



## US auto-manufacturers experience worsening credit outlook in the face of a global chip shortage

By [Yuxi Lin](#)

- Amid an ongoing global chip shortage, the NUS-CRI Agg PD shows the deteriorating credit quality of US automakers, in part due to production cuts and supply chain lags
- The industry faces a worsening credit outlook as a potential decline in operating cash flows strains companies' ability to transition to the incumbent EV boom

After rebounding from the COVID-19 pandemic, US automotive manufacturers<sup>1</sup> (automakers) are now facing a new wave of challenges brought about by production cuts and supply chain issues pertaining to the ongoing global chip shortage. With domestic production of automotive under significant strain, the credit profile of the industry has taken a turn for the worse over the past few months. The NUS-CRI Aggregate (median) 1-year Probability of Default (Agg PD) in Figure 1 illustrates the increasingly elevated credit risks faced by the sector since Mar-2021, with the Agg PD surging beyond the BBB- upper bound according to the PDiR2.0<sup>2</sup>. Furthermore, with the accelerated transition of the sector towards the production of Electric Vehicles (EVs), US automakers face increasing pressure to invest in expensive R&D in order to remain competitive both globally and domestically. Against the backdrop of an already stressed operating environment, the potential financial stress posed by such investments into the R&D of EV production may strain cash flows and pose increasing headwinds for traditional US automakers.

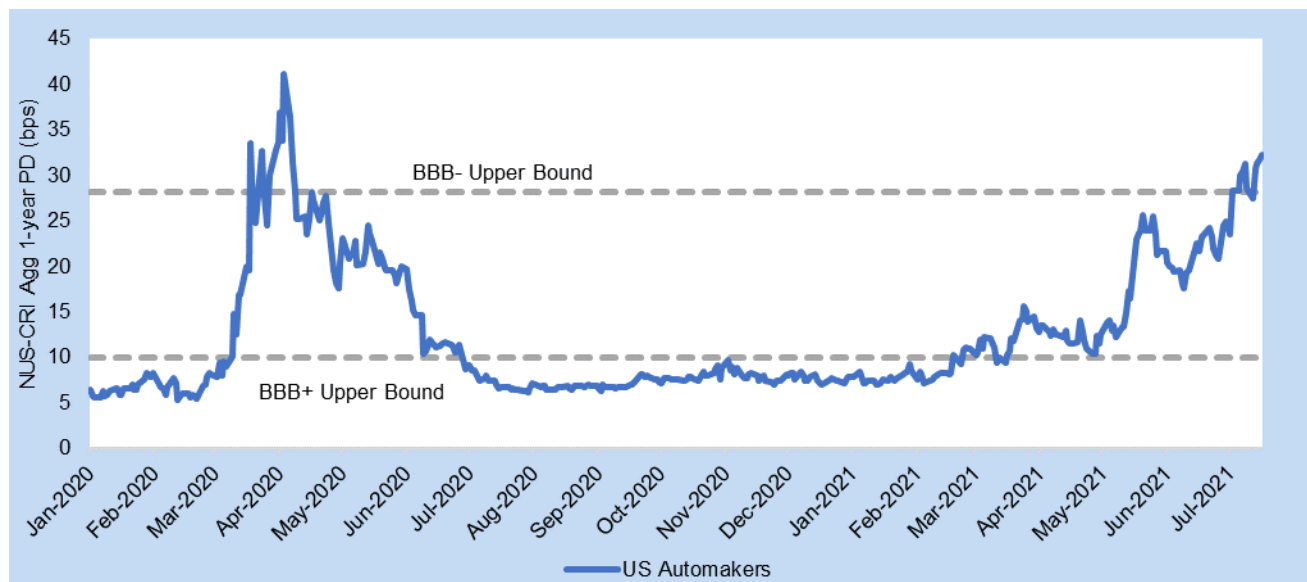


Figure 1: NUS-CRI Aggregate 1-year PD for US automotive manufacturers with PDiR2.0 bounds. Source: NUS-CRI

The ongoing shortage of semiconductors around the globe has affected the supply chain of a plethora of US industries, with effects being felt not least for the US auto and auto parts manufacturing companies. US automakers have been particularly hard hit by the shortage as they lack the negotiating power compared to their consumer electronic counterparts. Not only has the chip shortage disrupted domestic production of automobiles, with motor vehicles and auto parts production [contracting](#) 22.5% in Q2 2021, the issue also highlights the heavy reliance of domestic automakers on the import of semiconductors from foreign suppliers. The impact of this shortage on the industry's production capabilities is [profound](#) given the industry's historic "just-in-time"

