

WHEN CREDIT ANALYSIS BECOMES PARAMOUNT

APRIL 2020

The Global Fixed Income Business of Prudential Financial, Inc. Prudential Financial, Inc. of the United States is not affiliated with Prudential plc, incorporated in the United Kingdom or with Prudential Assurance Company, a subsidiary of M&G plc, incorporated in the United Kingdom. For professional and institutional investor use only—not for use with the public. Your capital is at risk and the value of investments can go down as well as up.

WHEN CREDIT ANALYSIS BECOMES PARAMOUNT

The breadth of the economic shutdowns to contain the spread of the coronavirus will affect nearly every sector across the global corporate universe—some positively, but most negatively.

Therefore, credit selection will be paramount to generating positive alpha going forward. Thorough, ongoing credit analysis should not only identify the potential survivors during the crisis, but it should also spot those issuers who will thrive during the recovery.

As companies emerge on the other side of the shutdown, the breadth of the impact also implies that the balance sheet repair in the years ahead will not be isolated to specific industries as in prior downturns. Rather, it may equal the extent of the economic damage caused by the virus-related shutdown.

Furthermore, the monetary and fiscal measures that have been unveiled thus far lean toward bondholder-friendly outcomes. Limited stock buybacks, reduced dividends, and prolonged balanced sheet repair will likely be the credit-related hallmarks of the recovery over the coming years.

Identifying companies with strengthening credit fundamentals across these industries will be critical to investment success going forward.

Framework Assumptions

In tackling a solvency and liquidity analysis across various global industries, PGIM Fixed Income's credit research team of more than 100 analysts started with the following base-case assumptions: two quarters of negative growth (Q2 and Q3) and 12 weeks of a work from home/shelter in place environment with most commercial locations closed except for essential goods and services. The closures could imply a prolonged period of very little or no revenue for the most affected credits, which could also experience large swings in working capital if they need to offer refunds.

Many energy-related sectors have also been hit by a combined demand and supply shock. Although the recent OPEC+ agreement was aimed at addressing the latter, imbalanced market conditions may persist for an extended period as indicated in the following sector summary.

On the other end of the spectrum, firms with solid balance sheets, such as U.S. money center banks, should withstand the sudden economic stop and emerge as strong credits in the recovery. Since the global financial crisis, money center banks have added substantial capital and strengthened their balance sheets, largely in response to regulatory tightening.

With that context, the respective industries were segmented into one of three buckets: minimal impact, material impact, or severe impact. The buckets have different implications for investment grade and high yield credits.

Impact Buckets

Within investment grade, the minimal impact bucket indicates that the industry may still be affected, but with minimal impact on our internal industry ratings. The material impact bucket implies that entities in these industries have a decent probability of being downgraded, but will likely retain investment-grade ratings. The significant impact bucket indicates a reasonable probability that the industry ratings will be cut to below investment grade.

Within high yield, the segmentation focuses on EBITDA and free cash flow impacts in 2020 and, ultimately, the liquidity/default risk, rather than a specific ratings action. In general, names in minimal-impact industries have an estimated 15-25% impact on EBITDA and free cash flow, credits in material-impact industries have an expected 25-50% impact, and companies in the significant-impact industries have an anticipated impact of 50% or more.

The bucketing breakdown in the following table is dynamic, and industries can shift across categories depending on developments, e.g. government support for a particular industry.

The framework concludes with a sample, summary analysis of industries at the wings of the impact—U.S. energy and retail from the severely-impacted bucket as well as U.S. money center banks and U.S. and European telecom from the minimally impacted segment.

Please contact your Client Advisory contact for further information on the listed sectors.

