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**Authors**

Maitena Pineiro (MA)  
Douglas Dwyer (MA)  
Richard Loeser (MA)  
Mattia Pasquini (CDR)  
Alessio Balduini (CRIF-CDR)  
Lorenzo Pagni (CRIF)

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**Editor**

Christopher Crossen.

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**Contact Us**

Americas  
+1.212.553.1658  
clientservices@moodys.com

Europe  
+44.20.7772.5454  
clientservices.emea@moodys.com

Asia (Excluding Japan)  
+85 2 2916 1121  
clientservices.asia@moodys.com

Japan  
+81 3 5408 4100  
clientservices.japan@moodys.com

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# Open Banking: Real-Time Analytics for Small- and Medium-sized Enterprises

## Abstract

Open Banking initiatives facilitate access to operating account data for business owners, banks, and suppliers, enabling easier and more cost-effective access to liquidity for SMEs. Frequently updated transactional data is a powerful tool that permits real-time assessment of creditworthiness using conventional scoring techniques. Together with Credit Data Research and CRIF, Moody's Analytics has developed a solution to access, process, and utilise Open Banking data to construct real-time financial statements and up-to-date financial metrics. Lenders can use our tool to access current credit information for origination and loan monitoring, and business owners can use it to better understand financial planning, as well as to share information with third parties.

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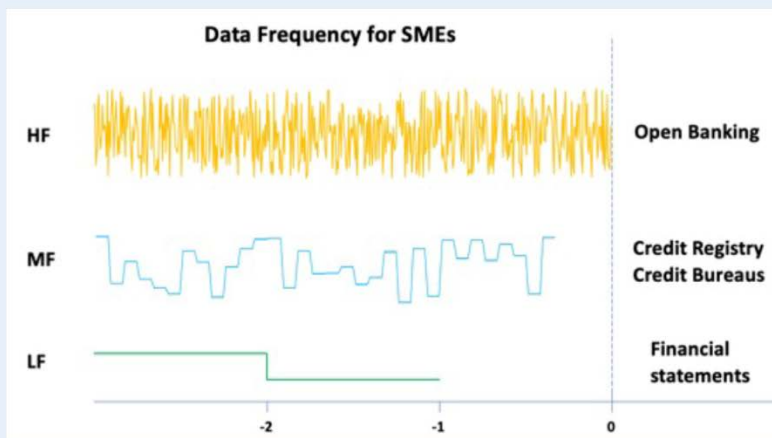
## 1. Introduction

At the start of 2020, small- and medium-sized enterprises (SMEs)<sup>1</sup> accounted for 99.9% of the UK business population.<sup>2</sup> The 5.94 million SMEs — out of a total population of ~6 million businesses — represent half of total turnover and three-fifths of total employment in the UK's private sector. However, despite their important role in the economy, many SMEs struggle to access external financing, with 6 out of 10 resorting to personal funding to help support business growth and operations. The UK's National Audit Office estimates the aggregate "gap" between the amount of funding needed and that actually available to SMEs at £22bn, and the issue has attracted attention from policymakers. It is not uncommon for SMEs to be denied credit without explanation, and credit supply constraints and uncertain financing are often the reason firms cancel expansion plans.

A key factor limiting SMEs' access to financing is the information available to lenders for making credit decisions. Limitations to sharing information, and firms' basic lack of access to their own information, impede the flow of funding for at least four reasons. First, traditional credit risk measures are based on dated information — an issue of particular relevance during the COVID-19 period when financial statements quickly became outdated. Second, traditional lenders cannot assess the risk of competitors' borrowers, which limits competition. Third, an SME's business viability is difficult to assess — lenders' expertise may allow them to identify borrowers that have difficulties paying their electricity bills, but by the time a borrower cannot pay, it is too late. Finally, the lack of a credible signal of creditworthiness limits an SME's ability to contract with suppliers, resulting in sub-optimal growth, scale, and profitability.

Open Banking is transforming the SME lending landscape by shifting ownership of transactional data from banks to the firms themselves, granting SMEs access and control of their own data. In the UK, 99% of SMEs use a single bank, making the account data a rich source for understanding a firm's operations, financing, and investment activities. Whereas previously, transaction-level information was only accessible to the bank providing the account, who benefited from this informational asymmetry, with Open Banking, SMEs can now share their information with all relevant institutions. The resulting transparency, combined with the data-driven technology it enables, can greatly improve the quantity and size of lending products available to a large number of firms.

