

2021 IAA INDUSTRY REPORT

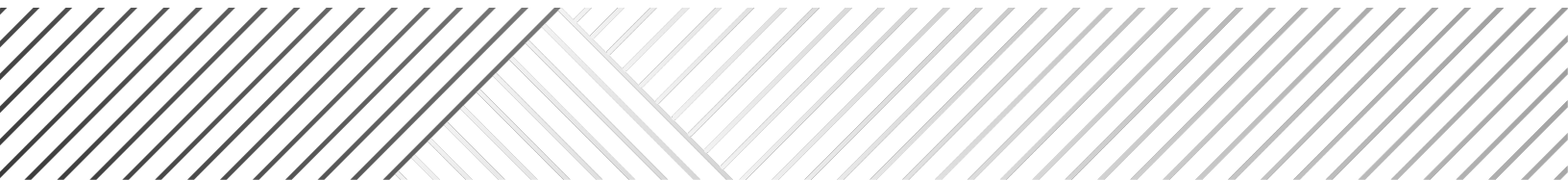




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Executive Summary

Economy

The U.S. economy has been recovering from an extremely volatile couple of years. A strong fiscal and monetary policy response contributed to a solid recovery in GDP in 2021, pushing it to near pre-pandemic level. GDP ended the year with a 5.7% annual growth rate. As the economy improved, the unemployment rate also continued its fall toward pre-pandemic levels, ending the year at 3.9%. While the headline unemployment numbers appeared strong, the labor market showed signs of weakness in terms of a labor shortage linked to a continued drop in labor force participation. One

consequence of the economic recovery was persistent inflation throughout 2021, ending the year at 7.0% year-over-year. This was the highest inflation rate in nearly 40 years. While inflationary pressure was broad-based, energy, food and used-car prices were contributing factors in the latter half of the year. The U.S. dollar strengthened in the early days of the pandemic then dropped until rallying in the latter half of 2021. The rally was caused by weaknesses in major trading partner currencies, such as the euro, and expectations of rising interest rates from the Federal Reserve.

2021 Real GDP Growth
5.7%

Inflation
7.0%
(Dec 2021 year-over-year)

Unemployment Rate
Ended year at **3.9%**

Average Unemployment
Rate 2021 **5.6%**
Rate decreased **2.5%**
between 1/21-12/21

<https://www.bea.gov/news/2022/gross-domestic-product-fourth-quarter-and-year-2021-advance-estimate>

<https://fred.stlouisfed.org/series/GDPC1>

<https://fred.stlouisfed.org/series/UNRATE>

<https://fred.stlouisfed.org/series/CPIAUCSL>

<https://fred.stlouisfed.org/series/TWEXAFEGSMTH>



Automotive Summary

The automotive industry experienced another irregular year, with a significant increase in sales at the beginning of the year due to a jump in consumer demand. As supply-side issues, such as the global semiconductor chip shortage, hampered production, new vehicle sales fell from an annualized high of 18.3 million units sold in April to 12.8 million in September. Compared to 2020, new vehicle sales increased by a modest 3.5% year-over-year. Used-car sales spiked during the semi-conductor shortage, with an estimated 40.9 million in sales, a 10% increase from 2020. The shift from new to used caused used-car prices to increase 32.6% year-over-year. Electric vehicle sales rose substantially compared to 2020. As more people traveled during the summer, gas prices rose 39.8% for the year and diesel prices were up 28.4%. Domestic supply issues, OPEC supply decisions, and an increase in Americans driving drove the price of crude oil up.

New Vehicle Sales

3.5% year-over-year

Used-Car Price Index

32.6% year-over-year

Gas Prices **39.8%**

Diesel Prices **28.4%**

<https://fred.stlouisfed.org/series/ALTSALES>

<https://www.gasbuddy.com/go/gas-prices-2021-year-in-review>

https://www.eia.gov/dnav/pet/pet_pri_gnd_dcus_nus_m.htm



Whole-Crushed Auto-Body Prices

63.6% year-over-year

Aluminum **43.8%** year-over-year

Platinum **23.3%**

Palladium **8.6%**

Lithium **437%**

Salvage Summary

As vaccines were rolled out and COVID-19 restrictions became more relaxed, the auto scrap industry experienced a significant increase in demand. Overall, whole-crushed auto-body prices were up 63.6% from 2020. From a metals perspective, platinum prices increased 23.3% year-over-year as producers moved away from palladium, which saw prices increase by a modest 8.6%. After initially rising at the start of the year, palladium prices plunged as the year went on. The ongoing global semiconductor chip shortage continued to influence the auto and salvage markets, putting pressure on palladium prices. Production issues attributed to the chip shortage caused many consumers to look toward the used-car market, which had a 32.6% increase in prices year-over-year. As for metals commonly used in the production of EV batteries, commodity metals, such as lithium, skyrocketed. Lithium's price increased by approximately 437% for the year.