WHEN CREDIT ANALYSIS BECOMES PARAMOUNT

Bucket 1: Minimal Impact	Bucket 2: Material Impact	Bucket 3: Significant Impact
Aerospace/Defense	Aircraft Lessors	Airlines
Banks—U.S. & Canadian	Building Products	Autos
Cable	Capital Goods	Consumer Finance
Food, Consumer Products	Chemicals	Energy
Environmental	Alcoholic Beverages	Lodging, Leisure
Healthcare Products	Life Insurance	Restaurants
Healthcare Services	Media	Dept Stores, Apparel, Specialty Retail
P&C Insurance	Metals & Mining	Restaurant Food Distributors
Pharma	Paper & Packaging	Euro Contract Catering Services
Protein	REITs	Euro Hospitality
Reinsurance	Retail (ex. Dept. Stores, Apparel)	Euro Hotels
Retail (Mass Merchants)	Technology	Euro Leisure
Supermarkets	Transportation	Euro Luxury Goods
Telecom	Euro Bev.	Euro non-food Retailers
Tobacco	Euro Facilities Mgt. Services	Euro Oil & Gas
Utilities	Euro Aerospace & Defense	Euro Shipping
Euro, Australian Banks	Euro Autos	HY Energy ex-Propane, Midstream
Euro Water/Waste	Euro Building Materials	HY Restaurants
Euro Exchanges, Markets	Euro Capital Goods	HY Metals & Mining
Euro Fast-moving Consumer Goods	Euro Diversified Chemicals	HY Industrials
Euro Food Producers	Euro Media, Entertainment	HY Chemicals-Commodity
Euro Govt. Outsourced Services	Euro Online Retail (ex-food)	HY Gaming
Euro Healthcare	Euro REITs	
Euro Industrial Gases	Euro Staffing	
Euro Insurers	Euro Transport	
Euro Integrated Utilities	Euro Transport	
Euro Paper & Packaging	HY Aerospace/Defense	
Euro Regulated Utilities	HY Specialty Chemicals	
Euro Supermarkets	HY Energy Midstream	
Euro Tech Services	HY Healthcare Other	
Euro Telecom	HY Homebuilders	
HY Equipment Rentals	HY Retail	
HY Financials	HY Tech—Hardware	
HY Independent Power Producers		
HY TV, Outdoor, Radio		
HY Tech—Software/Services		

WHEN CREDIT ANALYSIS BECOMES PARAMOUNT

Severe Impact: U.S. Energy

The energy markets (particularly oil) are in the midst of a historic collapse of demand brought on by COVID-19. While we are uncertain as to exactly how much demand is currently “off-line,” we believe reasonable estimates are 15-20 million barrels/day (mil bbl/d), which amounts to an unprecedented collapse. While the OPEC+ cuts (an estimated 7.2 mil bbl/d from Q1 2020 production) are a step in the right direction and a more constructive response than the price war initiated in early March, these cuts remain insufficient to balance the market in the short term.

Given the size and speed of the demand collapse it may be impossible for OPEC+ to cut enough to balance the current market. However, the cuts may “buy time” for a partial solution to the pandemic and some restoration of normalized demand before storage is exhausted. After the last two weeks of inventory builds, we estimate that the U.S. will reach “tank tops” shortly, putting additional downside pressure on prices. We view the OPEC+ action as a last-ditch effort to avoid this scenario. We expect U.S. production will decline significantly as every upstream company is cutting capital spending significantly, and the cuts will really begin to eat into U.S. production in the second half of 2020 and beyond. The outcome and shape of price recovery is dependent on the path of the virus and how soon the world’s major economies are reopened.

U.S. investment grade energy companies have maintained strong liquidity profiles. Most credits have manageable near-term maturities and revolving credit facilities with loose covenants. Meanwhile, the industry is engaged in “self help” via capital spending cuts, dividend cuts, and voluntary well production caps. While leverage will spike, and we expect several “fallen angels,” we view default risk in investment grade energy as relatively low. Over the long term, U.S. production is highly challenged by current crude prices. The persistence of COVID-19 will determine the duration of the downturn, and the duration is the largest factor in credit quality going forward. For the high yield energy sector, the current environment is worse than the 2016 supply shock and the 2008/09 financial crisis/demand shock. At this point, estimates place the cumulative default rate for the sector north of 33% through 2022. Within the sector, we expect

pipelines to fare relatively better than producers and oilfield service providers.

