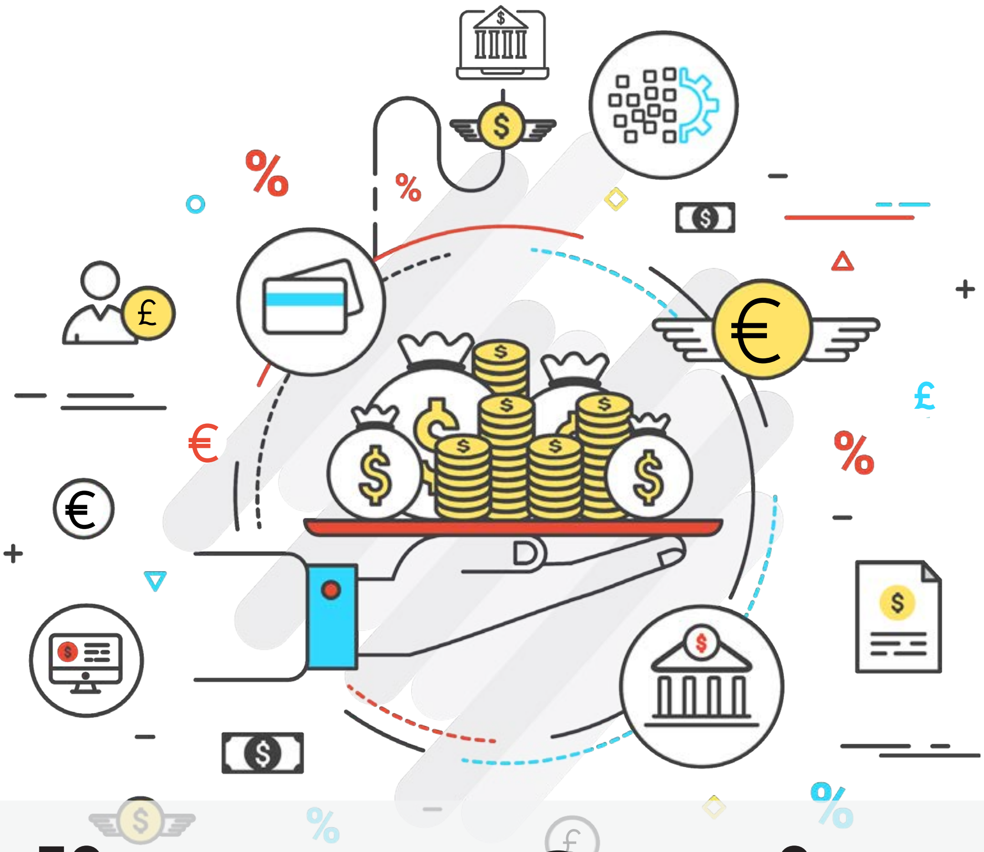

Lending as a Service

SME funding gap driving demand for technology to turbocharge lending

FIRST ANALYSIS WHITE PAPER

Integrative insights on emerging opportunities

August 26, 2020

First Analysis

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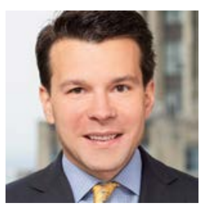

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Terry Kiwala is a vice president specializing in research and investment in software-as-a-service (SaaS) businesses, particularly in enterprise productivity applications. He is a thought leader in his sector, having authored widely read industry research. He uses his industry knowledge and expansive network to uncover promising investment opportunities and help companies navigate their strategic paths and accelerate growth. Prior to joining First Analysis in 2019, he was chief financial officer of Vokal, a software development company, senior vice president at Tribeca Flashpoint Media Arts Academy, and associate vice president at National-Louis University. Earlier, he was an investment banking analyst at Lehman Brothers. He earned a bachelor's degree in economics and government from the University of Notre Dame. He is a CFA charterholder.

About First Analysis

First Analysis has a nearly four-decade record of serving emerging growth companies, established industry leaders and institutional investors in emerging high-growth segments in technology and healthcare, both through its venture capital investments and through First Analysis Securities Corp. (FASC), which provides investment banking and related services. FASC is a FINRA-registered broker-dealer and member SIPC. First Analysis's integrative research process underpins all its efforts, combining 1) dynamic investment research on thousands of companies with 2) thousands of relationships among executives, investors and other key participants in our focus areas, yielding a deep, comprehensive understanding of each sector's near-term and long-term potential.

