Weekly Credit Brief Nov 15 - Nov 21 2022

Higher production costs and weakening demand set to heighten credit risk of the global chemicals industry

by Amrita Parab

- **NUS-CRI Agg Forward 1-year PD of the global chemicals industry increases as recessionary headwinds threaten profitability**
- **Domestic policies might limit the Chinese chemicals industry's ability to capture unserved European demand**

The global chemicals industry[1] is facing multiple headwinds as recessionary pressures push the global economy into a period of turmoil. In the second half of 2022, the chemicals industry's growth prospects continued to weaken as inflation and a global slowdown in demand adversely impacted profit margins. As seen from the NUS-CRI 1-year Aggregate (median) Probability of Default (Agg PD) for the global chemicals industry in Figure 1a, credit risk for the industry has been steadily increasing over the past year. The volatility in natural gas prices brought on by Russia's decision to restrict supply continues to be a major threat, especially for firms dependent on energy-intensive processes without the pricing power to pass it onto customers. Concurrently, as difficulty in procuring vital raw materials continues to raise costs, expectations of a looming recession may further restrict firms' ability to pass on higher costs in the coming quarters, potentially worsening their credit risk outlook as suggested by the rise of the NUS-CRI Aggregate (median) Forward 1-year Probability of Default (Forward PD[2]) in Figure 1b above the BBB- upper bound when referenced to PDiR2.0[3] levels.

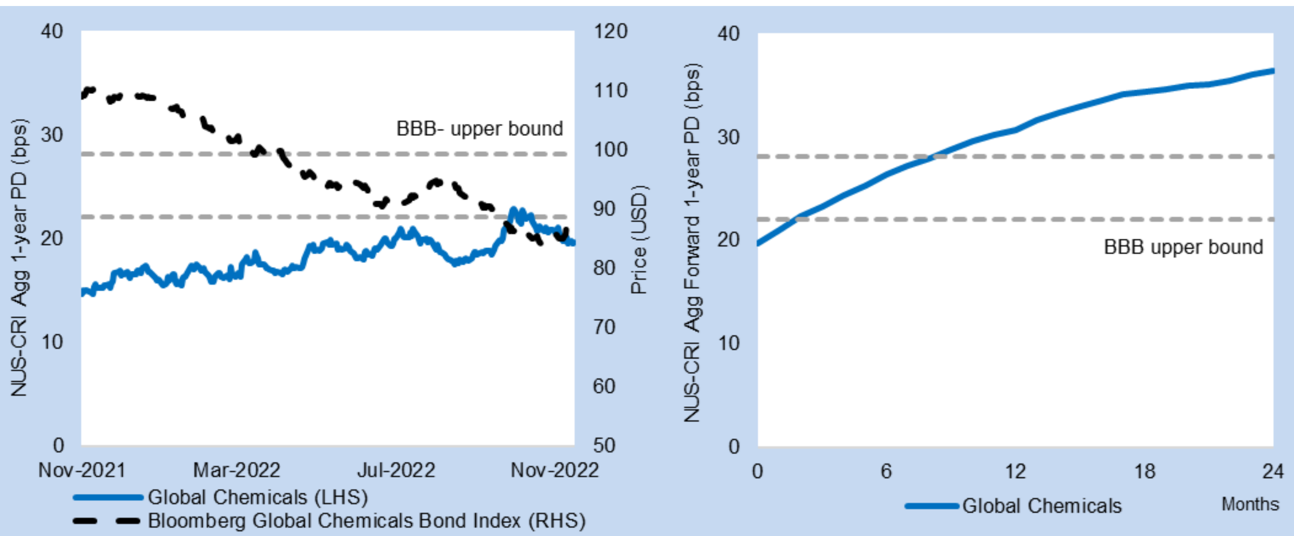

Figure 1a (LHS): NUS-CRI Agg (median) 1-year PD for the global chemicals industry, with reference to PDiR2.0 bounds from Nov-2021 to Nov-2022; Price of the Bloomberg Global Aggregate Corporate - Chemicals bond index. Figure 1b (RHS): NUS-CRI Agg (median) Forward 1-year PD for the global chemicals industry as of Nov-2022, with reference to PDiR2.0 bounds. *Source: NUS-CRI, Bloomberg*

The global chemicals industry is the largest industrial consumer of energy, which it uses not only to power the production of chemicals but also as a raw material. Thus, being highly vulnerable to fluctuations in energy prices, the surge in energy costs in 2022 dealt a severe blow to the industry's profitability and growth prospects. The effects of Russia's decision to cut gas supplies via its Nord Stream 1 pipeline triggered an upsurge in energy

[1] The global chemicals industry includes producers of basic, diversified, commodity, fertilizers, agricultural, and specialty chemicals. In 2021, the total revenue of the global chemical industry amounted to over USD 4.7tn.

