

ON INDUSTRIES: OIL & GAS

Industry insight with impact

ON Industries is a five-part series analyzing key industries through the lens of ON Credit Intelligence, providing commercial bankers with a detailed and powerful forward-looking view of the industry's drivers and performance.

REGULATION

GEOPOLITICS

TALENT SHORTAGE

The oil and
gas industry is
being disrupted

CLIMATE

GEOGRAPHICAL

NEW TECHNOLOGIES

CONSUMER DEMAND

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Borrowers are facing unprecedented risks

Soaring energy costs, rising interest rates, increasing inflation, supply chains at breaking point, political instability across the globe, and the looming threat of climate change with wildfires and floods making headlines on a weekly basis. It's not a matter of *if* bank's borrowers will be impacted, it's knowing *when* and *how*.

This includes those operating in the oil and gas sector, as these headwinds are set to have a significant impact on how the wider industry operates. With ever-evolving technologies favored by crude extractors, shifting demands from both commercial and retail customers in regard to their energy consumptions, in addition to the current volatile geopolitical landscape, oil and gas companies are facing unprecedented times.

That's why it's vital that banks serving the oil and gas community are able to model various scenarios across their loan book to identify their greatest risks, as well as potential opportunities for growth. However, the traditional and current approach taken by many lenders is too backward-looking, too used to benign market conditions (2009-2021 was the longest bull market in history), and no longer fit for purpose.

Commercial banks need to leverage scenarios that are granular, detailed, and forward-looking. This will enable them to look deep into each borrower's unique industry, assess every loan from the bottom up, select relevant macroeconomic factors which are fundamental to most banks and recommended by the regulators, and adjust them to conduct varying analyses to provide a forward-looking view of their entire loan book.

In this report, OakNorth dives deeper into the oil and gas industry which comprises of upstream establishments that primarily extract crude petroleum and natural gas in the US. Insights for the industry and individual borrowers are generated using ON Credit Intelligence, a data-driven software that provides a granular, 360-degree view of every commercial borrower, using continuous monitoring and a forward-look view of risk.

Drivers considered for the projection of industry performance

ON Credit Intelligence has compiled forecasts on the performance of the oil and gas industry by closely monitoring multiple drivers that impact oil and natural gas production and prices. These drivers include:

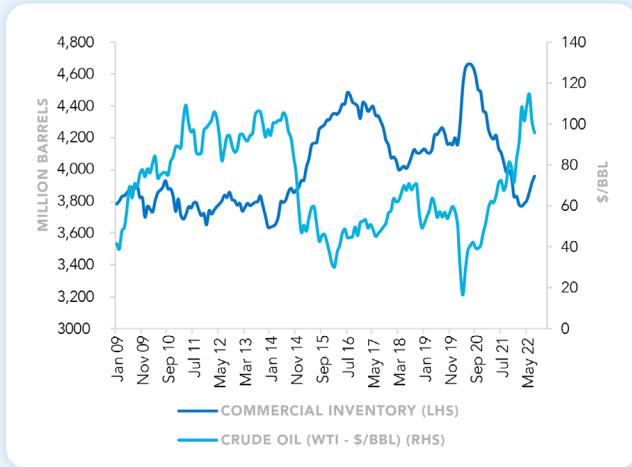
- Oil and gas supply
- Decisions from oil and petroleum exporting countries (OPEC)
- Inventory
- Geopolitics
- The macro-economic environment including inflation and interest rates
- Supply-chain conditions
- Weather-related impact
- Corporate decisions on capital discipline



Historical performance of crude oil and natural gas extraction industry

The following analysis provides insights and trends impacting crude oil and natural gas prices.