Frequency of data refers to the time gap between one data observation and the next. Historically, SMEs have been assessed by a combination of 1) Financial Accounts filed to country-specific, and sometimes public, data centres and 2) Behavioural Information stored at Credit Registries or Credit Bureaus. Financial Accounts can be characterized as having "low data frequency," since they are filed annually and are usually made available within between four and six months. This means that the window of observation is backdated 12 to 18 months before any analysis can be conducted at time T<sub>0</sub>. For Credit Registry and Credit Bureau data, the frequency, including the feedback loop from the Financial System, is higher, generally at between three and four months. This data can be described as "medium frequency." Open Banking offers, for the first time, a unique perspective, since its data frequency can be as high as daily. For example, trading information from stock markets and time-series data are collected at an extremely fine scale. Daily information on a bank account provides a real-time view, and it can be used to understand SME liquidity, profile dynamics, and micro-structures, as well as associated risks and business needs.



<sup>1</sup> The UK Companies' Act defines SMEs as businesses meeting at least two out of the following three characteristics: turnover less than £25m, employees less than 250, and gross assets less than £12.5m.

<sup>2</sup> Department for Business, Energy & Industrial Strategy, UK government, Business population estimates for the UK and regions 2020: statistical release, 2020.

Traditionally, a bank's relationship with a borrower involved a banker understanding the borrower's financial position, and providing advice based on this understanding. The banker looked at the firm's chequebook, monitoring inflows — distinguishing customer revenues from cash injections by the owner or a bank — and outflows — identifying expenses associated with selling a product versus capital expenditures that provide use over a long period of time. The key to a firm's health was to see revenue ahead of last year and for expenses to be commensurate with revenue. Since the bank reviewed these metrics, it knew early on if a firm was in trouble, often before the firm did. Yet such traditional analysis is time-consuming and increasingly uncommon as banking becomes more cost-sensitive. Can Open Banking-based information flows enable lenders to efficiently monitor businesses, to better help them keep the ability to pay bills, service debt, and maintain positive net worth? Can computers process high-frequency information in real-time and replicate what an experienced banker could do for a borrower with which they had a close relationship? In our view, the answer is a resounding yes.

Turning this vision into reality relies on solving three challenges. The first is the need for a secure technology that removes the frictions involved in packaging and moving operating account data for third-party use. The second is to achieve an understanding of what the credits and debits in the data represent, as traditional bankers did. Categorising and structuring the raw transactional data are a pre-requisite to using it for analysis and modelling purposes. The third challenge is to transform the information into meaningful, interpretable metrics, where one goal is to produce real-time statements. Our capabilities to create pro-forma financials can play a key role in this effort.

Together with Credit Data Research (CDR) and CRIF, Moody's Analytics has started a research initiative focused on the use of transactional data for SMEs' credit origination, monitoring, and financial planning purposes. This paper presents our methodology to navigate and utilize the Open Banking infrastructure to create real-time business analytics, supporting the need for cost-effective credit scoring models for SMEs. The performance metrics our tool outputs serve as high-frequency performance indicators that lenders can use for credit origination and efficient and timely monitoring; borrowers can use these metrics for effective financial planning. Furthermore, we estimate a real-time balance sheet and P&L, enabling an up-to-date risk assessment using conventional statement-based credit scoring models that lenders typically employ for larger firms. In this day and age, limited data availability should not form an impediment to SME credit flow.

## 2. Potential Open Banking Data Uses for SME Credit Market

The issue of credit availability for SMEs has concerned firms, policymakers, and academics for many years. A 2015 study<sup>3</sup> estimates the SME financing gap, the difference between the demand and supply of SME loans and available equity, at more than 4.7% of GDP in each of the five European countries studied, while for the U.S., the gap remains smaller, 2.3%. In France, Germany, the Netherlands, Poland, and the U.S., a larger share of the gap is attributed to an undersupply of loans, whereas, in Romania, more of the funding gap is associated with demand for equity. During the COVID-19 pandemic, SME financing in many countries received a boost from government grants and loan schemes, but the structure of the underlying issues persists, and thus the need for innovation.

A number of elements make it more difficult for SMEs to access credit compared with their larger peers. The processes employed by lenders for borrower assessment and credit decisions play an important role, since these are often the same across market segments, and thus not tailored to SME lending. As a consequence, many loan costs, e.g. related to the processing of documents and other inputs, are similar across borrowers — but SMEs request smaller amounts of credit. Since these loans are associated with lower fees and interest income, margins are generally smaller in SME lending. This trait may drive banks to charge higher fees or higher interest rates, making terms less attractive or even unacceptable, or banks may decide to avoid SME borrowers more generally, directing funds to other uses.