www.americanrecycler.com

<http://www.platinum.matthey.com/prices/price-tables>

<https://www.spglobal.com/platts/en/market-insights/latest-news/energy-transition/121421-commodities-2022-global-lithium-market-to-remain-tight-into-2022>

<https://publish.manheim.com/en/services/consulting/used-vehicle-value-index.html>

https://tradingeconomics.com/commodity/lithium?fbclid=iwar2lgz1_bgx6xvf3c8wajihulolpli4pueelnmfcow8sryvtiqcrlabk9nm

Section One

U.S. Economy

2021: U.S. Economic Readjustment

In 2020, after suffering its largest single-quarter reduction in GDP since 1950, the U.S. economy returned to pre-pandemic GDP levels in 2021. Using annualized data, quarterly GDP growth increased at an encouraging rate. In the first quarter, GDP rose by 6.3%, and similarly, in the second quarter, rose by 6.7%. GDP slowed to a 2.3% increase in Q3, only to increase by 6.9% in Q4. Non-annualized data showed a similar story, increasing Q1 to Q4 by 1.5%, 1.6%, 0.6%, and 1.7%, respectively. These figures are promising, given GDP dropped by \$2 trillion in 2020. By the second quarter of 2021, real GDP rose above \$19.25 trillion, which was the highest real GDP since before the pandemic. Real GDP continued to grow through the end of the year. The final GDP growth number for 2021, according to the BEA, was an annual increase of 5.7%.

GDP growth was driven by a return to 2020 consumer spending levels, along with a shift back toward spending on services by consumers. Business investment was also an important driver of 2021 GDP numbers. However, swings in inventory spending was the most important factor in this category, as firms grappled with supply chain challenges.

While 2021 was an improvement over 2020, new challenges, such as inflation, labor shortages, and high energy prices, will remain important factors shaping 2022's economic performance.

REAL GDP

2019 **\$19.25 trillion, 2.3% growth**
2020 **\$18.78 trillion, -3.4% growth**
2021 **\$22.99 trillion, 5.7% growth**



<https://www.bea.gov/news/2022/gross-domestic-product-fourth-quarter-and-year-2021-advance-estimate>

<https://apps.bea.gov/iTable/iTable.cfm?reqid=19&step=2#reqid=19&step=2&isuri=1&1921=survey>

<https://fred.stlouisfed.org/series/GDPC1>

<https://fred.stlouisfed.org/series/PCE>



Inflation Heats Up

A key economic measure making headlines in 2021 was the rising inflation rate, which started increasing in the summer and extended through the end of the year. In December 2021, year-over-year inflation was running at 7.0%, the highest rate the U.S. had seen since 1982. Inflation in 2021 increased significantly compared to the year-over-year inflation rate of 1.3% in 2020. Although the Federal Reserve debated whether this inflation was permanent or transitory, in terms of a policy response, the inflation rate continued to speed up through the end of the year. While energy prices were up 29.3% and food prices were up 6.3% over this same

period, it is notable that the all-item CPI, less food and energy, was still up 5.5%. Beyond energy and food prices, used-car prices were also on the rise. Over the course of 2021, the consumer price index for used cars and trucks in the United States increased by 38.4%. Much of this increase was due to supply chain issues, but many companies had cut back on production, decreasing the supply of used cars. This suggests more broad-based inflation, an indicator monetary policymakers are likely to watch when determining the appropriate course of action.