[2] The Forward PD estimates the credit risk of a company in a future period, which can be interpreted similarly 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 – this is conditional on the firm's survival in the next 6 months.

[3] 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.

prices across the globe which was most acutely felt in Europe, especially in Germany which relied heavily on Russian gas[4]. German chemical industry association, Verband der Chemischen Industrie (VCI), predicts that the industry's production would likely further fall by 8.5% YoY for FY 2022, the biggest decline since 2009, as the prohibitively high energy costs are forcing domestic players to reduce their production volumes as they try to preserve margins. The production cuts have been more severe at firms involved in energy-intensive production of chemicals such as ammonia and nitrogen, where the contribution of energy to production costs may be as high as 80%. Additionally, the drop in production has also been due to reduced demand from Russia and Ukraine. With both Russia and Ukraine being major contributors to the global chemicals industry demand, export of products to them fell by 49% and 40% respectively[5]. On the whole, if such production cuts persist, customers may switch to alternative suppliers possibly leading to a permanent reduction in demand. A permanent reduction in demand also threatens to squeeze smaller players in the industry which are more exposed to the volatility of energy prices. These smaller firms might not have the resources to effectively hedge against volatility in energy prices, similar to those employed by larger chemical producers. At the same time, small and medium-sized firms also lack the supply contract negotiating power of bigger counterparts. Hence, a further increase in energy costs in face of declining demand may push these companies to the brink as they might be unable to completely pass on the incremental costs to customers due to the risk of being substituted by cheaper alternatives offered by competitors. In addition to waning demand and rising costs, the German chemicals industry faces an existential crisis as it rapidly loses market share to its global counterparts.

Compared to its German counterpart, the Chinese chemicals industry, the largest chemicals industry in the world, is better shielded from natural gas price volatilities, thanks to coal-dependent production processes in China. As such, the Chinese chemicals industry is adequately positioned to capitalize on Europe's unserved demand. However, this opportunity to increase toplines on the back of additional demand might not be realized, and instead might only compensate for the decline in existing domestic demand of the Chinese chemicals industry which has been negatively impacted by the zero-covid policy and the ongoing property sector crisis. Since 2009, China's property sector has been an important source of demand for the chemicals industry, however, this demand may remain subdued for a longer period and may potentially stay lower than pre-pandemic levels as consumers and the government remain wary, limiting the industry's revenue growth prospects. Likewise, repeated lockdowns of factories and businesses lower production capacity and hamper the chemical industry's profitability while at the same time making new investment plans difficult to execute. Concurrently, weaker GDP growth forecasts, shrinking manufacturing activity, and higher raw material costs may potentially keep credit risk for the Chinese chemicals industry elevated (See Figure 2a). Moreover, the industry might be further constrained by regulatory hurdles as the government shifts its focus to achieving "common prosperity", cleaning up corporate balance sheets, and meeting environmental goals.