<sup>1</sup> Includes automotive manufacturers and automotive part manufacturers

<sup>2</sup> The Probability of Default implied Rating version 2.0 (PDiR2.0) provides a more familiar interpretation through mapping the NUS-CRI 1-year PDs to the S&P letter grades. The method targets S&P's historical credit rating migration experience exhibited by its global corporate rating pool instead of relying solely on the reported default rates.

procurement of semiconductors – with inventories being stretched thin amidst a [strong](#) rebound in domestic demand, some auto plants at US automakers like General Motors and Ford have been forced to put production on pause. As the possibility of delays stretch on, the shortage may cost US auto-manufacturers [tens of billions of dollars](#) in potential losses.

Though the US automotive industry has largely been able to survive the chip shortage, partially as they were able to issue new debt amidst record-low borrowing costs last year, the industry now faces a challenging financing environment should they need to further refinance over the next 2 to 3 years. Combined, industry participants issued close to USD 18bn in 2020. As we can see from Figure 2a, close to 67% of the debt issued is due to mature between 2023 and 2025. Thus, even though the issuance of new debt in 2020 provided US automakers [critical](#) liquidity to weather the brunt of the pandemic-induced economic slowdown, the double-edged nature of such refinancing poses a challenging risk over the next couple of years. With inflation fears catalyzing possible rate hikes by the Federal Reserve around 2023, the industry may need to absorb the higher borrowing cost should they need to refinance in the future, especially in a climate where operating cash flows are weak and operating margins are declining.

Despite the Biden administration's [best efforts](#) to dampen the effects of the chip shortage by subsidizing the construction of domestic infrastructure to create semiconductors onshore, new factories won't be built fast enough to plug the immediate shortage plaguing the automotive industry. Resultantly, the repayment ability of US automakers may be hindered should cash flow from operations decline in the medium-to-long term as the lagging effects of continuous low production figures decline US automakers' top line. This is demonstrated by the increase in the NUS-CRI Forward 1-year PD (Forward PD) in Figure 2b, which suggests an accelerated deterioration in the industry's credit outlook in Jul-2021, compared to Jan-2021 before the chip shortage gathered steam. As we can see from the Forward PD figure, the long-term impact of the chip shortage on the industry's credit outlook is severe, with the 36-month Forward PD increasing by 80bps over the last seven months.

