![OakNorth Credit Intelligence logo]

ON CREDIT INTELLIGENCE

A new perspective on risk & regulation

2021 Regulatory Mindset

Forward-Looking View
360-view of borrower with foresight

Get Granular
deep, bottoms-up sector approach

Dynamic Stress Testing
at speed and scale

A Better Path Forward
communities smarter and stronger than before

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Look forward, not just backward

In commercial lending, banks rely on long-standing risk models to help inform their decisions. These models have been built up internally over decades, becoming somewhat sacrosanct. However, the events of the last year have exacerbated a number of risk concerns and are changing banks' and regulators' expectations with regards to effective commercial risk management.

These enduring models are based on historic data and given the dynamics of the pandemic and the extraordinary steps taken to counter its economic impact, these historical correlations don't hold.

Alike to trade wars, natural disasters or, indeed, climate change, pandemics are by their very nature situations that are hard to predict or plan for. They can also lead to structural changes which have permanent or long-term implications for the sector. Supplementing this with a forward-looking view, which takes into account future challenges that may arise, provides the much-needed foresight to make better credit decisions.

"We're in this economy where everybody bases their models predicting the future on the past and of course we've never been in a situation where [we] effectively have been forced to shut down on the economy with this much fiscal stimulus."[1]

William Demchak, Chairman, President and CEO, PNC

ONE COMPANY'S PANDEMIC EXPERIENCE

A paper and cardboard packaging business saw revenue from paper sales reduce significantly as businesses moved to remote work and instituted digital solutions such as DocuSign. However, on its balance sheet, year-on-year sales for the entire business in 2020 was not much different than 2019. This is because the decrease in demand for paper was offset by an increase in demand for cardboard as people under lockdown shopped online and ordered items to their home. While the move away from heavy paper use is likely a permanent change from the pandemic, the increase in online shopping is unlikely to stay at peak pandemic levels once people are able to fully go to stores and shop in person. Therefore, if the business fast forwards 6-12 months, it could see a decrease in revenue that it hadn't been expecting and therefore, hadn't planned for.

In this example, the bank, armed with this data, takes an informed, consultative role and can share this analysis with the borrower, suggesting that they think very carefully about any changes that will add to their cost base. Equally, the business' management team can now be better prepared for changes further down the line. In a fast-changing world, a timely change of course informed by insight and foresight is much preferred to 20/20 hindsight when it's too late to avoid a problem.

[1]Source: the Financial Times - https://www.ft.com/content/da9798a6-0d53-491d-b3f7-cccfcb3f975f

With commercial lending, forward-looking data, such as projections of revenues, provide an additional means of understanding future risks. As these offer a glimpse of a possible outcome under certain assumptions, when combined with historical numbers, they give banks and borrowers a much deeper understanding and the opportunity to act with increased confidence.

The ON Credit Intelligence Suite enables banks to look forward, not just backward, helping them get ahead of borrower financial hardship, industry driven risk deterioration, and covenant breaches – thereby enabling the monitoring of loans with the same rigor used in underwriting. In other words, the bank is able to **lend smarter**.

> "As past correlations have become challenged, the OakNorth Credit Intelligence Suite provides a unique solution by offering a real-time and forward-looking view of your loan book. As regulatory focus on credit continues through – and after – the pandemic, tools like OakNorth are invaluable in ensuring you are able to meet important and detailed requests from supervisors."
>
> *Jeremiah Norton, former FDIC Board Member & former Deputy Assistant Secretary, US Treasury*

Get granular with a bottoms-up approach

Regulators dislike uncertainty and lack of control over outcomes. It's more important than ever for banks to consider what they can be doing to mitigate commercial risk in order to make regulators more comfortable.

> "To evaluate creditworthiness properly in the context of this crisis, banks must go beyond analyses of sectors or subsectors and assess individual borrowers."
>
> *McKinsey[2]*

The challenge however, is that most banks' risk models tend to lump all businesses into one of a dozen or so categories – for example, all restaurants, bars and hotels are classified as "Hospitality" – which disregards the fundamental differences in how these business operate and makes it harder for banks to identify the most vulnerable businesses in their portfolio. The experience of a pizza delivery business throughout this pandemic will have been very different to a Michelin-star fine dining restaurant for example. Equally, the experience of an all-inclusive destination resort is likely to havebeen starkly different to an airport hotel or a business conference hotel. The only way banks can effectively assess credit risk is by taking a granular, loan- by-loan approach.

[2]https://www.mckinsey.com/business-functions/risk/our-insights/managing-and-monitoring-credit-risk-after-the-covid-19-pandemic#

Banks not only need to be able to demonstrate to regulators that their data are organized, but that they've also got a very granular understanding of that data, and can quickly analyze, as needed. While annual stress testing is important, regulators increasingly want the "now"view that can be dynamically managed as the subtleties of a crisis change. A big picture understanding will no longer suffice.

The ON Credit Intelligence suite enables banks to classify their loan book into granular sub-sectors and determine the impact of COVID-19 using 262 sector-specific domain models based on industry specific drivers that provide better credit-level decisions.

"The transparent, bottoms-up, granular view that OakNorth provides has the potential to fundamentally transform banks' approach to commercial credit, whether deployed at point of origination, or across the second and third lines for ongoing monitoring and independent challenge."

