

# CELENT



# OAKNORTH: MACHINE LEARNING DRIVEN BUSINESS LENDING

WINNER OF CELENT MODEL BANK 2020 AWARD FOR LENDING AS A PLATFORM

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## CASE STUDY

This is an authorized reprint of a Celent case study. Although the reprint was prepared for OakNorth, the analysis has not been changed. For more information, please contact [info@celent.com](mailto:info@celent.com)

# CASE STUDY AT A GLANCE

FINANCIAL INSTITUTION	OakNorth Holdings Ltd.
INITIATIVE	Next-Generation Credit and Monitoring Platform
SYNOPSIS	OakNorth’s next-generation credit and monitoring platform leverages machine learning, decades of credit expertise, and massive data sets to model a forward-looking view of a borrower’s financial situation that is informed by industry benchmarks, macroeconomic drivers, and scenario analysis specific to that business.
TIMELINES	<ul style="list-style-type: none"> <li>• July 2019: Signed five-year commercial agreement with NIBC Bank following a nine-month pilot.</li> <li>• January 2020: Signed commercial agreement with OIMIO, a new Netherlands-based commercial real estate lender.</li> <li>• April 2020: Signed commercial agreement with Customers Bank, a US bank that provides a range of banking and lending services to small and medium-sized businesses, professionals, individuals, and families.</li> <li>• April 2020: Signed commercial agreement with Modern Bank, an FDIC-insured, full-service commercial bank headquartered in New York City.</li> <li>• April 2020: Launched end-to-end solution to help regional and community banks process the unprecedented volume from the CARES Act’s Paycheck Protection Program (PPP)</li> <li>• Current: 18 banks across six countries that have collectively put over \$20B of assets under service on the Platform.</li> </ul>
KEY BENEFITS	<p>The Platform enables banks around the world to more effectively address the debt financing needs of the “Missing Middle” – the growth businesses that are the backbones of economies and communities globally but that have been in banking’s blind spot for decades.</p> <p>The benefits to the partner banks licensing the Platform are:</p> <ul style="list-style-type: none"> <li>• <b>An enhanced credit and portfolio performance</b> – larger data sets and deeper analysis enable more informed credit decisions and proactive portfolio monitoring that deliver better credit outcomes.</li> <li>• <b>More attractive economics and scaled growth</b> – origination and credit teams who can transact several times more deals per year.</li> <li>• <b>A better borrower experience leading to accelerated revenue and business growth</b> – loans that are customized for the borrower’s individual needs and completed in days or weeks vs. months.</li> </ul>

# CELENT PERSPECTIVE

- OakNorth leverages its credit and monitoring platform to lend directly off its own balance sheet via OakNorth Bank in the UK and licenses the Platform as a Software-as-a-Service solution to other banks and lenders around the world.
- The Platform leverages big data and machine learning to enable its partner banks around the world to more holistically and profitably address the borrowing needs of mid-market businesses.
- Through leveraging the Platform, OakNorth Bank in the UK has been able to lend over \$5.4 billion without a single credit loss, reaching cash flow break-even in just 9 months and making \$82.4 million pre-tax profit in 2019.
- OakNorth Bank claims that its lending in the UK has directly helped with the creation of tens of thousands of new homes and jobs, and through licensing its Platform to other lenders, is helping to accelerate this multiplier effect.
- OakNorth’s Platform helps its partner banks: 1) Bring credit insight back to the front line, 2) boost productivity amongst relationship managers and credit analysts, and 3) perform more robust credit analysis and continuous monitoring.
- To help US regional and community banks process the unprecedented volume of Paycheck Protection Program (PPP) loans, OakNorth has designed an end-to-end solution, from application and document collection to pre-screening and forgiveness.

## DETAILED DESCRIPTION

### Introduction

Celent’s 2017 Model Bank Winner for Banking in the Cloud, OakNorth Bank, secured the third new UK banking license in the past 150 years in March 2015 and began trading six months later. It was the first bank globally to license the OakNorth Platform. Profiled in *OakNorth Bank: Core Banking in the Cloud* (April 2017), they became the first UK bank to have their core system hosted in the cloud in mid-2016, and one of the very first examples of a fully regulated full-service bank running their technology services entirely in the cloud.

OakNorth is headquartered in London with additional offices in New York, Singapore, Hong Kong, Shanghai, Istanbul, Gurgaon, and Bangalore. It is the best-funded fintech in the United Kingdom, raising \$1 billion in funding from several investors. Its latest round (which took place in February 2019), was the biggest funding round ever for a European fintech firm at the time, raising \$440 million from the SoftBank Vision Fund and the Clermont Group to grow its Platform, with a particular focus on expansion in the United States.