Crude oil prices trend



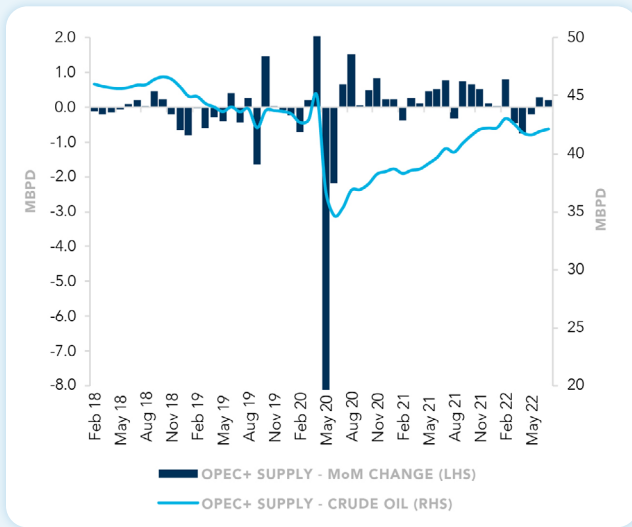
INVENTORY

Crude oil inventories

Strict restrictions and lockdowns to curb COVID-19 during 2Q20 led to a sharp increase in crude oil inventories which pushed oil prices to historically low levels.

This was followed by a continued improvement in demand backed by a post-COVID relaxation in travel restrictions and restricted supply increments by OPEC+.

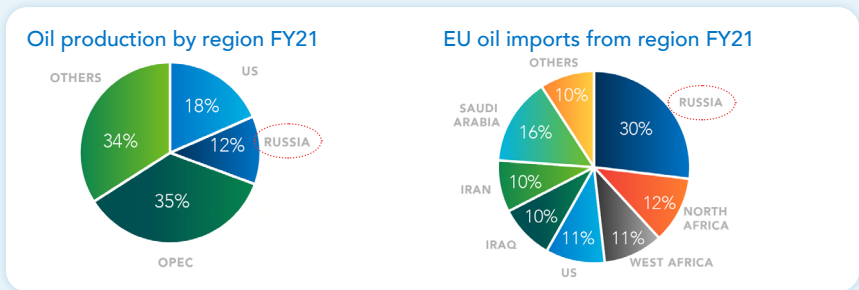
OPEC+ supply & supply increments



OPEC+

OPEC+ is a group of 24 oil-producing nations that together contribute 50% of the world's crude oil production. OPEC+'s collective decision to restrict supply increments has led to continued price rises.

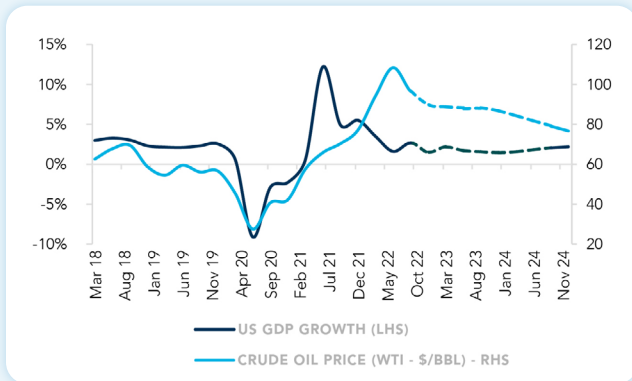
High dependence on Russia



GEO-POLITICAL

The Russia-Ukraine War and the resulting sanctions and restrictions on Russian trade have further constrained supply and led to increased energy prices.

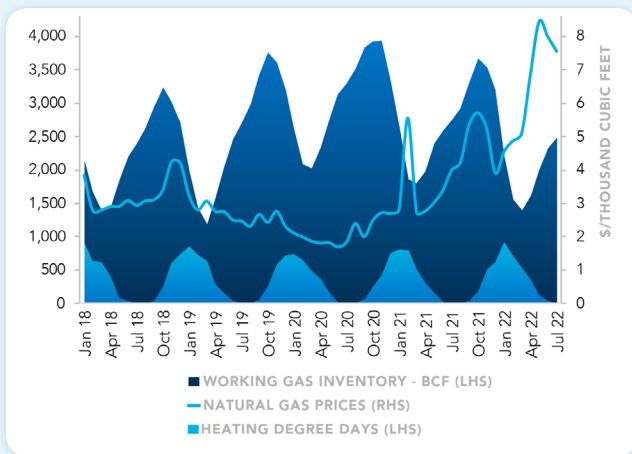
Crude oil price vs. GDP growth



ECONOMY

Since 2Q22, deteriorating macro-economic conditions led by a steep rise in inflation and interest rates have eased crude oil prices. Global oil demand outlook has weakened, and particularly led by weakness in China's economy, which is the largest importer of seaborne crude.