Positive for natural gas? The decline in oil drilling will help balance the U.S. natural gas market more quickly than expected. The gas market was oversupplied and the latest winter in the Northern Hemisphere was the warmest on record. We continue to favor gas credits in high yield given the improved price backdrop, lower production decline rates, and lower carbon footprints.

Severe Impact: U.S. Retail (Ex. Mass Merchants)

As coronavirus spreads across the globe and within the U.S., we believe the potential order of negative impact will be similarly and cumulatively, in many cases, felt by U.S. retailers. The COVID-19 order of negative impact on U.S. retail is progressing in the following order: The first wave of impact was felt by retailers more exposed to demand from international locations and/or U.S. tourism; Secondly, by retailers more exposed to China-based supply, including those that were already facing tariff headwinds; Thirdly, as a result of decreased in-store traffic and consumer discretionary spending in the U.S.; Lastly, and more acutely, by retailers with greater geographic exposure to oil patch(es) or regions that may face a longer re-opening process. The level of impact will be influenced by duration of the shutdown and the business models.

Are there better positioned sub-sectors? Sub-sectors and credits that could perform “relatively better” in such an environment include: drug stores (increased/pull-forward demand), convenience stores (falling/volatile oil prices should benefit fuel margins, which may be offset by lower fuel volumes as well as merchandise sales); non-consumer facing (business-to-business service providers); credits with non-discretionary or more-recession resistant business models (pet stores, dollar stores, off-price retailers); and those with a higher percentage of online penetration and/or delivery capabilities. In addition, following the re-opening of the economy, we would expect certain retail sectors, such as auto parts retailers, to rebound faster than more discretionary sectors of retail, as consumers prioritize spending on essential items, including vehicles.

WHEN CREDIT ANALYSIS BECOMES PARAMOUNT

In terms of high yield retail, while the fundamental health improved following several bankruptcies over the past few years, the universe is weaker positioned on average—with lower margins and higher leverage—entering a period of increased consumer uncertainty amid the economic shutdown. Although lower oil prices and interest rates, combined with fiscal/monetary stimulus, are favorable for consumers, **experience shows that an ability to spend does not always translate into a willingness to spend, particularly in times of significant uncertainty. As a result, we have become even less sanguine on the prospects for our high yield retail coverage universe over the intermediate term**—in fact, a number of stressed high yield retailers have recently missed bond coupon payments. On the positive side, near-term maturities are limited, and retailers have been proactively building liquidity, reducing costs, and taking actions to conserve cash. Retailers with better liquidity and balance sheets entering this period of store closures should be better positioned to re-ramp operations when stores begin to reopen. Inventory composition and management will be key, as the re-opening process could be a more challenging liquidity draw for retailers, than simply weathering this period of store closures.

Minimal Impact: U.S. Money Center Banks

U.S. money center banks entered the crisis from a position of strength, with historically strong asset quality, solid capital positions, and ample liquidity. At the end of 2019, the globally systemically important banks reported roughly \$300 billion in excess liquidity over the 100% liquidity coverage ratio requirement.

Net interest income was already under pressure from lower interest rates and a flat yield curve before the Fed cut the funds rate by 150 bps. Lower net interest margins will put significant pressure on revenues going forward. We think there will be pressure on the non-interest revenue line as well. Trading results may benefit, but market volatility is not conducive to M&A and debt/equity underwriting activity (granted, certain issuance markets have experienced significant volume recently). Mortgage banking fees will be strong as mortgage refinance activity is stimulated by low rates. Overall, we expect weakness in fee income.

Increases in credit line drawdowns and the impact of economic stimulus will contribute to some modest loan growth, but overall, we expect this to be offset by a reduction in loan demand for capex/investment spending. Deposit growth should be strong (mid- to high-single digits), driving balance sheet growth as companies act more defensively and hold more cash on their balance sheets. **Asset quality** entered the crisis at historically strong levels, and loan books are well diversified by both industry and geography. If net charge offs spike to the levels experienced during the global financial crisis, earnings could be partially wiped out with the capital base remaining intact (assuming share repurchases are halted beyond June 30, 2020). **We generally maintain overweight positioning in U.S. money center banks.**