Since its launch in 2015, OakNorth Holdings, which includes both the Platform and OakNorth Bank PLC, is profitable at the Group level and valued at \$2.8 billion (at the time of its last fundraising).

Table 1: OakNorth Holdings

OAKNORTH HOLDINGS	
YEAR LAUNCHED	2015
VALUATION	\$2.8 billion
GEOGRAPHICAL PRESENCE	Platform: London, New York, Singapore, Hong Kong, Shanghai, Istanbul, Gurgaon, and Bangalore

	Bank: London, Manchester, Bristol, Birmingham, Leeds, and Ipswich
EMPLOYEES	~ 800
OTHER KEY METRICS	Platform: 18 partners across six markets Bank: \$5.4 billion lent to SMEs; 144,000 savings customers; \$130.3 million revenue and \$82.4 million profit in 2019

Source: OakNorth

OakNorth is providing mid-market businesses with a better borrowing experience via a two-pronged approach:

1. OakNorth's Lending-as-a-Platform: the Platform combines a deep understanding of credit, rich data sets (which include unconventional and previously unavailable data), cloud computing, and state-of-the-art machine learning, to provide its bank partners with the insight and foresight they need to more holistically and profitably lend to mid-sized businesses. The operating efficiencies realized through the Platform allow banks' relationship managers to focus more time on borrower needs. Through predictive, 360-degree monitoring of borrowers' financial and operational data, the Platform provides its partner banks with early warning indicators in case of deterioration in credit quality, enabling them to have preliminary conversations with borrowers before negative credit issues arise.
2. OakNorth Bank PLC Balance Sheet Lending: The bank leverages the platform to lend off of its own balance sheet via OakNorth Bank in the UK. The fully-licensed bank provides a proof of concept for the platform and enables OakNorth to continue to iterate and improve its Platform as a licensed bank using it. The Bank offers loans of \$0.5m to \$45m and has lent over \$5.4BN to date.

Figure 1: OakNorth Bank's Lending Solutions

What do we finance?		Who do we finance?
Commercial Real Estate	Operating Business	<ul style="list-style-type: none"> <li>• Fast-growing, profitable companies</li> <li>• Sufficient cash flows to carry interest and amortization</li> <li>• Experienced management with a proven track record</li> </ul>
• Acquisition	• Working Capital	
• Refinancing	• Growth Finance	
• Pre-Development	• Owner Occupied Real Estate	
• Construction	• Acquisition/ReFi/Development	
• Rehab/Reposition	• Mergers and Acquisitions	
• Bridge	• Refinancing	

Source: OakNorth Bank

OakNorth Bank's technology stack includes Mambu's cloud-based core banking system running on AWS and nCino's Bank Operating System, which leverages Salesforce.com's cloud architecture.

### Opportunity

No matter where you go in the world, mid-sized businesses are the drivers of GDP growth, job creation, productivity, and innovation. Financial services regulators in the UK have for some time been concerned about the lack of competition for these businesses. In 2013, the Bank of England signaled a reduction in the regulatory barriers to entry for startup banks, and in response, British entrepreneurs Rishi Khosla and Joel Perlman founded OakNorth to provide mid-sized businesses with a borrowing experience the way they felt it should be.

OakNorth believes that despite major advances in technology, how banks lend to these businesses hasn't evolved for decades. Instead of seeking to understand each business's unique needs and growth capacity, lending to these smaller businesses has defaulted to a "checkbox" approach of standardized and inflexible terms often using an automated decision engine, while larger and more established companies benefit from bespoke underwriting and credit analysis from larger financial services institutions.

If you look at the global commercial lending market today, a similar pattern emerges: when it comes to loans of \$500,000 or less, big banks and platforms such as Funding Circle, Kabbage, Ant Financial, Lending Club, Iwoca, etc. offer several debt options including small general-purpose business loans, asset finance, and invoice finance. To make this commercially viable, lending is typically based on highly automated credit models that allow lenders to process loans quickly and efficiently.

At the larger end of the market (loans of \$25 million+), large banks can justify allocating significant amounts of time and resources to underwriting loans because the potential returns are substantial. However, borrowers are typically required to offer property as collateral — an approach that simply isn't fit for purpose in this age of falling home ownership and new industries such as technology where property assets aren't required.