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LENDING AS A SERVICE

SME funding gap driving demand for technology to turbocharge lending

- There is a significant worldwide funding gap for small and medium enterprise (SME) working capital needs owing to a mismatch between the size of loans needed by SMEs and the cost associated with traditional banks' lending practice that prevents banks from recouping the cost of extending credit with associated interest income and fees.
- We think both public policy and private sector innovation will increasingly look to Lending-as-a-Service (LaaS) companies — companies that use technology combined with existing and new data sources to reduce the cost and risk of lending to SMEs and thereby expand the supply of funding – as a key to filling the SME funding gap.
- We estimate the U.S. LaaS total addressable market (TAM) at $1.2-2.0 billion with only 3-4% penetration. We expect the TAM to grow at an 18% annual rate driven by growth in factoring loans and venture capital funding, normalized GDP growth of about 2% annually, an expectation of higher demand for SME credit following the exhaustion of Paycheck Protection Program (PPP) loan funds, and further progress toward open banking in the United States.
- We expect penetration of the TAM to increase by 35% annually, reflecting the 18% TAM growth plus increasing adoption of LaaS technology by capital providers seeking to address the growing SME funding opportunity more efficiently. This mirrors trends in the EU following the adoption of open banking.
- We discuss 27 providers aiming to transform SME lending with innovative technologies and data.

SME FUNDING GAP LARGE, A HINDRANCE TO ECONOMIC GROWTH AND CATALYST FOR THE LAAS SECTOR

On April 21, as Treasury Secretary Steven Mnuchin announced an incremental $310 billion in emergency PPP forgivable loans for small businesses hit by the COVID-19 pandemic, he proclaimed it was critical to extend a total of $600 billion in funding to small businesses, which are the "backbone of the economy" and "50 percent of the private payroll."

The reality is that even prior to the COVID-19 liquidity crunch that small businesses currently face, there was a significant worldwide funding gap for SME working capital owing to a mismatch between the size of loans needed by SMEs (and lenders' potential profit from those loans) and the cost associated with traditional banks' lending practices that prevents banks from recouping the cost of extending credit with associated interest income and fees.

Traditional banks' inability to profit from SME lending products is largely due to their antiquated underwriting and servicing platforms. The lengthy and detailed document collection and inputs required by banks do not differ materially by loan size. As such, the required documents and underwriting procedures are substantially similar for well-capitalized mid-market firms as they are for SMEs. A December 2019 study by ezbob, a London-based LaaS platform, reports that the average U.K. SME loan costs a bank between $2,500 and $5,200 to process and fund. Similarly, a 2019 study by Deloitte estimates that for U.S. lenders, the same SME loans cost between $2,500 and $10,000 to process and fund, and the entire application process takes between three and 10 weeks to complete.

Studies vary in their estimates of the SME funding gap – the difference between the loan volume demanded by SMEs and the overall supply of loans – but unanimously, each indicates it is large. At the BNP Paribas September 2018 conference on SME lending, Code Investing, a leading U.K. lending platform, reported the U.K. funding gap is $77 billion, the European funding gap $825 billion and the U.S. funding gap an astonishing $5 trillion. Given SMEs accounted for 63% of total employment among OECD countries according to a 2016 World Trade Organization report, "Levelling the trading field for SMBs," we believe the narrowing the funding gap will remain a key focal point for efforts to resume and accelerate worldwide economic growth. We think both public policy and private sector innovation will increasingly look to LaaS companies – companies that use technology combined with existing and new data sources to reduce the cost and risk of lending to SMEs and so expand the supply of funding – as a central part of the solution.