Natural gas inventory and prices

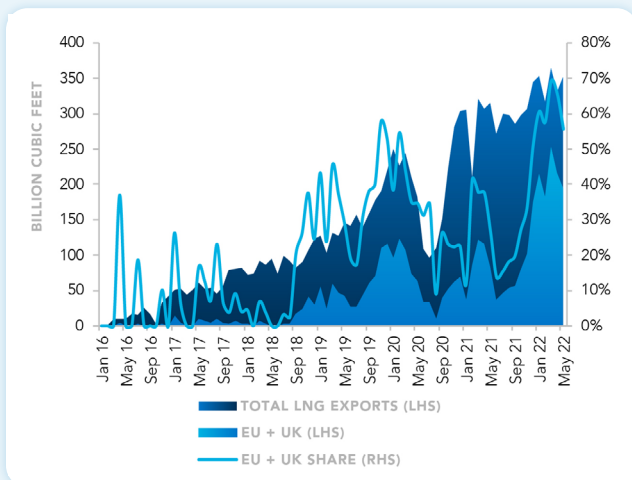


INVENTORY & WEATHER

Unlike crude oil, natural gas consumption is highly seasonal, being predominantly used for domestic heating during the winter.

Russia's curtailment of natural gas exports to Europe in 2022 as a result of the Russia-Ukraine war, has catalyzed higher Liquefied Natural Gas (LNG) imports from the US, resulting in continued drawdowns in US natural gas inventories and higher prices.

US LNG exports by vessels



LNG EXPORTS

US LNG exports jumped by 12% YoY in 1H22, making the US the world's largest LNG exporter. Exports are supported by:

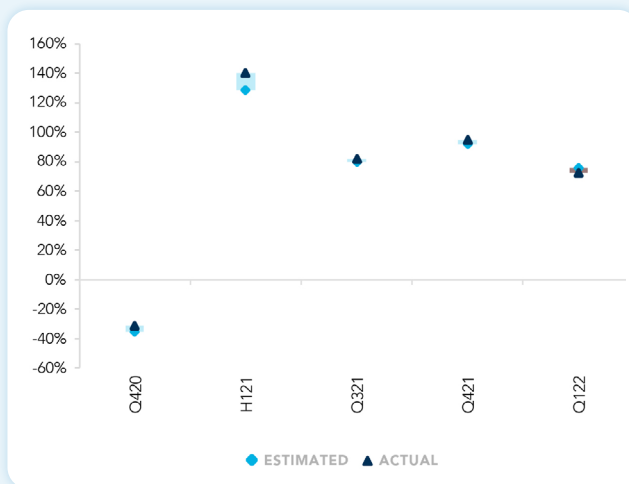
- Increased LNG export capacity
- Increased international natural gas and LNG prices
- Increased global demand, particularly in Europe

Efficacy of ON Forecasts

OakNorth’s forward-looking scenarios have been put to the test over a series of industries with predictions assessed against actual outcomes. The accuracy of these forecasts is very high (90% accuracy achieved over the last 24 months for overall portfolio), giving banks confidence that the insights they receive offer a true indication of the future impact on their loan book.

OakNorth conducts quarterly reviews to assess the efficacy of its industry forecasts by comparing reported revenues with the projected revenues using the most recent quarterly data available. During each update cycle, OakNorth also identifies critical emerging trends across industry groups and then makes the necessary revisions to its industry forecasts to minimize divergence.