2020 **1.3%**
(Dec 2020 year-over-year)

2021 **7.0%**
(Dec 2021 year-over-year)

https://www.bls.gov/news.release/archives/cpi_01122022.htm

<https://fred.stlouisfed.org/series/CPIAUCSL#0>

<https://fred.stlouisfed.org/series/CUSR0000SETA02>

<https://fortune.com/2021/09/17/manheim-index-report-high-used-car-prices-us-inflation/>



Labor Slowly Returns

The labor market trended toward pre-pandemic levels in 2021, after reaching the highest unemployment rate in the past century due to the economic impact of the pandemic. After a quick partial rebound in 2020, unemployment rates slowly decreased in 2021. At the start of 2021, the unemployment rate sat around 6.4%. During the year, unemployment steadily dropped and finished at about 3.9%. Prior to the pandemic, the unemployment rate was 3.5%, its lowest level since 1969. The unemployment rate continued to improve, but the annual average of 5.6% was still relatively high compared to the 3.7% recorded in 2019.

National employment trended toward pre-pandemic levels, but the distribution of those returning to the job market was skewed. From January 2020 through August 2021, high-income employment (paying greater than \$60K) increased by 10%, while low-income employment (paying less than \$27K) fell by 26%. In 2021 alone, from January-August, high-income employment increased by 8%, while low-income decreased by 2%. These statistics highlight the unfortunate reality that the economic effects of the pandemic have had varying impacts across households, depending on their circumstances.

<https://fred.stlouisfed.org/series/UNRATE>

<https://tracktherecovery.org/>

Auto Industry Labor Shortage

Over 2021, the United States saw labor shortages across many different industries, including the auto industry. Segments within the auto industry that saw the largest decreases in employment included rental car companies, used parts sellers, and parts manufacturing. Other areas saw increased employment but continued to struggle to bring on additional needed workers. There were a few key reasons that seemed to cause the labor shortages within this industry. One was the aging labor pool. Other primary reasons were intertwined with the supply chain issues that have been ongoing over the past two years. Since there was a shortage of new cars, the average age of cars on the road increased from 11.9 years in 2020 to 12.1 years in 2021. This caused higher demand for workers in repair shops and other related areas. While labor shortages continue within the auto industry, it is encouraging that employment has nearly returned to pre-pandemic levels. The challenge going forward will be to continue that growth in employment above and beyond the levels that were seen before the pandemic in order to match the increasing demand for workers.

AVERAGE UNEMPLOYMENT

2019 3.7%

2020 8.1%

2021 5.6%

December
2021 3.9%
(downward trend)

https://data.bls.gov/cew/apps/data_views/data_views.htm#tab=Tables

https://www.mmh.com/article/us_manufacturing_skills_gap_could_leave_as_many_as_2.1_million_jobs_unfilled

<https://www.bloomberg.com/news/articles/2021-10-16/car-parts-shortages-are-hitting-u-s-garages-creating-weeks-long-delays>

<https://www.washingtonpost.com/business/2021/12/29/job-market-2021/>

<https://www.cnn.com/2021/09/28/cars-on-american-roads-keep-getting-older.html#:~:text=The%20average%20age%20of%20a,their%20cars%20at%20the%20most.>

Wages on the Rise

Wages grew steadily in 2021, with an annual average rate of 3.7%. Throughout the pandemic, this growth was similar to previous years. Wages rose 3.6% in 2020, 3.7% in 2019, and 3.4% in 2018.

Although it did not change drastically year-over-year, wage growth has differed among certain demographics. Education levels, for example, saw varying wage growth. Wages for jobs requiring a high school education increased from 3.6% in January to 4.2% by December. This was a dramatic increase compared to wages requiring a bachelor's degree, which increased steadily at 3.4%. Another interesting demographic differential in 2021 was working age. For individuals 55 and older, wage growth increased at just 2%. In contrast, wage growth for 16-24-year-olds increased by 8.6%. Lastly, wage growth by industry also differed. Education and healthcare workers saw the lowest increase in wages at 3.2%. Among other industries, the construction and business services industries saw wage growth rise by 4% and 3.7%, respectively. Although there was steady wage growth compared to previous years, the small sample shows differences within each demographic.