Two other factors connected with banks' lending processes contribute to high borrowing costs for SMEs. One is related to the type of information available about firms and the ease with which it is acquired. Smaller firms prepare less extensive financial

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<sup>3</sup> Mc Cahery, J., Lopez de Silanes, F., Schoenmaker, D., and Stanicic, D., "The European capital markets study: Estimating the financing gaps of SMEs." *Duisenberg School of Finance*, Vol. 1, No. 3., 2015.

statements, due to regulatory requirements, and because they find less use in them for controlling purposes, and they generally have a shorter borrowing history. Furthermore, certain information about smaller firms may be more costly for lenders to obtain. As a consequence, the available information may not fit with banks' standard statement- and history-based risk assessment methodologies. The other factor is SME collateral, which tends to be more difficult to value than for larger firms, in particular, because there is a trend for it to be intangible or located in the digital space. In summary, lending processes are often not tailored to SMEs, with one-size-fits-all underwriting approaches making them no cheaper to fund than large firms.

Figure 1 SME assessment.

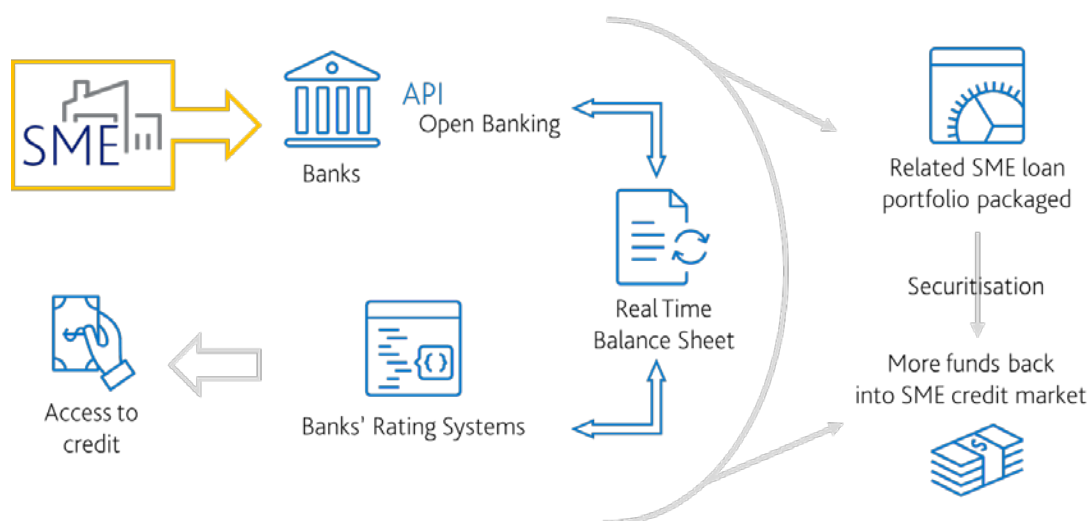


Open Banking enables businesses to take ownership of their bank account data, and to have the ability to transfer this information to third parties, such as other potential lenders. In 2018, the European Union adopted Open Banking reforms through the second Payment Services Directive (PSD2), which mandates banks provide interfaces for data access and transfer. In the UK, the Competition and Markets Authority (CMA) oversees the Open Banking rollout via an Implementation Entity, and it has mandated data standardization for the nine largest banks. By making transactional data widely available, Open Banking can transform the SME lending environment. Equipped with solutions for understanding and analysing the new data, banks can develop lending processes tailored to SMEs' needs, making funding more accessible and cheaper.

A key element for Open Banking's success is the technology used to access the data. This step involves using application programming interfaces (APIs) that can connect to the data source at the bank providing the account. In addition to making it easier for borrowers to share information, APIs reduce the burden on banks by making data acquisition seamless and cheap. With lower costs, smaller loans make more economic sense for lenders, creating increased supply.

Importantly, borrowers' operating account-level information enabled by Open Banking has game-changing potential, since the level of information is both more granular and more timely. Banks can form better risk assessment. Currently, in the absence of a good assessment, banks may regard SMEs as riskier across the board, possibly leading to profitable and well-run firms being underserved due to limited information. The ability to more effectively differentiate between borrowers can make a difference in credit availability for successful firms. Operating account data granularity enables constructing financial statements (see discussion in Section 3), opening up the possibility of applying standard statement-based methods to a much wider universe. In tests, established financial ratio-based PD models, such as Moody's Analytics RiskCalc™, demonstrate good ability in distinguishing small firms, so broadening applicability would enhance underwriting efficiency.

Figure 2 Transactional data workflow.



