto delinquencies building prior to the pandemic. However, the recent withdrawal of government programs, mounting affordability pressures, and exposure to variable-interest debt including through housing mortgages could have knock-on effects for auto delinquencies at the margins. Low starting points, a higher quality base, and strengthening labour market dynamics should offset this risk.

**Trends in negative equity likely also mitigate credit risks for now.** Unlike usual downturns where dampened demand would see residual values drop, they continue to escalate according to Black Book and are likely to stay elevated over the course of the supply recovery, as discussed earlier. Nevertheless, this poses a risk for vehicles financed at the height of this elevated pricing environment with terms extending well beyond the recovery after which some decline could be expected.

Chart 9

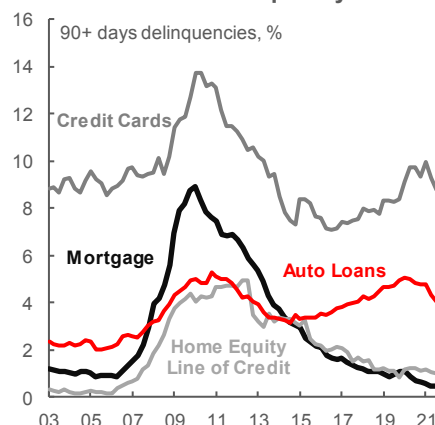
### Subprime Auto Loans in US



Sources: Scotiabank Economics, FRBNY Consumer Credit Panel, Equifax.

Chart 10

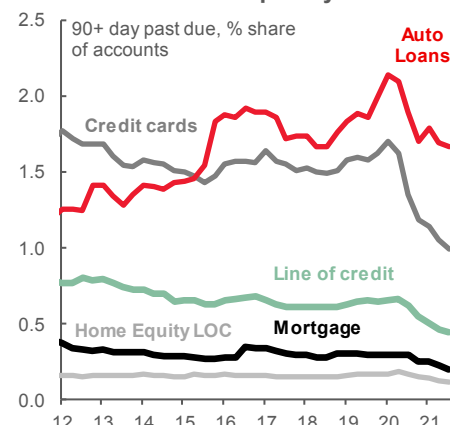
### US Consumer Delinquency Ratios



Source: Scotiabank Economics, Federal Reserve, Bloomberg.

Chart 11

### Canada Delinquency Rates



Sources: Scotiabank Economics, CBA, Equifax and CMHC calculations.

**BOX 1: TRENDS IN REGIONAL AUTO SALES**

Global auto sales edged up in October by 3% m/m (sa), putting an end to the five-month streak of declines. On an annualised basis, sales sat just shy of an anemic 59 mn units in October after trending closer to 72 mn vehicles over the first half of the year. Not surprisingly, the global semiconductor chip shortage continues to weigh on the global auto sales recovery. On a year-over-year basis, sales still sat 18% (nsa) below last October's level, and the moderate improvement masked differences across regions.

After leading the deceleration in the past five months, the North American market has slightly turned the corner and posted a positive m/m growth (4.5% m/m, sa). US sales saw a rebound of 6.3% m/m, sa and sat just under a weak annualised rate of 13 mn vehicles. Canadian auto sales contracted moderately in October (-3.1% m/m, sa), after Wards Automotive reported some slight improvement in September, whereas DesRosiers Automotive Consultants recorded a persistent downward trend since June.

Being the last to be hit by chip shortage, auto sales in Asia Pacific recorded some large rebounds after the sharp dip in August and September. Japanese auto sales rose by 8.3% m/m (sa) in October, although still struggling to approach levels before the production disruptions (-31.3% y/y, nsa). Chinese auto sales picked up 9.6% m/m sa and are back to the levels in the first half of the year, driving headline numbers 7.5% higher than the month prior (sa) in Asia Pacific. Notably, Indian auto sales recorded a 20.1% m/m growth, sa, after the sharp contraction in September.

Sales in Western Europe pulled back in October, led by -13.6% m/m (sa) and -10.9% m/m (sa) declines in France and Germany. Spain and Italy both recorded sales contraction by -11.4% m/m (sa) and 8.1% m/m (sa), respectively. UK is the only outlier with a slight bounce-back of 6% m/m (sa) from the double-digit declines in the previous two months. The combination of near-term inventory shortages and structural shifts following tightening emissions regulations continue to put pressure on sales growth.