In early 2020, the LaaS industry was gaining momentum as non-bank lenders increasingly pivoted their models from direct lending activities to leveraging their proprietary data sets, providing data to large, well-capitalized banks. In response to the COVID-19 pandemic, the U.S. government absorbed a substantial amount of SME credit risk through the PPP program. As the U.S. economy rebounds from the economic shock related to the pandemic and normal lending resumes, U.S. banks remain ill-equipped to make lending decisions based on future cash flows and ability to repay. We believe these institutions will increasingly use fintech firms to evaluate credit quality based on these firms' proprietary data sets, that set a baseline for accounts receivable quality based on historical payments and have the ability to predict future cash flows based on prior payment behavior. We expect the LaaS industry to grow at 18% annually, and firms in the LaaS industry will penetrate the growing TAM at an accelerating rate. We believe a variety of firms, including both early stage companies as well as public procurement and accounts receivable and payable automation platforms will all be innovators in the growing LaaS industry.

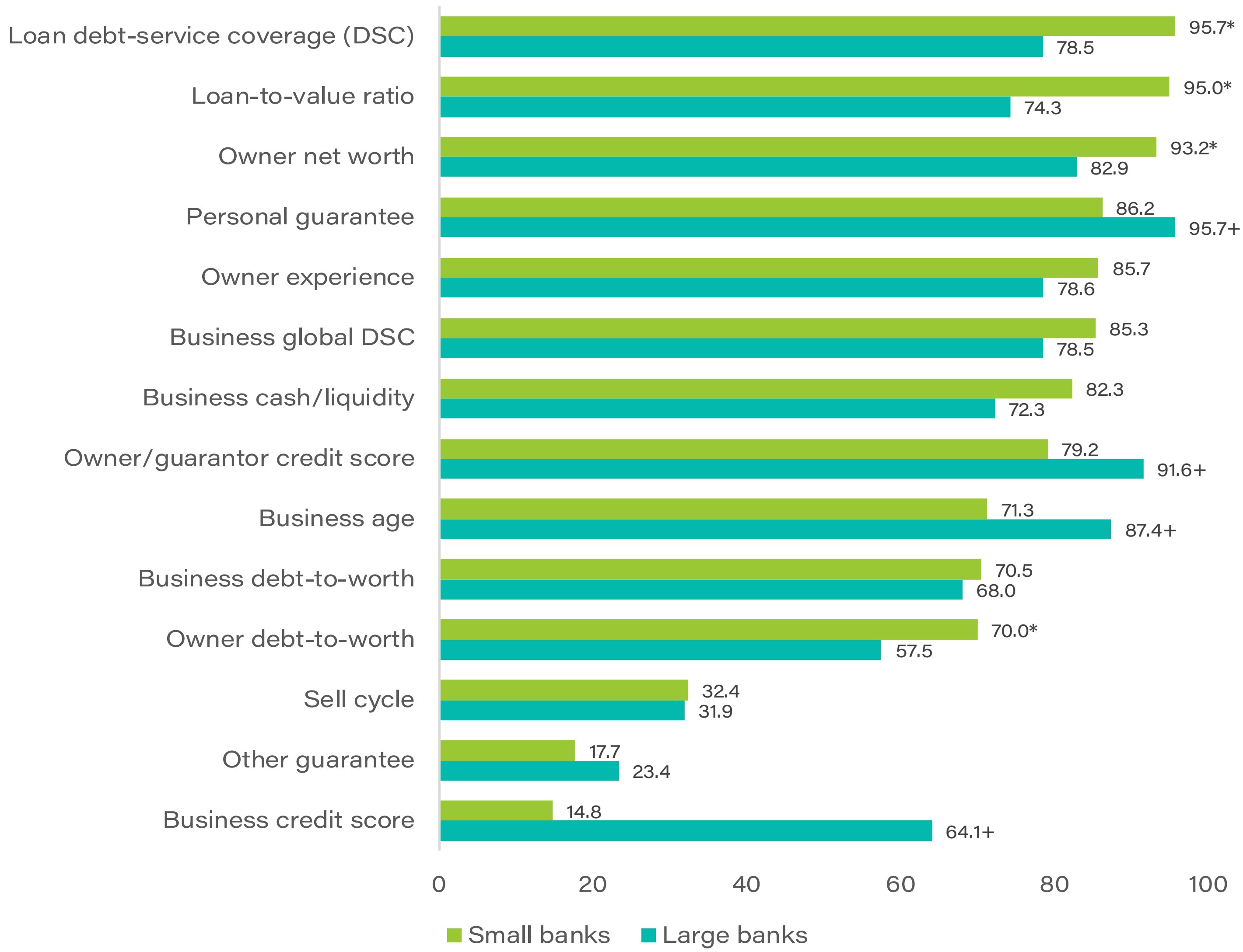
THE NUMBERS SHOW LIMITED OPTIONS FOR SME BORROWERS

As SMEs are often unable to access credit on a standalone basis, alternate credit sources have dominated the SME lending space, providing some SMEs access to working capital without traditional business financing. For example, many owners revert to personal guarantees or loans based on personal assets to shore up liquidity for their businesses.