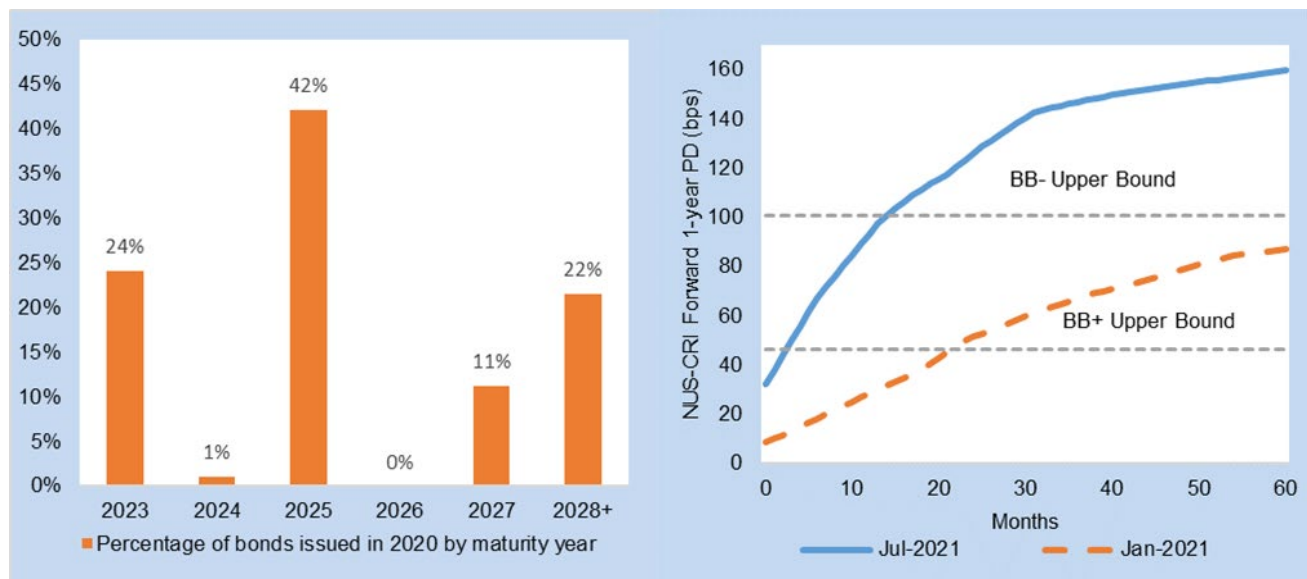


Figure 2a (LHS): Percentage of bonds issued in 2020 by US automakers distributed by maturity year. Figure 2b (RHS): NUS-CRI Agg Forward 1-year PD<sup>3</sup> (median) for US automotive manufacturers as of Jan-2021 and Jul-2021. Source: Bloomberg, NUS-CRI

Furthermore, the transition of the domestic US auto industry towards EVs and plug-in hybrids also poses a risk to the US automakers in the long term. EVs will likely occupy [a rapidly increasing share](#) of both the global and US automobile market, in part due to regulations such as President Biden's administration's target to [reduce](#) US net greenhouse gas pollution by 2030. However, this transition is expensive, as indicated by the US automakers' plan to spend [USD 250bn](#) on EV production in Mar-2021. For those companies in the industry that lack cash reserves currently to invest in R&D, they may have to tap into their existing credit lines or issue more debt in the near future, further indebting their balance sheets. Furthermore, the industry's steer towards EVs come at a time when the automakers are still recovering from the pandemic, which only [increases the risks in transitioning into a nascent industry](#). Lower revenues and hence tighter cash flows are risky for this capital-heavy industry which seeks to invest intensely in order to capitalize on a growing market for EVs. However, there is a silver lining for

<sup>3</sup> The Forward PD estimates the credit risk of a company in a future period, which can be interpreted similar to a forward interest rate. For example, the 6-month Forward 1-year PD is the probability that the firm defaults during the period from 6 months onwards to 18 months, conditional on the firm's survival in the next 6 months.

the industry. Advancements in EV battery technologies are expected to decrease its cost to [USD 50-80/kWh](#) by 2030, which is as cheap as the current combustion-engine vehicles, reducing overall production cost by [30%-40%](#).

As US automakers deal with the successive shocks of the COVID-19 pandemic and the semiconductor shortage, potential market consolidation with larger, cash-heavy players acquiring smaller, cash-dry companies may be [expected](#). This may especially be the case if no direct subsidies or bailouts are provided by the US government to the automaker industry. As companies continue to battle low production numbers amidst strong demand, the loss in potential revenue will continue to increase. With the chip shortage unlikely to be abated until the end of 2023, automakers domiciled in the US may reduce their exposure to the foreign import of semiconductors, especially if the US government's efforts to increase the number and capabilities of domestic foundries provide a suitable alternative.

**Credit News****Yield spread highlights embrace of riskier debt**

**July 16.** The extra return on lower-rated corporate bonds over Treasuries has fallen to near all-time lows, signaling investors' growing appetite for riskier assets. Earlier this month, the spread on bonds in the Bloomberg Barclays U.S. high-yield corporate bond index fell as low as 2.62%, a trough last seen in Jun-2007. In absolute terms, speculative-grade bond yields are already at record lows. Several factors contributed to the near-record low spreads. One is the optimism about the economic outlook despite the Delta variant of COVID-19 and the possibility of tighter monetary policy. The second is the low Treasury yields, which have driven investors to risk assets seeking higher returns. Another reason is that speculative-grade bond indexes consist of more higher-rated bonds than before. ([WSJ](#))

**China to order developers to disclose commercial paper debt every month**

**July 16.** Amidst increasing defaults in the sector, regulators want property developers to submit specifics of increasing commercial paper issuance in their monthly reports. It also occurs as Beijing seeks to tackle rampant borrowing by developers outside traditional and typical financing channels, to decrease their financial risk. Property developers have increasingly used commercial paper to raise cash with new issues of commercial paper worth CNY 3.6tn in 2020, up 20% from 2019. Commercial paper is used by the property sector as a payable, which promises construction suppliers payment on a future fixed date and is not counted as interest-bearing debt. Some developers issue the commercial paper to associate or shell firms or issue multiple papers to a supplier who sells them in the secondary market. ([Reuters](#))