Loans that fall outside these parameters (i.e., those between \$500,000 and \$25 million) are either too large for the automated credit process applied to smaller loans or too small to be traditionally underwritten because the potential return doesn't offset the underwriting expense. As a result, mid-market businesses have been overlooked and underserved for decades. This is the opportunity OakNorth seeks to address, and it is using its Platform to do this.

### Solution

The OakNorth Platform allows financial institutions to significantly improve and accelerate their credit decision-making and monitoring capabilities to the multi-trillion mid-market business segment. The Platform leverages machine learning, decades of credit expertise and massive data sets (including unconventional and previously unavailable data) to model a forward-looking view of a borrower's financial situation, that's informed by industry benchmarks, macroeconomic drivers, and scenario analysis specific to that business.

OakNorth currently provides its partner banks in six countries with the insight and foresight they need to provide these businesses with a better borrowing experience. It manages the onerous process of licensing, integrating, and managing a large and ever-growing volume of data feeds which provides lenders with greater visibility and accuracy when evaluating credit risk and cash flow forecasts.

Figure 2: Example of the OakNorth Platform Portfolio Monitoring Home Page

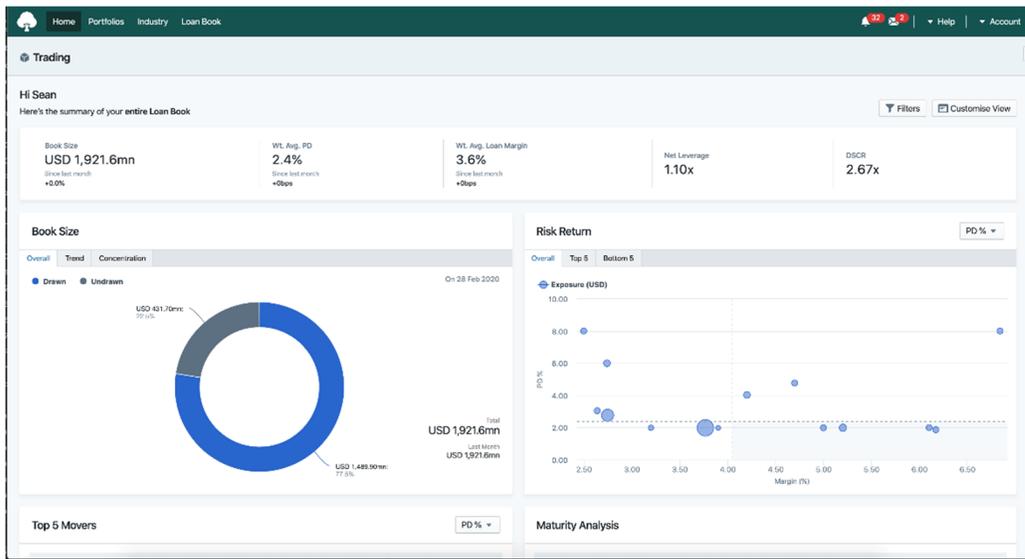


Figure 2.1: Example of the OakNorth Platform Covenant Monitoring Page

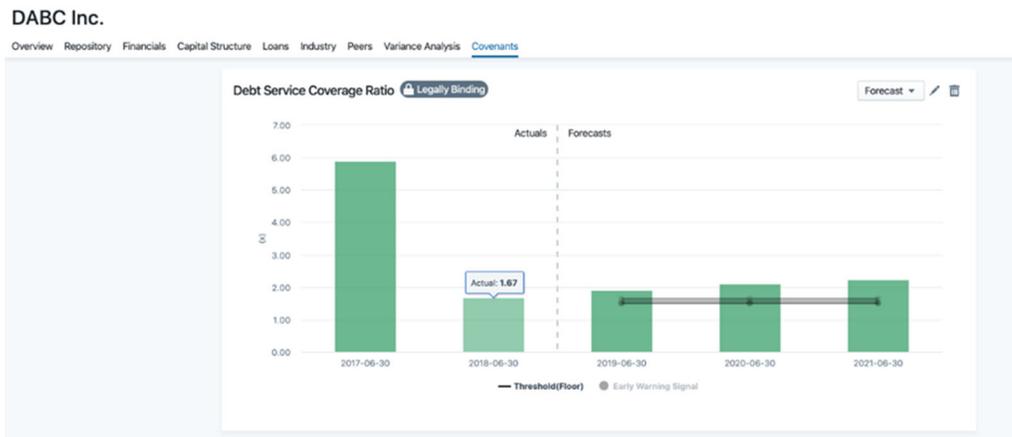
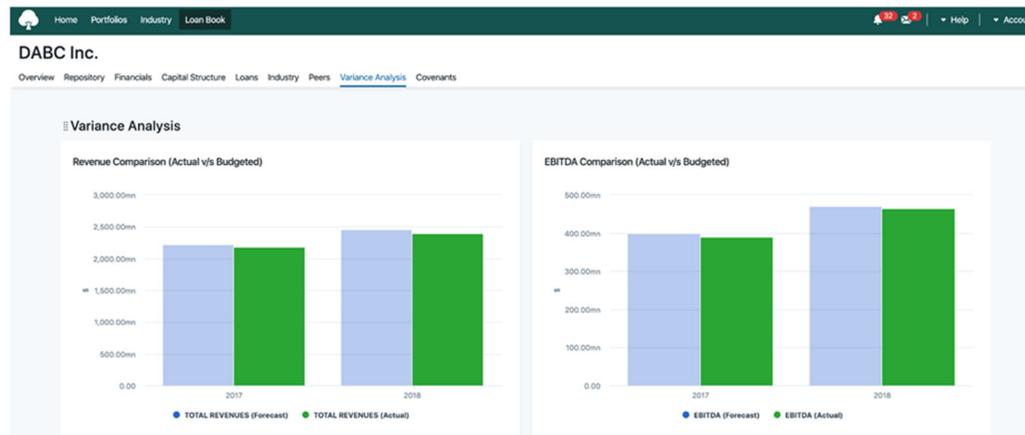