Bruce Richards, former Head of Supervision for Complex Financial Institutions, Federal Reserve Bank of New York & 30+ years in Commercial Credit

WHY GRANULARITY MATTERS

Significant variations in fundamentals and outcomes exist between different sub-sectors within a broader sector, which traditional banks do not capture – e.g. within Hotel sector, the dynamics of "Luxury Hotels" differ significantly from "Business-centric hotels"

Correlations from previous cycles are broken – the pandemic environment has broken these; hence, the traditional approach of analyzing a credit within broad sector frameworks will not accurately identify all relevant risks

OakNorth's framework allows institutions to be more particular and **identify risks in their loan book much more specifically**, while also enabling them to build smarter, more granular credit policies

Dynamic stress testing

In the intervening years since the '08 recession, regulators have sought to understand how banks' thought processes and risk management capabilities have evolved, particularly when it comes to stress-testing. The challenge is that traditional risk models don't take into account how quickly the situation changes day to day during a pandemic. The steps taken by the Trump administration to manage the pandemic last year were completely different to the steps being taken by the Biden administration today. Banks therefore need the ability to re-run analyses and stress test on an ongoing basis in order to determine how governmental or socio-economic changes are impacting their loan book.

Transparency is essential to this, and the ON Credit Intelligence Suite replaces the traditional third-party vendor 'black box' approach in favor of a 'glass box'. Banks see the underlying assumptions that flow into the ON Credit Intelligence Suite, alter the parameters of scenarios and stress testing, and see the impact of those changes instantly. Banks are able to set their own rules for financial alerts, such as hard or soft covenant triggers. A sector alert is fully explainable, with direct or derived data points and context for the alert. Bank users may then act on the alert based on their own judgement. Even for stress scenarios, the ON Credit Intelligence Suite provides full transparency on assumptions, calculations, parameters, weights and thresholds within the user interface: going a step further to provide users with the ability to create their own stress scenarios and re-run tests.

The path to rebuild smarter and stronger

Throughout the COVID-19 pandemic, regulators and governments have committed to supporting scale-ups and growth businesses — what OakNorth calls the 'Missing Middle' — to access the capital they need to survive the current environment and thrive beyond it. They recognize the positive multiplier effect these businesseshave on communities and the economy in terms of productivity, job creation and GDP growth. By lending smarter, lending faster, and lending more, OakNorth's customer banks are boosting this multiplier effect and are demonstrating their commitment to the businesses at the heart of a successful economy.

"Missing Middle businesses are the most significant contributors to economic and employment growth. They have developed productive and profitable business models, so by giving them access to finance, you enable them to scale and in doing so, improve productivity, employment and GDP growth across the country."

Rishi Khosla, Founder and CEO, OakNorth

OakNorth Advisory Board Members

Bruce Richards

During his time at the Federal Reserve Bank of New York, Bruce served as Senior Vice President and Head of Supervision for Complex Financial Institutions, including the ten largest financial firms in New York. He was also a member of the Federal Reserve's system-wide operating committee responsible for the supervision of all systemically important firms in the United States. He has served on the boards of the Institute of International Bankers, Great Western Bank, the American Australian Association, the US-New Zealand Business Council, and the Shelter for the Homeless, and is a member of OakNorth's Advisory Board. Prior to his service as a regulator, Bruce was a senior leader within the commercial credit space for over three decades.

Jeremiah Norton

Jeremiah served as one of five board members at the FDIC, overseeing the agency responsible for the safety and soundness of the nation's banking system and resolving failed institutions. During his tenure, he had oversight and approval authority for bank regulations mandated by the Dodd-Frank Act and rules from the Basel Committee. From 2007 to 2009, he served in the U.S. Treasury Department as the Deputy Assistant Secretary for Financial Institutions Policy under Secretary Henry M. Paulson. He played a key role in the financial crisis response while at the Treasury, including working on the conservatorships of Fannie Mae and Freddie Mac, the government financed recapitalization of the U.S. banking sector, and assistance packages for the automotive industry. Jeremiah is a member of OakNorth's Advisory Board.

OakNorth Credit Intelligence

The ON Credit Intelligence Suite was born from a bank, so we know first-hand how important it is for regulators to understand how banks identify and manage risk. Built over five years by a team of 250 credit scientists and software engineers, it has powered OakNorth Bank,in the UK, into the top 1% of banks globally, measured by ROE and efficiency, enabling it to profitably manage a multi-billion-dollar commercial loan book. The ON Credit Intelligence Suite is now available to banks across the United States, enabling them to realize the benefits of lending smarter, lending faster, and lending more.

"This is my sixth recession and this one is as different as any I've ever seen, and in the future, there'll likely be other recessions which are very different to anything else we've seen. So, we can't rely on the old ways of assessing risk. We need to have the tools to be more responsive to these different types of recessions, which is why OakNorth's software is going to be a very important product for a lot of banks."

Daryl D. Moore, Senior Executive Vice President and Chief Credit Executive
Old National Bancorp

Get Started with Intelligent Credit

OakNorth is the creator of the ON Credit Intelligence Suite, the industry's first ML-powered, data-driven technology that gives commercial lenders a forward looking, 360-degree view of their borrowers. Our cloud software is transforming commercial lending with the banks leading the innovation of lending.

Schedule a private demo today to see what the ON Credit Intelligence Suite can do for you.

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