Currently, the funding landscape for SMEs is characterized by a strong reliance on existing relationships and by limited competition. When seeking new funding, most SMEs only approach the bank providing their primary account — a practice that may be influenced by high rejection rates in applications to competing banks.<sup>4</sup> Enhanced data access through Open Banking allows for more objective risk assessment by more market participants, reducing frictions, and encouraging more SMEs to seek external funding more broadly. Furthermore, more seamless information flow and analysis can greatly speed up decision processes, which is particularly important for young, growing businesses that often need financing and cashflow quickly.

Apart from risk assessment leading to improved origination decisions and greater credit availability, Open Banking information can enhance banking processes and client offerings. Because operating account data is real-time, it harbours great potential to be used for monitoring purposes. And this granularity, combined with technology to interpret it, provides new opportunities for banks to analyse borrowers and support clients better. Detecting patterns of potential concerns, such as low cashflow, high costs, that borrowers may not be aware of can improve services, including financial advice and other product offerings.

In summary, Open Banking can significantly improve SME lending in many ways, creating utilization opportunities for all market participants. First and foremost, borrowers can use data to gain insights about their finances and to represent themselves vis-a-vis lenders. Intermediaries such as brokers can work with applicants to enhance their information package. Technology Open Banking can enhance banks' use of existing client operating account data, and it enables them to analyse new clients that decide to share their information.

### 3. From Transactional Data to Real-time Financial Information

This section describes the methodology used to utilise transactional data when evaluating SMEs' financial soundness and debt repayment ability. The solution development involves the four steps described in Figure 2.

#### 3.1 Packaging and moving transactional data

APIs are the first infrastructural component that facilitate practical execution of our framework: packaging and moving transactional data from the operating account to the appointed destination. CDR and CRIF have developed an API that connects SMEs' account holders with the third party interested in evaluating the data easily and quickly, only requiring a one-time input from the SME. This technology enables SMEs to transfer their operating account information to third parties in real-time, making

<sup>4</sup>SME Finance monitor (see BOE paper).

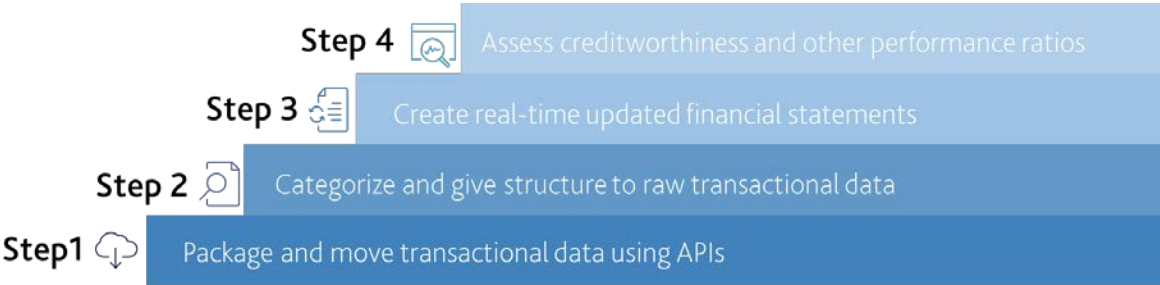
completely up-to-date performance metrics possible. Practically speaking, the process is fully automated, so that the solution output is updated as soon as new information flows.

### 3.2 Categorising and structuring transactional data

Once transactional data reaches its destination, the next step is to pre-process the information and prepare it for modelling. The information contained in the operating account shows cash inflows and outflows, but these are not yet reconciled with intended business purposes. For example, the raw data does not reveal the organic growth of firms' operations, as it does not distinguish between a cash inflow derived from a sale or a cash inflow derived from an external credit. To pre-process the data, we use CRIF's Categoriser, an AI algorithm that organizes cashflows with respect to their source and purpose.

The Categoriser screens each transaction's details, such as stakeholder's information, amount, date, and reference description and classifies transactions into 13 categories and 124 sub-categories. For instance, it distinguishes expenses intended for rent payments from utility bill payments. The Categoriser allows us to differentiate operating items from financing and investing resources.

Figure 3 Solution workflow.



### 3.3 Creating real-time financial statements

Once all the transactions have been categorised, we aggregate by type and purpose during a given period. The categorised information allows us to track inflows derived from sales, outflows intended for operating purposes and tax and interest payments. This information lets us assess profitability metrics, such as business growth and operating profit in the form of excess sales, after subtracting outflows derived from operating expenses. The aggregation of categorized transactions also provides structure to the data and facilitates the creation of a pro forma profit and loss account. The pro forma profit and loss account can serve as input for conventional credit scoring models. Some small firms in the UK are exempt from delivering the profit and loss account to Companies House, if they meet certain size criteria.<sup>5</sup> Hence, the above is a crucial first step in assessing SMEs using conventional scoring techniques that often rely on income statement information, among other information sources.