**Global bonds look to Powell as inflation surges test nerves**

**July 14.** The global bond rally is under threat following surprises in the UK's inflation data and the withdrawal of support by some central banks, as New Zealand ceases quantitative easing and Canada expected to pare bond purchases. Yields on benchmark bonds were up by as much as 11 bps to 1.78% and follow a day of volatility in US Treasury yields due to weak demand for the monthly 30-year bonds. As such, legislators are likely to question Powell at the Wednesday testimony on the rapid price increases, demanding that he accelerates the Fed's exit sequence. Ahead of the testimony, Powell's prepared remarks triggered some re-steepening of the yield curve and pushed up bond-market gauges of inflation. Some analysts now say inflation looks less and less transitional, and bond markets are bracing for a repricing on any signs of hawkishness from the Fed ([Bloomberg](#))

**Credit rating upgrades hit record pace as US economy rebounds**

**July 16.** Credit rating agencies are upgrading billions of dollars of US corporate debt in response to the strong economic recovery brought about by vaccine rollouts, abundant liquidity, and low borrowing costs available to companies. According to data from Bank of America, around USD 361bn of investment-grade debt has been upgraded in the past two months. Risky junk-rated companies are also experiencing an increase in the pace of upgrades. According to data from Citigroup, around USD 18bn of junk debt has been upgraded to investment grade in 2021. Rating Agencies have drawn criticism due to the rapid pace of upgrades this year, as well as for the disproportionate number of downgrades last year. ([FT](#))

**'Strange' bond reaction to US inflation data puzzles investors**

**July 17.** A relentless rally in US Treasuries has come in time of the fastest inflation in more than ten years, breaking usual patterns and causing investors to seek an explanation for this phenomenon. Inflation is usually bad for bond prices as it erodes the value of fixed payments the debt offers and runs the risk that central banks will increase interest rates. US Treasuries prices have experienced substantial gains, pulling the 10-year yield to its lowest in more than three months. The more infectious Delta variant, which has caused increasing coronavirus cases, has resumed fears that economic recovery will fall short of the optimistic forecasts earlier in the year. As such, this rally in bonds has caught many investors by surprise. ([FT](#))

**U.S. high-grade supply of USD 20bn expected in next week** ([Bloomberg](#))

**Carnival said to prep bond sale for next week to buy back debt** ([Bloomberg](#))

**Asian bonds' June foreign inflows are biggest in two years** ([Reuters](#))

### **Regulatory Updates**

#### **Bank of Japan opens push on climate change in contrast to fed**

**July 16.** Bank of Japan released plans on Friday that included no-interest loans to commercial banks that support lending for environmentally friendly projects and the purchase of green bonds in foreign currencies. This move has further added to the debate over whether environmental issues should be part of a central bank's mission. BOJ's Mr. Kuroda stated that the impact of climate change complied with the bank's mandate of achieving healthy growth with price stability, even if regulations and direct subsidies to companies fall under the government's purview. Bank of Japan's stance stands in contrast with that of the Federal Reserve, with the Fed chief stating that the Federal Reserve does not seek to be climate policymakers. ([WSJ](#))

#### **Cash unwanted by banks piles up at the fed reverse repo facility**

**July 17.** Against a backdrop of near-zero short-term funding rates, large US banks have emerged as a major driver in demand for the Fed's overnight reverse repurchase agreement facility, as it functions as an investment tool of last resort to mop up unwanted cash deposits. Following the expiry of regulatory exemptions for reserves in March, banks have been forced to take on more cash as the Fed continues ongoing asset purchases and the TGA drawdown returns funds to the system. Private banks have been reluctant to absorb the incumbent deposit growth. JP Morgan says the O/N RRP is helping marginally with their deposit growth and supplementary leverage ratio. In the next few months, demand for the RRP could further increase as the Fed's asset purchases continue and the Treasury's cash balance continues to dwindle in a prolonged debt-limit standoff. ([Bloomberg](#))

**Central banks line up to dial back emergency stimulus** ([Reuters](#))

**Kenya central bank seeks 'teeth' to regulate digital lenders** ([Bloomberg](#))

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