3.7%

WAGE GROWTH INCREASE YEAR-OVER-YEAR

INDUSTRY

Education and Healthcare	3.2%
Construction	4%
Business	3.7%

<https://www.atlantafed.org/chcs/wage-growth-tracker>

<https://www.ama-assn.org/practice-management/physician-health/half-health-workers-report-burnout-amid-covid-19>



The Fall and Rise of the Dollar

The weighted index of the U.S. dollar relative to the currencies of major trading partners dropped by 4.2%, from 109.1 in 2020 to 104.5 in 2021. At first glance, this suggests that the U.S. dollar had less purchasing power when looking at the annual averages. However, the strength of the U.S. dollar was somewhat volatile last year. Even though the average decreased, the dollar gained strength over the latter half of 2021, increasing by 6.1% from May to December. The dollar rally was linked to weak performance in trading partner currencies, such as the euro, and rising expectations of the Federal Reserve to raise interest rates to combat inflation.

TRADE WEIGHTED U.S. DOLLAR INDEX ANNUAL AVERAGES

2019	110.2
2020	109.1
2021	104.6

<https://fred.stlouisfed.org/series/TWEXAFEGSMTH>

<https://www.reuters.com/business/perfect-storm-lifts-dollar-over-unsettled-markets-2021-10-01/>

Rising Prices at the Pump

Gas prices steadily increased, starting around \$2 and rising above \$3 in 2021. The COVID-19 pandemic caused prices to fall significantly over the course of 2 months in 2020. Average gas prices prior to the pandemic sat around \$2.50 and dropped to an average of \$1.70 by the beginning of May 2020. Gas and diesel prices increased by 41% and 36%, respectively, in 2021. Travel continued to ramp up as the economy eased back into normalcy. In 2021, demand for gas increased as the economy recovered from the pandemic and people returned to work. Supply, however, continued to lag. OPEC has kept production low since the pandemic began. OPEC had a strong influence on the 6.15 million barrels per day production decrease in 2020. The limited supply resulted in higher gas prices. Beyond OPEC, Colonial Pipeline endured a cyber-attack, which caused gas supplies to be further disrupted.

AVERAGE GASOLINE PRICE

2019	\$2.49
2020	\$2.08
2021	\$2.90

AVERAGE DIESEL PRICE

2019	\$3.06
2020	\$2.56
2021	\$3.28

<https://www.gasbuddy.com/go/gas-prices-2021-year-in-review>
https://www.opec.org/opec_web/en/press_room/6632.htm
https://www.eia.gov/dnav/pet/pet_pri_gnd_dcus_nus_m.htm

Section Two

Automotive Industry

New Vehicle Sales Increased but Supply Challenges Remain

With the economy recovering through 2021, the auto industry saw some growth overall. Compared to 2020, average monthly new car sales increased by a modest 3.5%. However, supply-side issues, such as the chip supply crisis, severely impacted the automotive industry. The chip shortage began in the first half of 2020, making it difficult for automakers to secure orders of semiconductors. These chips are an intermediate good used in the production of automobiles. With chip manufacturers dealing with supply-chain issues, and consumer demand falling at the start of lockdown, chip manufacturers shifted their production away from the auto industry and toward the personal technology industry. Once consumers looked to buy more cars, the auto industry did not have the semiconductors it needed. This resulted in approximately \$210 billion in lost revenue for the automotive industry in 2021.

After peaking at approximately 18.3 million annualized units in April, monthly new U.S. car sales declined substantially throughout the summer, decreasing 33% in September. In December, monthly new car sales finished at 12.5 million annualized units, far from the initial

growth experienced in the first quarter. The semiconductor chip shortage severely impacted auto production worldwide, limiting the supply of vehicles entering the market. This made it difficult for consumers to find vehicles at a price they were comfortable paying. 82% of consumers had to pay above the sticker price for new vehicles, compared to 0.3% in early 2020.

NEW VEHICLE SALES

2019 **16.9 million units**

2020 **14.4 million units**

2021 **14.9 million units**

2021 Average Monthly
New Car Sales **3.5%**

<https://www.washingtonpost.com/technology/2021/03/01/semiconductor-shortage-halts-auto-factories/>

<https://www.edmunds.com/industry/press/8-out-of-10-of-car-shoppers-paid-above-sticker-price-for-new-vehicles-in-january-according-to-edmunds.html>

<https://www.cnn.com/2021/09/23/chip-shortage-expected-to-cost-auto-industry-210-billion-in-2021.html>

<https://www.techrepublic.com/article/global-chip-shortage-cheat-sheet/>

<https://fred.stlouisfed.org/series/PSAVERT>



Used-Car Market Strong

With the semiconductor shortage emerging, used-car sales spiked during 2021, with an estimated 40.9 million in sales, a 10% increase from 2020. The shift from new to used caused prices to increase, with used-car prices up 32.6% year-over-year compared to 2020. With fewer new vehicles being produced, and consumers facing massive sticker shock, many looked to the used-car market rather than the new-car market. With government stimulus driving stronger consumer demand in the first quarter, used-car prices rose throughout the year. Strong demand and high prices made the used-car market one of the hottest markets in 2021.