In addition to operating cashflows, the Categoriser also tracks financing and investing cashflows, such as debt repayment and inventory. However, creating an updated balance sheet is not as easy as tracking cash flows and aggregating them into categories. There is a more methodologically complex task involved in this process that we tackle using Moody's Pro Forma Engine. This tool is especially powerful if combined with transactional data, as it only requires the latest available balance sheet as an input to now-cast full financials. The balance sheet information required by the Pro Forma Engine is usually publicly available, as firms in the UK must submit at least an abridged version of their balance sheet to Companies House. The Pro Forma Engine combines the latest available balance sheet information and categorised transactional data to track the firm's activity since the latest balance sheet date and then derives a now-casted, updated balance sheet. Specifically, the Pro Forma Engine tracks operating activity with the categorised transactions and then creates monthly income statements. The latest available balance sheet is then updated with the monthly operating activity, together with other financing and investing activity, such as loan repayment, credit line drawdowns,

<sup>5</sup> GOV.UK, Companies House, Company accounts guidance.



and inventory purchases. This information provides an end-of-month balance sheet for each monthly pro forma income statement. The process is repeated as many times as necessary to reach the current date.<sup>6</sup>

### 3.4 Using the data for SMEs' financial assessment and planning

Once we estimate a real-time income statement and balance sheet, we have all the necessary components to score the firms using conventional PD scoring models such as Moody's Analytics RiskCalc model. RiskCalc is a ratio-based PD model that extracts a measure of default risk from financial statements, known as the RiskCalc EDF™ (Expected Default Frequency) credit measure. Because EDF measures are objective and forward-looking, they can help risk managers allocate resources more effectively for risk assessment and mitigation. In addition, our research shows that RiskCalc demonstrates a good ability to score smaller firms.<sup>7</sup>

In addition to scoring SMEs with RiskCalc, real-time financial data offers a broad range of uses for real-time risk management for both business owners and lenders. Business owners can leverage their transactional data to create accurate and forward-looking financial plans. Lenders can use data to improve the speed and efficiency of origination approvals and to monitor their exposures efficiently. Our method tracks activity and refreshes the full financial statements with every single new activity on the operating account of firms. The method is fully automated and transparent, which enables lenders to mitigate the increase in the credit risk of their exposures by reading alerts coming from the updated real-time statements, to detect historical or current poor financial performance, and to identify if firms are still operating and avoid so-called "Zombie" firms.

The next section contains a business case study for real-time management and illustrates these uses in practice.

## 4. Case Study: Evidence from the Construction Sector

This section illustrates how to use financial metrics derived from transactional information to assess firms' financial performance and credit worthiness. First, we address liquidity, solvency, and activity metrics derived from transactional data. Second, we use the updated pro forma financial statements derived from transactional data to calculate a probability of default using RiskCalc. We perform these calculations for an example firm from the UK, named "Roofer1." Roofer1 makes about £100,000 per year and operates as a contractor in the residential roofing industry. The selection of this specific firm has been motivated by the fact that around 20% of the SMEs in the UK belong to the construction industry,<sup>8</sup> which makes this a representative use case for the SME market. The idea is to conduct the analysis with the most up-to-date data as possible. We use the last day of March as the reference date for the analysis.

### 4.1 The importance of categorising transactions

As described in the methodology section, the analysis starts with raw transactional data coming through the API, and the first step categorises the cashflows. We highlight the importance of this step with an example: Figure 4A shows raw one-year lookback aggregated inflows and outflows. Figure 3B shows one-year lookback categorised inflows, categorised as sales, and one-year lookback outflows categorised as expenses. We see that total inflows and sales are correlated, as are total outflows and operating expenses. However, if not categorised, total inflows do not accurately represent the firm's organic output. Roofer1 received a £25,000 government support loan in June 2020. It is crucial to identify this transaction correctly as external credit to prevent it from distorting the reality of this firm's organic growth and size.