ON Industry Forecasts exhibit strong accuracy for the oil and gas sector

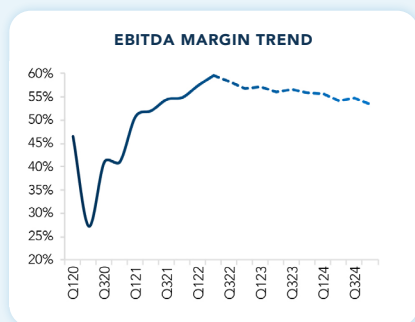
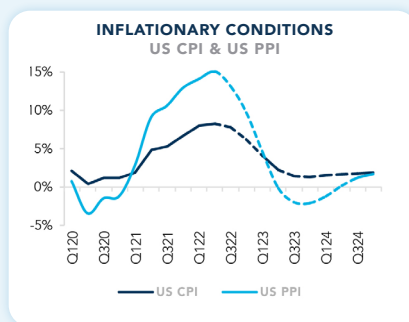
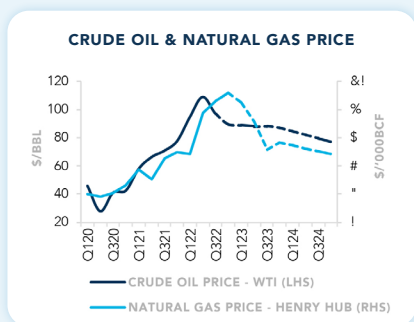


ACTUALS VS ESTIMATES

The accuracy of the ON Industry Forecasts is measured by analyzing the amount of divergence between actual performance of the industry and OakNorth estimates. As illustrated in the chart, OakNorth has achieved low divergence¹ for the past six quarters, at sub-5%.

¹ Low Divergence is defined as <=800bps differential between actual and estimated growth rates in a given quarter

Looking ahead | OakNorth’s view on future performance of the oil and gas industry



ON Credit Intelligence uses KPI-driven models. KPIs such as production and prices of crude oil and natural gas are projected to forecast the revenue curve for borrowers in the oil and gas extraction industry.

Crude oil price projection

- Crude oil prices are expected to average substantially higher over FY22 vs. FY21, mainly driven by a sharp increase in 1H22, due to the Russia-Ukraine war. However, weakening global macro conditions, lower than anticipated disruptions on Russia's oil products exports, and the release of crude oil from strategic reserves by the US, has led to inventory build-up since 2Q22.
- OakNorth expects crude oil prices to decline over the forecast period from very high FY22 levels, driven by an easing supply-demand situation, continued increase of EV penetration, and stronger fuel efficiency.
- Production is expected to grow gradually as prices are expected to stay above \$70/bl over the forecast period.

Natural gas price projection

- Natural gas prices are expected to average substantially higher over FY22 vs. FY21, again mainly driven by a sharp increase in 1H22 due to the Russia-Ukraine War. Natural gas prices remain strong, with Europe relying heavily on Russia for its supply. However, Russia has curtailed pipeline supply and US LNG exports to Europe face infrastructure driven limitations. So, natural gas prices are expected to remain at elevated levels over the forecast period.

Profitability projection

- The price of crude oil remains the key profitability driver for upstream companies. Geology, the locations of wells, drilling productivity, technological advancements, and efficiency improvements play a major role in driving the margins for upstream establishments.
- OakNorth expects moderate compression in EBITDA margins (beginning 3Q22) over the forecast period, as crude oil prices gradually ease on the back of moderately improving supply, while a deteriorating economic backdrop driven by high-interest rates and elevated inflation softens demand. Natural gas price could provide some cushion in the near term as disruptions in Russia's supply to Europe could keep demand for seaborne LNG high.

Disruptions to the oil & gas industry



GEOGRAPHICAL CHANGES: Crude supplies are getting harder and harder to extract so oil companies have turned to developing their extraction techniques to boost production. For example, the hydraulic fracturing of rocks (aka fracking), has rapidly become a major driver behind the revival of oil production in the US.



TECHNOLOGICAL DISRUPTION: Technologies such as GPS systems, drones, blockchain models and machine learning techniques can lead to operational efficiency gains for oil and gas companies. Automated processes throughout the entire supply chain have resulted in a reduction in the need for human intervention, reducing the risk of human error.