10%
**USED-CAR
SALES INCREASE
YEAR-OVER-YEAR**

<https://www.consumerreports.org/buying-a-car/get-the-car-you-need-now/>

<https://www.autonews.com/retail/used-car-sales-set-us-record-2021-cox-automotive-says>

<https://www.manheim.com/>

<https://www.reuters.com/business/autos-transportation/used-car-retailer-carmax-profit-beats-stimulus-checks-drive-demand-2021-06-25/>

https://opportunityinsights.org/wp-content/uploads/2021/01/Oi_Secondstimulus_analysis.pdf

Used-Car Price Index

The shortage of new cars—caused by the global chip shortage—pushed consumers into the used-car market, where wholesale prices rose substantially in 2021. High consumer demand, as a result of a reawakening economy from the stimulus packages, elevated savings levels, and the diminished supply of new vehicles, drove used-car prices. Average prices increased from \$12,551 in January, to \$15,001 in May, before dipping slightly to \$14,250 in July, and then rallying to \$16,318 in October. The wholesale price finished the year at \$16,026 in December, a 32.6% increase from January.

2021 Used-Car Wholesale Prices

32.6%

USED-CAR PRICE INDEX

2019 Average **116**

2020 Average **124**

2021 Average **153**

<https://www.usatoday.com/story/money/cars/2022/02/13/used-cars-cost-more/6778705001/>

<https://www.karglobal.com/2021-year-end-kontos-kommentary-current-used-vehicle-market-conditions/>

EV Market Strengthens

Electric vehicles' share of the total U.S. market jumped from 1.8% in 2020 to 3.4% in 2021. EV sales rose on the heels of an increase in consumer demand for energy-efficient vehicles. The U.S. represented 4.5% of the global EV market share in 2021. In total, 434,879 electric vehicles were sold in the U.S. last year. EV sales were up 83% from 2020, with Tesla being the top seller. In 2022, an increasing public and private push for an improved and expanded electric vehicle market and infrastructure may positively impact EV sales. This effort has been boosted by the Biden administration's August 2021 EV executive order and rising gas prices.

U.S. EV MARKET SHARE

2020 1.8%

2021 3.4%

SALES UP 83%

<https://insideevs.com/news/566900/us-plugin-car-sales-2021q4/>

<https://www.iea.org/commentaries/electric-cars-fend-off-supply-challenges-to-more-than-double-global-sales>

<https://www.thedetroitbureau.com/2022/01/ev-sales-jumped-83-in-u-s-in-2021-tesla-still-on-top/>

<https://www.reuters.com/business/autos-transportation/us-hybrid-electric-car-sales-hit-record-highs-2022-01-06/>

Section Three

Economic Indicators of Automotive Salvage



Demand Increases for Automotive Scrap

An increased demand for scrap metal drove whole crushed auto-body prices to rise throughout 2021. An increase in consumer demand for various products in the electronics, automotive and construction sectors contributed to a jump in demand for recycled scrap metal. Higher steel and copper prices incentivized producers to go after recycled scrap, as the cost of recycling is less than mining ores. Crushed auto-body prices saw the greatest rise in the spring and early summer. Whole crushed auto-body prices were up 63.6% from the previous year, with prices increasing from an average of \$193.4 in April to \$252 in December.