Figure 2.2: Example of the OakNorth Platform Variance Analysis Page



Source: OakNorth  
 Note: All data points and company name are purely fictional for this purpose.

The borrowers benefit from more flexibility in the structure of the loan and faster “yes” or “no,” decisions, enabling them to get back to running their business and avoid the opportunity cost of having to wait months to get a credit decision.

Furthermore, the Platform’s portfolio monitoring tool, Monitor Bench, enables banks to proactively monitor their existing portfolio of borrowers. Monitor Bench provides a relationship manager with an intuitive dashboard with information on all borrowers, along with ongoing actionable and contextual new alerts based on deep and near instant portfolio analysis as credit events unfold (e.g. COVID-19, commodity price shocks). The relationship manager can proactively act on vulnerabilities, as well as identify opportunities within a portfolio, resulting in superior credit outcomes.

For partner banks around the world that are licensing the Platform, OakNorth offers the “OakNorth Academy” to equip relationship managers and credit analysts with the skills to leverage the Platform to its full extent. OakNorth’s online and in-person training program helps relationship managers with:

- Enriched underwriting using millions of data sets including unconventional and previously unavailable data, providing insight and foresight without the noise.
- Deal-tuning opportunities to help customize each deal to meet the borrowers’ requirements while staying within the lender’s risk parameters.
- Predictive, 360-degree monitoring of borrowers’ financial and operational data, to provide early warning indicators in case of deterioration in credit quality, enabling the partner bank to have preliminary conversations with borrowers before negative credit issues arise.

## Results, Lessons Learned, and Future Plans

OakNorth has found a way to leverage technology to provide mid-market businesses with a better borrowing experience.

OakNorth’s Platform enables:

- **An enhanced credit and portfolio performance** – larger data sets and deeper analysis enable more informed credit decisions, and continuous portfolio monitoring delivers better credit outcomes.
- **More attractive economics & scaled growth** – origination and credit teams who can transact several times more deals per year.
- **A better borrower experience leading to accelerated revenue and business growth** – loans that are customized for the borrower’s individual needs and completed in days or weeks vs. months.

To date, the OakNorth group has:

- Booked over \$20 billion of assets on its next-generation credit analysis and monitoring platform, enabling its bank partners around the world to more effectively address the debt financing needs of the mid-market businesses.
- Leveraged the Platform to lend over \$5.4 billion to UK growth businesses directly via OakNorth Bank PLC, helping with the creation of over 13,000 new homes (of which 11,700 are affordable and social housing) and more than 17,000 new jobs in the UK.
- Raised over \$1 billion from investors, including \$440 million in capital raised by SoftBank’s Vision fund in February 2019, making OakNorth one of Europe’s most highly valued fintechs with a current valuation of \$2.8 billion.

OakNorth pledges to continue its relentless focus on supporting mid-market businesses through licensing its Platform to partner banks around the world and leveraging the Platform to do its own balance-sheet lending via OakNorth Bank in the UK. To further nurture the UK's entrepreneurial ecosystem, OakNorth Holdings donates 1% of its group profits to supporting charitable causes and social enterprises. OakNorth Bank is one of the first banks globally to achieve a net carbon zero footprint.

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