Latin American sales declined further in October (-3.5% m/m, sa), albeit at a much slower pace than July when the downtrend started (-8.2% m/m, sa). Mexico led the regional slowdown (-6.2% m/m, sa) and Brazil doubled down on the decline (-5.2% m/m, sa). Peru reversed some of its sales increase in the past two months with a slight decline of 2.4% m/m, sa. Chile and Argentina have turned the corner and recorded sales growth at 4.8% m/m and 2.6% m/m, sa, respectively.

**Table 1 — Global Auto Sales Outlook (mns units)**

	2010-19	2019	2020	2021f	2022f	Oct-21, SA % m/m	Oct-21, NSA % y/y	2021, NSA % y/y
<b>Total Sales</b>	<b>71.0</b>	<b>74.9</b>	<b>63.8</b>	<b>66.0</b>	<b>72.4</b>	<b>3.0</b>	<b>-18.0</b>	<b>8.6</b>
<b>North America</b>	<b>18.7</b>	<b>20.2</b>	<b>17.0</b>	<b>18.0</b>	<b>19.8</b>	<b>4.5</b>	<b>-21.5</b>	<b>9.3</b>
Canada	1.82	1.92	1.54	1.67	1.79	-3.1	-14.7	11.1
United States	15.7	17.0	14.5	15.3	16.8	6.3	-23.0	9.0
Mexico	1.22	1.32	0.95	1.04	1.13	-6.2	-9.1	11.5
<b>Western Europe</b>	<b>13.0</b>	<b>14.1</b>	<b>10.7</b>	<b>10.1</b>	<b>11.4</b>	<b>-9.0</b>	<b>-30.2</b>	<b>1.9</b>
Germany	3.2	3.6	2.9	2.5	2.8	-10.9	-34.9	-5.2
United Kingdom	2.3	2.3	1.6	1.7	1.9	6.0	-24.6	2.8
<b>Eastern Europe</b>	<b>3.3</b>	<b>2.9</b>	<b>2.8</b>	<b>2.9</b>	<b>3.2</b>	<b>-4.8</b>	<b>-26.7</b>	<b>8.8</b>
Russia	2.1	1.7	1.5	1.6	1.8	2.8	-18.1	10.5
<b>Asia</b>	<b>31.8</b>	<b>33.8</b>	<b>30.6</b>	<b>31.9</b>	<b>34.8</b>	<b>7.5</b>	<b>-11.5</b>	<b>9.7</b>
China	19.7	21.5	20.2	20.8	22.6	9.6	-4.5	8.8
India	3.3	3.6	2.8	3.5	4.0	20.1	-27.3	35.3
Japan	5.1	5.2	4.6	4.4	4.6	8.3	-31.3	-1.3
<b>South America</b>	<b>4.3</b>	<b>3.8</b>	<b>2.8</b>	<b>3.1</b>	<b>3.3</b>	<b>-2.6</b>	<b>-18.6</b>	<b>17.5</b>
Brazil	2.91	2.67	1.95	2.00	2.13	-5.2	-26.9	7.6
Chile	0.34	0.37	0.26	0.39	0.44	4.8	6.4	66.8
Colombia	0.26	0.26	0.19	0.24	0.27	-3.2	10.5	44.2
Peru	0.16	0.15	0.11	0.15	0.17	-2.4	9.3	47.0

Sources: Scotiabank Economics, Wards Automotive, Bloomberg.

**Table 2 — North American Production Outlook**

	2010-19	2019	2020	2021f	2022f
(millions of units, annualised)					
<b>North American Production</b>	<b>15.9</b>	<b>16.2</b>	<b>13.0</b>	<b>13.8</b>	<b>16.2</b>
Canada	2.2	1.9	1.4	1.2	1.6
United States	10.4	10.5	8.6	9.4	11.0
Mexico	3.2	3.8	3.0	3.1	3.6

Sources: Scotiabank Economics, Wards Automotive.

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