Whole Crushed Auto-Body Prices increased **63.6%**

2019 Average **\$161**

2020 Average **\$137**

2021 Average **\$224**

<https://glescrap.com/blog/consumer-demand-for-autos-and-electronics-is-boosting-scrap-metal-recycling/>

<https://federalmetals.ca/the-benefits-of-recycling-vs-extracting-raw-metal/>

www.americanrecycler.com

<http://www.platinum.matthey.com/prices/price-tables>

Aluminum, Platinum, and Palladium

Aluminum prices significantly increased in 2021. The auto industry experienced a faster than expected boost in demand. This helped drive aluminum prices, reaching its highest price per pound since April 2011. Prices peaked at \$1.33 per pound in October. The average price per pound of aluminum was \$1.11, up 43.8% year-over-year. Overall, platinum prices were up 23.3% year-over-year. At the start of the year, prices increased from an average of \$1,033 in December 2020 to \$1,215 in February 2021. Prices oscillated between \$950 and \$1,220 from spring to the end of the year, peaking in May. This oscillation may have been partly due to decreasing demand caused by the global semiconductor chip shortage. As for palladium, prices increased 8.6% year-over-year; however, this figure is deceiving. The price rally experienced at the end of 2020

continued into 2021, as pent-up demand and reduced auto production drove metal prices up. As palladium is heavily used to produce catalytic converters in internal combustion engines, prices rose from a monthly average of \$2,398 in January to a high of \$2,896 in May. As the global semiconductor chip shortage reduced consumption and auto sales, the price of palladium fell a staggering 23.5% by yearend. This was significantly different from the rally it experienced at the beginning of 2021. As automakers and policymakers have become more environmentally focused, automakers have begun switching to other metals, such as platinum, for pollution control devices. Palladium performed worst compared to other precious metals.

Aluminum **43.8%**
Platinum **23.3%**
Palladium **-23.5%**

*Aluminum data for Dec. 2021 not yet published.
This covers Nov. 2020-Nov. 2021.*

<https://markets.businessinsider.com/news/commodities/aluminum-prices-supply-chain-demand-metals-china-commodities-futures-2021-8>

<https://www.marketwatch.com/story/platinum-palladium-buck-an-overall-upward-trend-for-commodities-poised-for-hefty-2021-losses-11638467090>

<https://www.recyclingtoday.com/article/precious-metals-price-rebound-unlikely-2022/>

<https://www.bloomberg.com/news/articles/2021-12-22/the-only-way-is-up-for-worst-performing-major-commodity-of-2021>

<https://platinuminvestment.com/>

<https://investingnews.com/daily/resource-investing/precious-metals-investing/platinum-investing/platinum-outlook/>

<https://fred.stlouisfed.org/series/PALUMUSDM>

<https://investingnews.com/daily/resource-investing/precious-metals-investing/palladium-investing/palladium-outlook/>



EV Metals

On the heels of increased demand for electric vehicles, cobalt, used in the production of EV batteries, saw its price rise substantially in 2021. European cobalt metal prices averaged around \$21 per pound in Q2, slightly higher than in Q1. By November 2021, cobalt prices had risen more than 90%, their highest since 2018, to \$30 per pound. As for lithium, the leading battery type for EVs, demand for the metal grew exponentially in 2021. Lithium carbonate prices increased by 413%, and lithium hydroxide prices increased by nearly 254% from January to December. Record-high lithium prices occurred almost every month, fueled by a mismatch between short supply and strong demand. COVID-19 restrictions in Argentina decreased production of the metal in 2020, and the affects were still being felt in 2021. Lithium carbonate prices were at \$39,250 per metric ton in December 2021.

Cobalt	90%
Lithium Carbonate	413%
Lithium Hydroxide	254%

<https://investingnews.com/daily/resource-investing/battery-metals-investing/cobalt-investing/cobalt-trends/>

<https://www.forbes.com/sites/rpapier/2021/12/31/the-challenges-posed-by-rising-lithium-prices/?sh=23e01f3a3af9>

<https://www.spglobal.com/platts/en/market-insights/latest-news/energy-transition/121421-commodities-2022-global-lithium-market-to-remain-tight-into-2022>

<https://www.reuters.com/business/energy/lithium-carbonate-prices-jump-record-high-china-bmi-2022-01-05/>

https://afdc.energy.gov/vehicles/electric_batteries.html

Section Four

Looking Forward

Geopolitical Uncertainty will Weigh Heavily in 2022

The existing economic and market challenges from 2021 highlighted in this report have been complicated by the rising geopolitical challenges associated with the Russia-Ukraine conflict that began in February of 2022. While this report looks to highlight trends and expectations for the markets ahead, it cannot overstate the cloud of global uncertainty surrounding the effects of this conflict. In addition to the significant impact this situation has already had on the people directly involved, there have been economic ripples felt in the food and energy markets. According to Morgan Stanley Chief Economist, Seth Carpenter, global growth should remain solid, however, “global inflation will be higher, and we see a direct drag on growth from higher commodity prices and possibly a further drag from uncertainty.” There is little doubt that this situation will play a role in shaping the economic outlook for 2022.