CHANGING REGULATIONS: The US's Clean Air Act has been a major industry disruptor, whilst also being paramount to the reduction in the emissions of greenhouse gases. The regulation requires that every oil and gas operator must take measurements focused on the capture of natural gas that escapes into the air during the extraction process.



CHANGING CONSUMER DEMANDS: Shifts in consumer demand have negatively impacted the industry. The rise of EVs, increased popularity of renewable energy sources and a shift from gas hobs to induction hobs in homes, restaurants, hotels, etc. requires individual companies and the whole industry to adapt.



TALENT SHORTAGES: Oil and gas companies are facing a war on talent and an overall aging workforce, with only 12% of those working in the industry under the age of 30, according to data from ECITB. There are fears around job security, environmental and ethical concerns, such as the sectors link to accelerating climate variables, that are impacting the functionality of the supply chain.

Climate impact and assessing the risk to loan books with climate as a scenario

According to recent research from risk consultancy firm Verisk Maplecroft, more than 600 billion barrels of the world's commercially-recoverable oil and gas reserves are at severe risk of damage and disruption from a growing amount of extreme weather events, such as floods, volatile temperature fluctuations, wildfires, and rising sea levels.

These figures are forward-looking, however, changes to today's global climate have already begun disrupting the supply of oil and gas across several countries. Examples of these climate events include freezing conditions in Texas in 2021, which resulted in the country's oil and gas output hitting a three-year low. Hurricane Ida also caused a record 55 oil spills in the Gulf of Mexico, creating historic disruptions to the supply of both crude oil and refined products.

While banks may be exposed to climate risk and industries in structural decline, they don't have to miss out on the innovative industries or opportunities within their loan book. The climate opportunity exists in entirely new industries such as clean energy, carbon capture, and investments into the transformation of existing industries with green technologies such as green manufacturing / construction and the electrification of vehicles.

The SEC and OCC have both raised the prospect of regulations that will compel banks to account for the likely material impact of climate-related risk on their portfolio, as well as the related greenhouse gas (GHG) emissions associated with lending. How equipped is your bank to evaluate the risks to your borrowers and identify new lending opportunities?

ON Climate: a solution for future lending

ON Climate—part of the wider ON Credit Intelligence Suite—provides powerful insights, powered by a granular forward look, that enable banks and financial institutions to get ahead of climate related risks and opportunities in a data-driven manner, enabling smarter, faster, and more proactive decisions across the credit life cycle. ON Climate provides:

- An overview of your climate risk and distributed exposure across top sectors and borrowers
- Total financed emissions by sector and borrower level (Scope 1 and Scope 2)