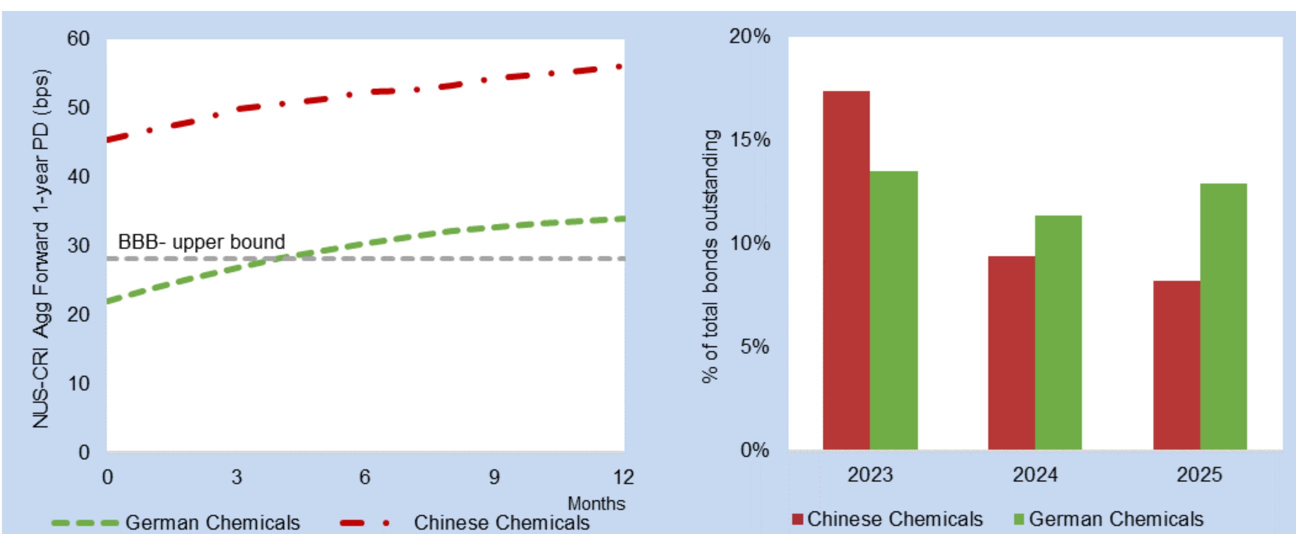

Figure 2a (LHS): NUS-CRI Agg (median) Forward 1-year PD for the Chinese and German chemicals industries as of Nov-2022, with reference to PDiR2.0 bounds. Figure 2b (RHS): Maturity distribution of total bonds outstanding of the Chinese and German chemicals industries. *Source: NUS-CRI, Bloomberg*

The global chemical industry, a significant contributor to global greenhouse gas emissions, is now increasingly being scrutinized and pushed towards a zero-emissions future. The industry will be required to invest in new technologies and processes to achieve this target. An additional estimated annual investment of USD 100bn or about 2.5 times the normal yearly capital investment may be required for the purpose which may add to the

[4] Russian gas accounted for 40% of Germany's total consumption.
[5] Russia and Ukraine are major global producers of agricultural commodities. Russia is one of the world's largest fertilizer exporters.

industry's debt-service burden. Additionally, the recent string of global interest rate hikes and heightened risk perception have pushed up financing costs on new debt issuances. The Index YTM of the Bloomberg Global Aggregate Corporate - Chemicals bond index increased from 1.7% in Nov-2021 to 5.04% in Nov-2022 (See Figure 1a). Amongst major regional industries, Germany and China face higher refinancing pressures as around 35-38% of their outstanding bonds are set to mature over the coming 3 years amidst a tough business environment (See Figure 2b). However, the PBOC's softer monetary policy stance as compared to the ECB, which is expected to continue raising rates in 2023, might provide the Chinese chemicals industry a slight reprieve against refinancing pressures. Going forward, the policy measures introduced by governments such as energy price caps or new stimulus measures will serve to alleviate pressures on the chemicals industry in the short term. However, as recessionary expectations gain momentum, the potential weakening in demand which may follow may keep credit risk higher for a longer period.

Credit News

UK debt binge threatens to haunt its bond market for years

Nov 20. Over the next four fiscal years, UK's financing needs are expected to increase by almost 50% to GBP 1tn despite the tax increase package and spending cuts. The projections raise concerns about the market's capacity to absorb such a massive amount of government issuance especially since the BoE is not likely to participate in the bond purchases as it is reducing its balance sheet. In line with this, the BoE might also be offering its bond portfolio to the market, which includes GBP 835bn gilts it had acquired from a decade of quantitative easing and GBP 19bn from its recent bond purchases in Sept-2022. Yields for 10-year bonds have fallen from their 4.5% peak when markets priced in uncertainties in Liz Truss' fiscal plan. However, it is expected to hit 4.3% by 2H 2023.(Bloomberg)