U.S. Economy: The Recovery Continues

In 2021 the U.S. economy made a solid comeback from the Q2 2020 recession, despite ongoing pandemic challenges. For the full year, GDP rose 5.7%, the highest growth rate since 1984. Specifically, the spike stemmed from businesses being able to open back up and replenish their inventories. In addition, the rounds of stimulus checks going to households, as well as government aid to businesses, really pushed the economy along. In fact, throughout 2021 there was a 7.9% increase in consumer spending and 9.5% jump in private investment, which helped spike the growth rate. The economy also recovered almost 19 million of the 22 million jobs lost in 2020 during 2021. However, amid the vaccine's widespread availability, new strains were also present, specifically the Delta and Omicron variants later in the year.

With that said, 2022 will be an interesting year for the U.S. economy. While GDP and unemployment numbers look strong, inflation, supply chain issues, energy prices, labor shortage challenges, and the economic effects of the Ukraine-Russia conflict will serve as headwinds to U.S. economic performance. Most notable is inflation, which is linked to several of the factors mentioned above. This is an issue that policymakers will likely focus on in 2022, with the Federal Reserve grappling with the size and frequency of interest rate increases throughout the year in its attempt to balance economic growth with slowing inflationary pressure. While there is reason to be optimistic about 2022, due to the factors noted in this section, there remains a great deal of uncertainty as we continue navigating through the year.



<https://www.nytimes.com/2022/01/27/business/us-gdp-4q-2021.html>

<https://time.com/6131764/2021-us-economy-explained-in-charts/>



Automotive Market Challenges Likely to Remain

According to the National Automobile Dealers Association's (NADA) chief economist, the major challenge in this sector is the constrained inventory of new vehicles due to the chip shortage and production cuts. Compared to 2020's sales volume, 2021 had an increase of 3.1%, resulting in a total of 14.93 million units. Moving into 2022, NADA forecasts new vehicle sales of 15.4 million units, an increase of 3.4% from 2021. On the other hand, the existing microchip shortage dating from 2020 remains and is expected to last through Q2 of 2022. Auto Forecast Solutions projects that 11.3 million vehicles will not be produced in 2022 as a result of this scarcity. This also caused the spike in prices of used vehicles in 2021, which is expected to continue if these conditions remain. With pandemic-driven government stimulus programs out of the picture, household savings falling to pre-pandemic levels, and rising inflation rates, the hot used-car market may start to cool down due to declining consumer demand, as prices face a head-wind in 2022.

<https://blog.nada.org/2022/01/11/nada-issues-analysis-of-2021-auto-sales-2022-sales-forecast/>

<https://www.nytimes.com/2021/07/15/business/car-sales-chip-shortage.html>



The Scramble for Metal Continues

Metal was a hot commodity in 2021. As EV sales increased, so did the demand for lithium and cobalt as essential materials for battery production. This resulted in skyrocketing prices for both. Lithium saw an annual growth rate of 497.6%. In addition, since major automakers like Ford and GM have committed to producing zero emission cars by 2040, other materials used to make batteries, like lead and nickel, were also in high demand. Similarly, steel had a spike in demand as another essential material for the production of new vehicles. By July 2021, the price of steel had increased by 200%, which was further exacerbated by limited supply due to the closing of steel mills around the country. Thorsten Schier, a metal expert at Fast Markets, expects this trend to continue into 2022 as “people are just scrambling for material.” As for aluminum, prices have stabilized after reaching a 13-year high stemming from a Chinese energy crunch brought on by new mining laws, climate policies, and shortages in supply. Fitch forecasts aluminum prices to be \$2,300 per metric ton in their latest 2022 quarterly report.