Furthermore, Figure 4B shows how the firm's yearly sales dipped around March 2020 and then have recovered ever since. Roofer1 maintained its operations pace during the pandemic, growing its business through the rest of 2020. One could argue that this fact was expected, as the demand for roofing-related services cannot be postponed indefinitely and can be provided in a socially distant manner. However, the reality of the SME market is that macro factors are not as informative and reliable as when deriving larger firms' expected performance, since SMEs' internal structures are simpler and change more quickly over time. Coming back to our example, even though residential roofing repair and maintenance are seen as a pocket of stability within the re-modelling

<sup>6</sup> Loeser, Richard, Mateusz Giezek, Maitena Pineiro, and Douglas Dwyer. "Pro Forma Engine, Modelling Methodology." forthcoming whitepaper, Moody's Analytics, 2021.

<sup>7</sup> Bacham, Dinesh and Lucia Yang, "RiskCalc Small Business." Moody's Analytics, July 2018.

<sup>8</sup> Department for Business, Energy & Industrial Strategy, Business estimates for the UK and regions 2020.



market, Roofer1's sales have shown a certain degree of volatility over the firm's life cycle. Business declined during the fall of 2019 and the winter of 2020, which may reflect seasonality.

#### 4.2 Financial planning built upon transactional data

Managing financial matters effectively can help a business thrive and adapt to evolving economic environments. Every business owner and the potential lender wants to answer the four following questions in a timely manner: *Business as usual or business downturn? Financing capital expenditures or operating losses? Sufficient liquidity or hand-to-mouth? Healthy balance sheet or risk of insolvency?* Should the answer to any of the questions be negative, early-stage remedy is critical to firm survival.

Figure 4 A) One-year lookback cashflows.

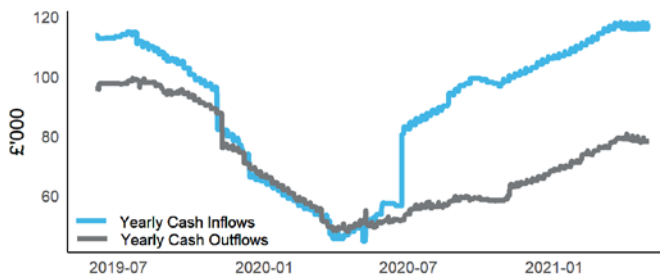
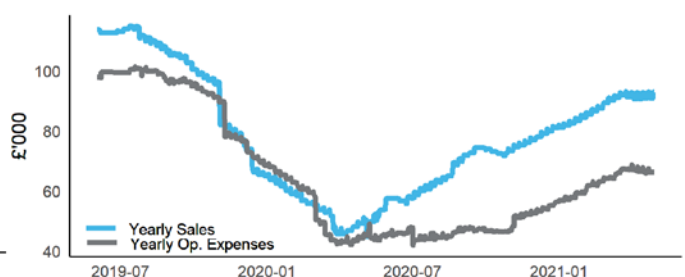


Figure 4 B) One-year lookback sales and expenses.



The next section shows how to translate categorised transactions into real-time metrics meaningful to business owners and lenders. The reference date for our analysis is November 2020, the last available date in our database, but the idea is that this date refers to the present, as the transactional data flowing through the APIs is updated frequently.

Figure 5 Annual sales growth.

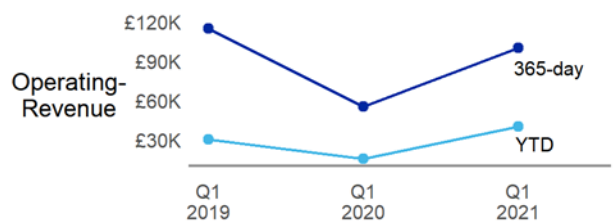
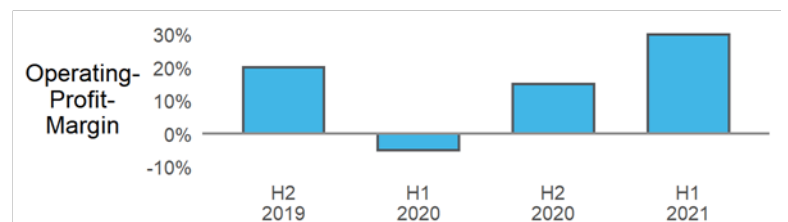


Figure 6 Operating profit margin.

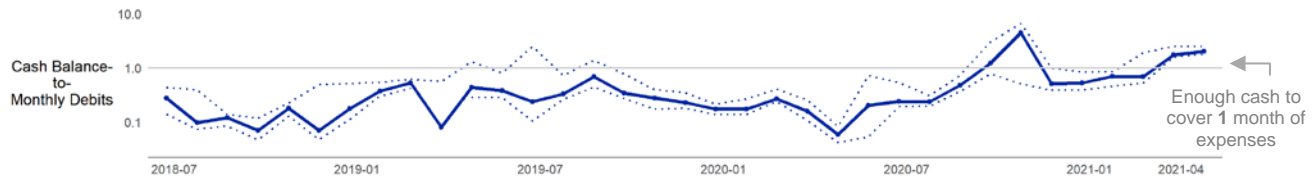


We aggregate cash flows derived from sales to estimate yearly, quarterly, and year-to-date revenue and revenue growth figures. Figure 5 shows how all year-on-year growth measures rose in Q1 2021, following a contraction until Q2 2020. The bars in Figure 6 present the firm's half-on-half, semi-annual operating profitability, which shows that Roofer1 is now more profitable than before the sales contraction.