High-yield party returns to emerging markets too cheap to ignore

Nov 21. Emerging market bonds regain their attractiveness after suffering a brutal drawdown and having been shunned by investors in the previous months due to the perceived heightened risk of default and higher yields from investment-grade countries such as the US. Market jitters on these poorer nations' repayment capability appear to have softened as they continue to service debts, except for Sri Lanka. While some of these countries are able to do so after securing IMF deals, such support boosted investor confidence to realize short-term gains. At the same time, the prospect that the Fed might slow down interest rate hikes provides an incentive for investors to hunt for higher yields somewhere else. As investors flock to high-yield emerging markets, credit spreads are falling rapidly from the record-high of 890bps Jul-2022, while average yields settle below 12% after exceeding 13% in Oct-2022. (Bloomberg)

Bond market heads into treacherous waters as activity subsides

Nov 20. US bond yields are expected to sustain large daily movements for the rest of the year, even as trading volumes lessen, as the market prices in the Fed's prospective monetary policy direction. Such a relationship can be seen recently when the daily yield for the benchmark 10-year note swung over 12bps in response to the Fed's comment about a potential higher policy rate peak necessary to tame the surging inflation. Further swings in daily yields will likely be seen in the following weeks as employment and inflation data are released, which may indicate the potential tone of the Fed's policy statement on 14-Dec. (Bloomberg)

Asia high-grade dollar bonds set for best performance since 2009

Nov 18. As the US shows signs of easing inflation, investors are regaining confidence that global inflation is on to a similarly optimistic outlook, therefore reinstating appetite for other investments such as Asian corporate bonds. Recently, the Chinese government softened its strict COVID-19 policies and instituted a series of measures to support and revitalize its distressed real estate sector, adding to the attractiveness of investments in the region. As of Nov-2022, returns for Asia ex-Japan dollar corporate debt returns are at 3%, its highest gain since 2009, with Chinese developers being the highest gainers. (Bloomberg)

Global ESG-linked bond market faces its first set of penalties

Nov 17. Europe's energy policy to address the current energy crisis by reviving the use of fossil fuels might come at the cost of financial penalties as such practice compromises the accomplishment of ESG-linked debt commitments. Sustainability-linked bonds, which penalize issuers if ESG targets are not met, have grown rapidly in the last 2 years, with issuances reaching USD 80bn in 2022 alone. These ESG bonds have been criticized for having flexible or unambitious targets and low penalties, in case of non-compliance, hence the enforcement of penalty clauses could set a precedence and determine the market's reaction. (Bloomberg)

Indian short-end corporate bond issuances surge as yields fall (Reuters)

Canada corporate bond market issuance perking up again (Reuters)

Carvana faces cash crunch from high debt, rising interest rates (WSJ)

Regulatory Updates

ECB raises alarm over growing risks to financial system

Nov 16. In its Financial Stability Report, the ECB emphasized that surging inflation and looming recession amid high borrowing costs could pose challenges to indebted households, businesses, and governments. Such challenges could reinforce each other, resulting in more insolvencies, and potentially causing contagion in the markets, fueling further market volatility. To build up resilience, the ECB urges eurozone investment funds to beef up liquidity as liquid asset levels remain relatively low despite the improvement from the start of the year. These investment funds are one of the ECB's priorities because, in an adverse scenario, their failure could amplify market turbulence. Similarly, even as the rising interest rates may be beneficial to lenders, it could also signify increased credit risk as households' and businesses' debt repayment abilities are affected by the weakening economy. (FT)

China withdraws cash from banking system as bond selloff cools

Nov 21. As China's bond market recovers from the massive sell-off last week, PBOC withdraws short-term excess liquidity amounting to CNY 2bn. PBOC's move aims to prevent liquidity shock after it injected CNY 368bn into the bond markets to stem market panic as retail investors rush to redeem fixed-income assets. Investors interpreted the easing of COVID-19 policies as an indicator of China's eventual reopening, therefore fueling optimistic outlooks and demand for riskier assets. Yet, market sentiment stabilized on reports of fresh cases and curbs. Yields on 10-year government and onshore CNY-denominated bonds declined by 2.81% and 0.6%, respectively, while the overnight repo rate fell to 1.1%. Meanwhile, PBOC maintained benchmark lending rates for the third straight month. (Bloomberg)

UK hits energy companies with new windfall taxes (FT)

Crypto should be regulated with existing law, says former FDIC head (FT)

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