<https://www.mining-technology.com/comment/us-steel-prices-remain-high-into-2022/>

<https://fortune.com/2021/07/08/steel-prices-2021-going-up-bubble/>

<https://store.fitchsolutions.com/metals/bmi-aluminium-report>

<https://www.mining.com/web/chart-how-metals-prices-performed-in-2021/>

Section Five

Canadian Commentary



Canadian Economy Slowly Recovering

By the end of 2021, it was evident that Canada's economy was slowly recovering to pre-pandemic levels after governmental COVID-19 restrictions were lifted. GDP was on track to reach 6% growth in Q4, and employment rates were rising again. Bloomberg was hopeful that a full recovery was near, but also expects a series of increasing interest rates from the Bank of Canada to combat inflation. Overall, consumer confidence rose throughout the year, hitting its peak in July. Likewise, the employment rate increased to pre-pandemic levels.

Gasoline prices started the year at \$0.89/liter and ended at \$1.13/liter in December. The almost 27% increase was a result of the federal carbon tax and a weak Canadian dollar, according to Dan McTeague, President of Canadians for Affordable Energy.

Moving forward, Canada may face many of the same challenges as the U.S. in terms of continuing its economic recovery while facing the headwinds of rising inflation, supply chain challenges, and labor market issues, according to the Business Development Bank of Canada.

<https://www.aljazeera.com/economy/2021/12/23/canadas-economy-expands-for-sixth-straight-month-in-november>

<https://tradingeconomics.com/canada/consumer-confidence>

<https://tradingeconomics.com/canada/gasoline-prices>

<https://www.ctvnews.ca/business/record-high-gas-prices-expected-for-ontario-quebec-1.5757402>

<https://www.bdc.ca/en/articles-tools/blog/2022-economic-outlook-return-normal>

Forward-Looking Statement

Certain statements contained in this report contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 and which are subject to certain risks, trends and uncertainties. In particular, statements made in this report that are not historical facts may be forward-looking statements. Words such as "should," "may," "will," "anticipates," "expects," "intends," "plans," "believes," "seeks," "estimates" and similar expressions identify forward-looking statements. Such statements include statements regarding the expected timing and associated benefits with respect to the 2021 Industry Report on our business and plans regarding our growth strategies and margin expansion plan, and to our customers and company generally. Such statements are based on management's current expectations, are not guarantees of future performance and are subject to risks and uncertainties that could cause actual results to differ materially from the results projected, expressed or implied by these forward-looking statements. These risks and uncertainties include, but are not limited to: uncertainties regarding COVID-19, and other potential future health crises, including new more contagious and/or vaccine resistant variants, and the impact on the duration and severity of the COVID-19 pandemic and measures intended to reduce its spread, including the availability, rate of public acceptance and efficacy of COVID-19 vaccines; the loss of one or more significant vehicle suppliers or a reduction in significant volume from such suppliers; our ability to meet or exceed customers' demand and expectations; significant current competition and the introduction of new competitors or other disruptive entrants in our industry; the risk that our facilities lack the capacity to accept additional vehicles and our ability to obtain land or renew/enter into new leases at commercially reasonable rates; our ability to effectively maintain or update information and technology systems; our ability to implement and maintain measures to protect against cyberattacks and comply with applicable privacy and data security requirements; risks associated with online commerce security and credit card fraud; our ability to successfully implement our business strategies or realize expected cost savings and revenue enhancements, including from our margin expansion plan; weather-related and other event beyond our control which may adversely impact operations; failure to attract and retain key personnel, have inadequate succession planning, or manage labor shortages; business development activities, including acquisitions and the integration of acquired businesses, and the risks that the anticipated benefits of any acquisitions may not be fully realized or take longer to realize than expected; our expansion into markets outside the U.S. and the operational, competitive and regulatory risks facing our non-U.S. based operations; our reliance on subhaulers and trucking fleet operations; changes in used-vehicle prices and the volume of damaged and total loss vehicles we purchase; economic conditions, including fuel prices, commodity prices, foreign exchange rates and interest rate fluctuations; trends in new- and used-vehicle sales and incentives; and other risks and uncertainties identified in our filings with the Securities and Exchange Commission (the "SEC"), including under Item 1A "Risk Factors" in our Annual Report on Form 10-K filed with the SEC on February 28, 2022, as such risk factors may be amended, supplemented or superseded from time to time by other reports we file with the SEC, including subsequent Quarterly Reports on Form 10-Q and Annual Reports on Form 10-K. Many of these risk factors are outside of our control, and as such, they involve risks which are not currently known that could cause actual results to differ materially from those discussed or implied herein. The forward-looking statements in this report are made as of the date on which they are made and we do not undertake to update our forward-looking statements.



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