Minimal Impact: U.S. and European Telecom

While the telecom sector will not be immune from the impacts of COVID-19 and the resultant recession, we expect the sector to remain resilient. The most impacted revenue streams for telecom will be the sale of new wireless equipment and sales to small & medium business customers across both the wireline and wireless businesses. Within wireless, the closure of retail stores, coupled with the weakening economy, will negatively impact the sale of new wireless equipment, contributing to lower postpaid and prepaid phone gross additions. On the positive side, this lower gross add activity should be accompanied by lower wireless churn, which will preserve the much larger (and profitable) wireless service recurring revenue stream. While we expect the wireless industry will remain very competitive, the recent completion of the T-Mobile/Sprint merger will remove one aggressive player from the US marketplace and potentially provide at least a short respite in competitive intensity as T-Mobile focuses on deal integration. On the wireline side, we expect existing pressure on legacy voice and data revenue streams to be heightened by business closures within the SMB (small & medium business) space, layoffs, and general economic weakness. These pressures should be partly offset by increased demand for broadband services due to a dramatic increase in work-from-home.

We also expect the European telecom sector to be relatively resilient in the current recession. However, we have a negative bias on this outlook amid the currently high debt levels amongst the European telecoms and

WHEN CREDIT ANALYSIS BECOMES PARAMOUNT

diminished prospects for debt repayment given less opportunity for assets sales, coupled with marginal pressure on revenue, EBITDA, and free cash flow. Our negative bias also reflects increased competition in certain markets (Spain & Italy), potential for significant spectrum auction spending (although certain auctions have been delayed), risk of rising capex, the negative impact of regulation in certain markets (UK), and now expected recessionary conditions. Though we expect most operators will experience these negative revenue headwinds, we also believe the operators have levers to pull on the cost side in

order to maintain margins, as well as the ability to utilize free cash flow to reduce debt/leverage as needed. **Overall, we see better value in U.S. telecom relative to European telecom, and our portfolio positioning has generally reflected that view. The recent spread widening presents an attractive opportunity to add telecom exposure to portfolios where appropriate.**

WHEN CREDIT ANALYSIS BECOMES PARAMOUNT

Notice: Important Information

Source(s) of data unless otherwise indicated: PGIM Fixed Income, April 2020.

PGIM Fixed Income operates primarily through PGIM, Inc., a registered investment adviser under the U.S. Investment Advisers Act of 1940, as amended, and a Prudential Financial, Inc. (“PFI”) company. PGIM Fixed Income is headquartered in Newark, New Jersey and also includes the following businesses globally: (i) the public fixed income unit within PGIM Limited, located in London; (ii) PGIM Netherlands B.V. located in Amsterdam; (iii) PGIM Japan Co., Ltd. (“PGIM Japan”), located in Tokyo; and (iv) the public fixed income unit within PGIM (Singapore) Pte. Ltd., located in Singapore (“PGIM Singapore”). PFI of the United States is not affiliated in any manner with Prudential plc, incorporated in the United Kingdom or with Prudential Assurance Company, a subsidiary of M&G plc, incorporated in the United Kingdom. Prudential, PGIM, their respective logos, and the Rock symbol are service marks of PFI and its related entities, registered in many jurisdictions worldwide.

These materials are for informational or educational purposes only. The information is not intended as investment advice and is not a recommendation about managing or investing assets. In providing these materials, PGIM is not acting as your fiduciary. These materials represent the views, opinions and recommendations of the author(s) regarding the economic conditions, asset classes, securities, issuers or financial instruments referenced herein. Distribution of this information to any person other than the person to whom it was originally delivered and to such person’s advisers is unauthorized, and any reproduction of these materials, in whole or in part, or the divulgence of any of the contents hereof, without prior consent of PGIM Fixed Income is prohibited. Certain information contained herein has been obtained from sources that PGIM Fixed Income believes to be reliable as of the date presented; however, PGIM Fixed Income cannot guarantee the accuracy of such information, assure its completeness, or warrant such information will not be changed. The information contained herein is current as of the date of issuance (or such earlier date as referenced herein) and is subject to change without notice. PGIM Fixed Income has no obligation to update any or all of such information; nor do we make any express or implied warranties or representations as to the completeness or accuracy or accept responsibility for errors. **All investments involve risk, including the possible loss of capital. These materials are not intended as an offer or solicitation with respect to the purchase or sale of any security or other financial instrument or an investment management services and should not be used as the basis for any investment decision. No risk management technique can guarantee the mitigation or elimination of risk in any market environment. Past performance is not a guarantee or a reliable indicator of future results and an investment could lose value. No liability whatsoever is accepted for any loss (whether direct, indirect, or consequential) that may arise from any use of the information contained in or derived from this report. PGIM Fixed Income and its affiliates may make investment decisions that are inconsistent with the recommendations or views expressed herein, including for proprietary accounts of PGIM Fixed Income or its affiliates.**