#### Financing capital expenditures or operating losses?

For this exercise, we subtract aggregated outflows derived from operating expenses to cash flows derived from sales to estimate the operating profit margin of the firm. Roofer1 has been highly profitable over the recent 12 months, and the profitability shows an upward trend. Figure 7 shows that the periods of cash shortage coincide with the ones of low profitability.

Figure 7 Monthly liquidity.



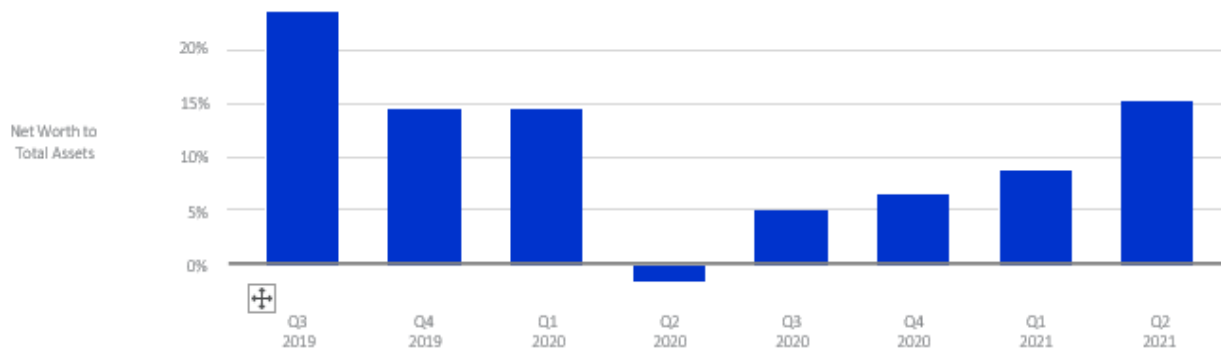
### Sufficient liquidity or hand-to-mouth?

To examine a firm’s liquidity, we look at average balance divided by aggregated monthly expenses. This metric is particularly powerful, as it is directly derived from the raw transactional data, and its interpretation is straightforward: Number of months of expenses that firms hold as a cash buffer. Figure 6 presents the monthly metric for Roofer1, where the solid blue line is the average value for the month and the upper and lower dotted lines correspond to the maximum and the minimum values for the month, respectively. We see that Roofer1’s liquidity has improved compared to previous periods and now holds more than one month of expenses as cash balance, whereas it held around 10 days of expenses in earlier periods.

### Healthy balance sheet or risk of insolvency?

Once we have created a real-time balance sheet following the methodology in earlier sections, a number of popular ratios can be computed. Figure 7 presents quarterly Net Worth to Total Assets for Roofer1, which dipped through the first two quarters of 2020 and has recovered ever since. The latest Q2-2021 values for this ratio show that the business is still not fully recovered as it has not yet reached Q3-2019 levels.

Figure 8 Quarterly solvency.



### 4.3 Assessing SMEs’ credit worthiness with conventional scoring methods

So far, we have learned that all of Roofer1’s year-on-year growth measures are up in March 2021, following a contraction until Q1 2020. Further, profitability, liquidity, and solvency ratios have improved during the most recent periods. The next step combines this information to estimate a probability of default for the year ahead. We next illustrate how to score Roofer1 using RiskCalc 4.0 UK and look at which factors contribute to its probability of default.