Granular analysis across the supply chain

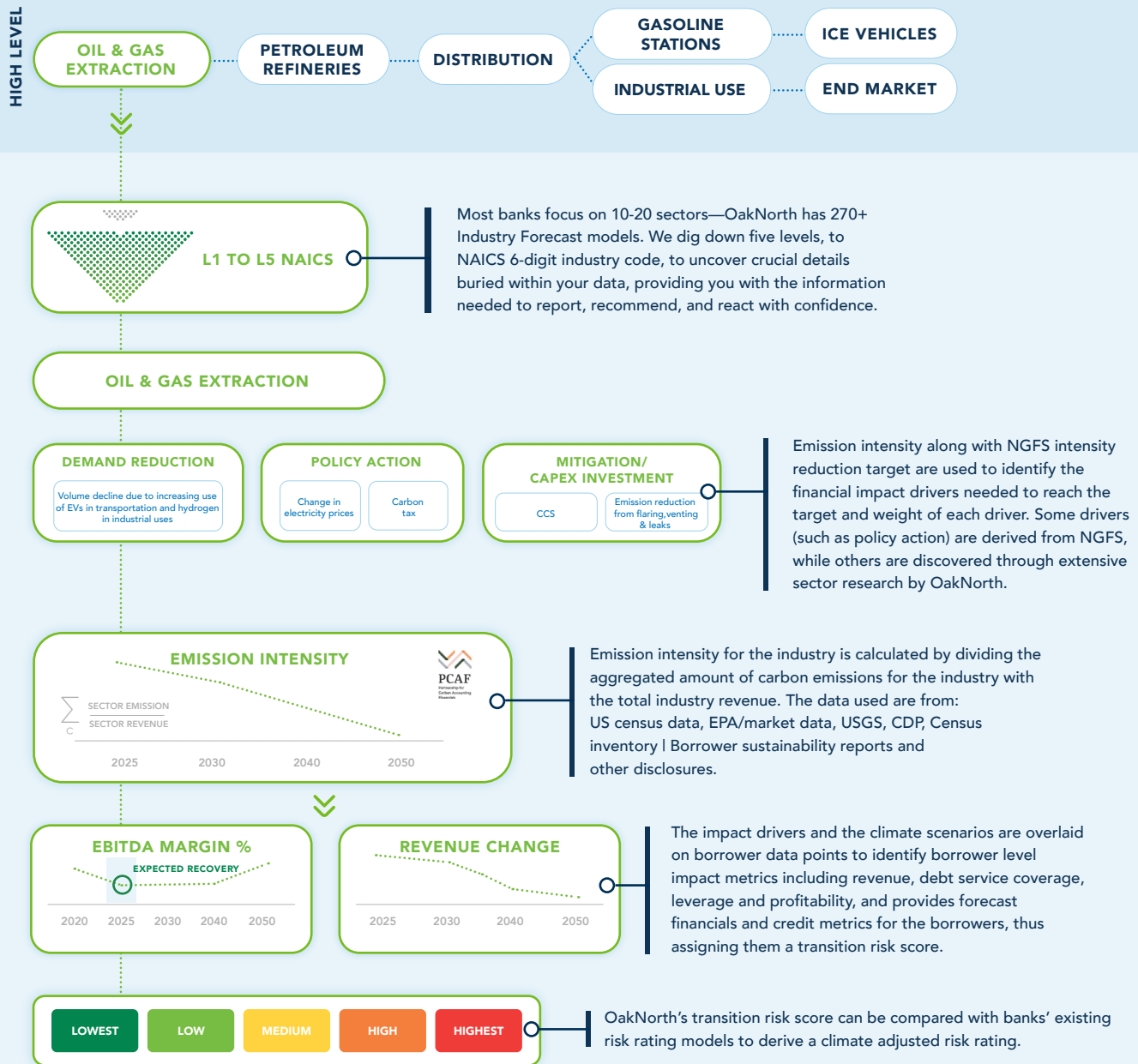
THE OIL & GAS SUPPLY CHAIN



- A list of borrowers that should be prioritized for climate reviews
- Borrowers with high climate risk that you might be able to coach to help avoid future risk
- Borrowers with lower projected climate risk, even though they are in sectors that are rated to have inherently high climate risk
- Lending opportunities in sectors that are projected to have lower climate risk in the future

A look at OakNorth's granularity and how risk ratings are generated

This sample analysis of the potential impact of climate across the construction value chain reveals areas of risk and opportunity, and how they may change over time.



Industry trend and the path to net-zero

With the EV revolution already underway and expected to gain momentum, the industry is likely to face a significant demand reduction. In addition, the usage of natural gas is also expected to reduce in a low-carbon economy, as hydrogen could replace natural gas in areas of stationary combustion. Overall, the revenue would be impacted severely by declining volumes. Reducing emissions from flaring, venting and leaks, and capturing carbon emissions using CCS (carbon capture and storage) technology could be sustainable ways to reduce GHG emissions in the industry.

Carbon costs are likely to impose severe margin pressure in the near-medium term. However, in the longer term, the profit margins could return to normalcy, as carbon costs subside in a low-carbon future. Still, absolute profit levels would contract significantly unless players venture into different business lines.



Let's put your loan book to the test

You could implement ON Credit Intelligence in just weeks, moving rapidly from initial briefing through exploratory workshops, an executive readout, and then go live. To discover what it could deliver to your bank, we offer a rapid onboarding that is completely customizable to your needs.

Schedule a demo to learn how the ON Credit Intelligence Suite can help your institution better evaluate and manage climate-related risks in your portfolio.

[Request a demo](#)