The opinions and recommendations herein do not take into account individual client circumstances, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies to particular clients or prospects. No determination has been made regarding the suitability of any securities, financial instruments or strategies for particular clients or prospects. For any securities or financial instruments mentioned herein, the recipient(s) of this report must make its own independent decisions.

Conflicts of Interest: PGIM Fixed Income and its affiliates may have investment advisory or other business relationships with the issuers of securities referenced herein. PGIM Fixed Income and its affiliates, officers, directors and employees may from time to time have long or short positions in and buy or sell securities or financial instruments referenced herein. PGIM Fixed Income and its affiliates may develop and publish research that is independent of, and different than, the recommendations contained herein. PGIM Fixed Income’s personnel other than the author(s), such as sales, marketing and trading personnel, may provide oral or written market commentary or ideas to PGIM Fixed Income’s clients or prospects or proprietary investment ideas that differ from the views expressed herein. Additional information regarding actual and potential conflicts of interest is available in Part 2A of PGIM Fixed Income’s Form ADV.

In the European Economic Area (“EEA”), information is issued by PGIM Limited or PGIM Netherlands to persons who are professional clients as defined in Directive 2014/65/EU (MiFID II). PGIM Limited’s registered office: Grand Buildings, 1-3 Strand, Trafalgar Square, London, WC2N 5HR. PGIM Limited is authorised and regulated by the Financial Conduct Authority (“FCA”) of the United Kingdom (Firm Reference Number 193418). PGIM Netherlands B.V. is authorised by the Dutch Authority for the Financial Markets (Autoriteit Financiële Markten – AFM) as an alternative investment fund manager with MiFID top up service capabilities under registration number 15003620. PGIM Limited and PGIM Netherlands are authorized to provide services or operate with a passport in various jurisdictions in the EEA. In certain countries in Asia, information is presented by PGIM (Singapore) Pte. Ltd., a Singapore investment manager registered with and licensed by the Monetary Authority of Singapore. In Japan, information is presented by PGIM Japan Co. Ltd., registered investment adviser with the Japanese Financial Services Agency. In South Korea, information is presented by PGIM, Inc., which is licensed to provide discretionary investment management services directly to South Korean investors. In Hong Kong, information is presented by representatives of PGIM (Hong Kong) Limited, a regulated entity with the Securities and Futures Commission in Hong Kong to professional investors as defined in Part 1 of Schedule 1 of the Securities and Futures Ordinance. It is anticipated that certain investment management services would be delegated to PGIM, Inc. the above-listed entities’ U.S. registered investment advisory affiliate. In Australia, this information is presented by PGIM (Australia) Pty Ltd (“PGIM Australia”) for the general information of its “wholesale” customers (as defined in the Corporations Act 2001). PGIM Australia is a representative of PGIM Limited, which is exempt from the requirement to hold an Australian Financial Services License under the Australian Corporations Act 2001 in respect of financial services. PGIM Limited is exempt by virtue of its regulation by the FCA (Reg: 193418) under the laws of the United Kingdom and the application of ASIC Class Order 03/1099. The laws of the United Kingdom differ from Australian laws. In South Africa, PGIM, Inc. is an authorised financial services provider – FSP number 49012.

© 2020 PFI and its related entities.

2020-2662