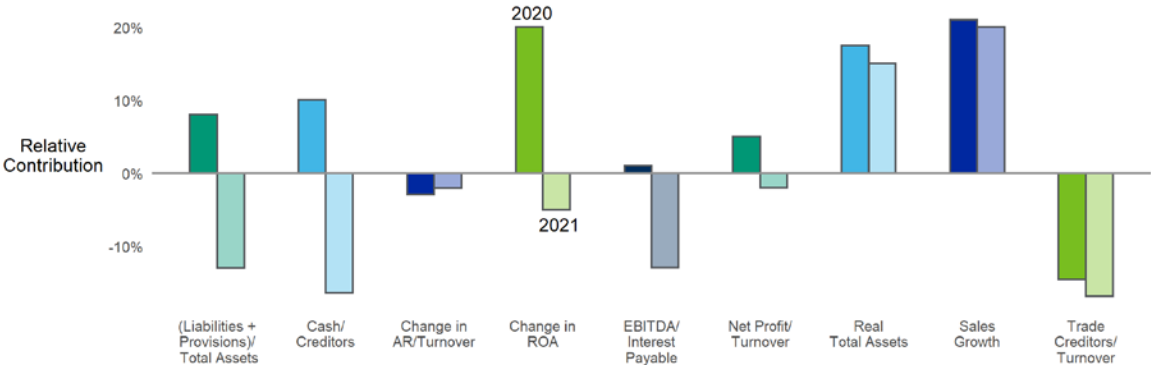
Table 1 shows the one-year EDF values using estimated YTD financial statements for end of Q1 2019, end of Q1 2020, and end of Q1 2021 and the corresponding implied ratings. Figure 9 shows the relative contribution of each risk driver to the EDF value. A positive relative contribution means that the firm’s ratio is increasing the EDF value, while a negative relative contribution means that it is decreasing the credit risk. Figure 9 helps understand the magnitude, size, and effect of each ratio on the EDF value. We see that the credit risk has improved since 2020, but it is still higher than before sales

Table 1 RiskCalc EDF values

YEAR	RISKCALC EDF	EDF-IMPLIED RATING
2019	1.0%	Ba2
2020	3.0%	B1
2021	1.7%	Ba3

contracted in 2020, despite the business being more profitable than before. We can explain this phenomenon by looking at Figure 9. The highest risk contributors for 2020's and 2021's EDF values are size, measured in total assets, and sales growth. On the one hand, smaller firms are expected to be riskier. On the other hand, the sales growth ratio aims to measure the stability of the firm's performance and behaves like a double-edged sword; both rapid growth and rapid decline tend to pull the EDF value up. Hence, the strong sales rebound from H2 2020 is regarded as a risk factor. Liquidity, profitability, and solvency metrics have improved from 2020 and contribute to 2021's improving EDF value compared to 2020's. Activity ratios have a positive impact for both 2020 and 2021 credit risk measures in a very similar magnitude, as Roofer1's working capital items, such as trade creditors, have remained low with respect to sales.

Figure 9 Risk Drivers for 2020 and 2021 EDF values.



By applying the proposed data-driven technology, we can assess the financial soundness of the small firm under analysis, which does not have any publicly available information, other than 2020's abridged balance sheet. Information from 2020 would have put this firm in a much poorer position when compared to its current reality.

### 5. Summary and Road Map Ahead

SMEs play a key role in the UK's economy, yet many are having a hard time growing due to difficulties in finding external credit. Many factors contribute to the credit constraint including information asymmetries, unorganized and missing credit information, and collateral scarcity. Open Banking initiatives have created an opportunity for SMEs to own their transactional data and share it with third parties easily and effectively through API interfaces. Moody's Analytics, together with Credit Data Research, has developed a solution to use this transactional data for real-time risk management of SMEs.

Our solution constitutes data-driven technology that supports various uses related to risk management for SMEs. First and foremost, the integration of **updated financial information estimated by transactional data contributes to improving the accuracy of rating models.** Second, **analytics developed around transactional data help improve the speed and efficiency of credit origination and the ongoing monitoring of credit exposures.** Our solution relies on real-time data transfer that avoids unnecessary, operationally inefficient back-and-forth exchanges. Plus, the real-time data exchange helps lenders learn about SMEs interests, while keeping pace with the rapidly changing SME market environment. In addition, leveraging updated insights into SMEs' activities means that lenders can better discriminate against fraudulent clients that try to exaggerate their financial performance and to identify dormant companies. Enabling the flow of this type of data and increasing the transparency of SMEs' operations and financial performance is a key step to enhancing borrower credibility and increasing lending within the SME space.

The core of our technology is based on an AI algorithm that translates transactional data into categorized and structured financial statement information. So far, the algorithm is trained to extract financial information, but it can be enhanced to extract other types of behavioural information, such as loan repayment, investing appetite, and supply chain metrics. Extracting multiple types of information from transactional data that is efficiently available remains a challenge. Also, creating a multidimensional score by best combining these different types of behavioural information with the probability of default metric, remains a key question that we are working on answering.

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The firm has an international footprint, in France, Germany, Spain, Italy, and the UK and has partnered with other like-minded businesses to power credit decisions and increase transparency in the SME lending space.

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