A December 2018 report by the Federal Deposit Insurance Corp. (FDIC) states that certain criteria are "always" or "almost always" used by banks to evaluate small business loan applications for their number one loan product to small business: owner net worth (93.2% of large banks, 82.9% of small banks), personal guarantee (86.2% of large banks, 95.7% of small banks) and owner or guarantor credit score (79.2% of large banks, 91.6% of small banks). This report characterizes the collateral held by SME clients as difficult to value or not easily sold.

Further evidence of the reliance on owners' assets or personal guarantees is found in the 2019 Report on Employer Firms published by the Federal Reserve, which features a Small Business Credit Survey. This survey revealed that 86% of employer firms rely on their owners' personal credit scores to obtain

TABLE 1: Percentage of banks that 'always' or 'almost always' use this underwriting criterion to evaluate business loan applicants for their number one loan product to small businesses



Source: Federal Deposit Insurance Corp., FDIC Small Business Lending Survey, 2018 Question 22E.

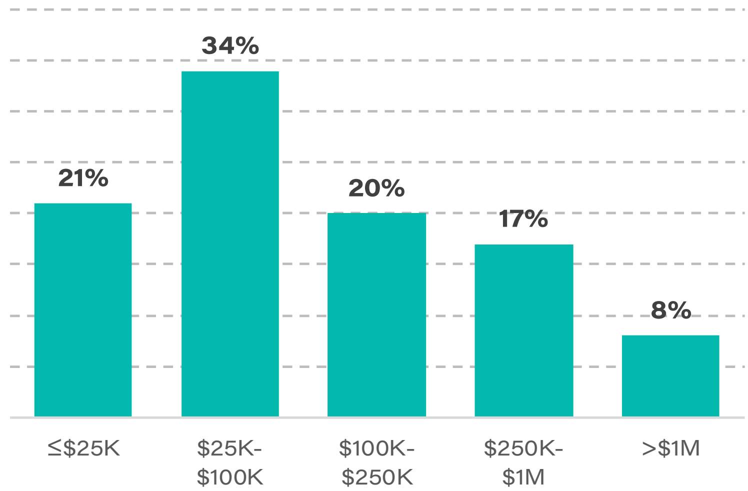
Notes: At the statistical significance of 10%, "*" denotes that small banks are more likely than large banks to 'always' or 'almost always' use this underwriting criterion to evaluate loan applicants for their number one loan product to small businesses; "+" that large banks are more likely than small banks. Banks may select multiple answers; results will not sum to 100.0%.

SME loans. Further, for SME loans, 58% of loans used the owner's personal guarantee as collateral for the loan, followed by business assets, which were used as collateral in 49% of loans, and personal assets, which were used as collateral in 31% of loans.

Because of the limited SME liquidity sources, business owners often revert to alternate methods of financing, including factoring or personally funded loans, to gain working capital. A 2017 survey of small businesses by the Federal Reserve showed that 67% of SME owners used personal funds to cover operating expenses. And for firms that were able to secure business financing, 87% required the owner's personal credit score, and 75% of the loans sought were for amounts under $250,000.

Factoring, the purchase of receivables, is a common practice among marginally capitalized SMEs. In a factoring transaction, a firm sells an outstanding receivable at a discount. The buyer advances a portion of the receivable to the SME and gets paid back upon invoice payment. Factoring firms are typically more concerned about the creditworthiness of the invoiced entity than the SME selling the receivable.

TABLE 2: Total amount of financing sought *(% of applicants, N=3,434)*



Source: Federal Reserve Banks, *Small Business Credit Survey, 2017.*

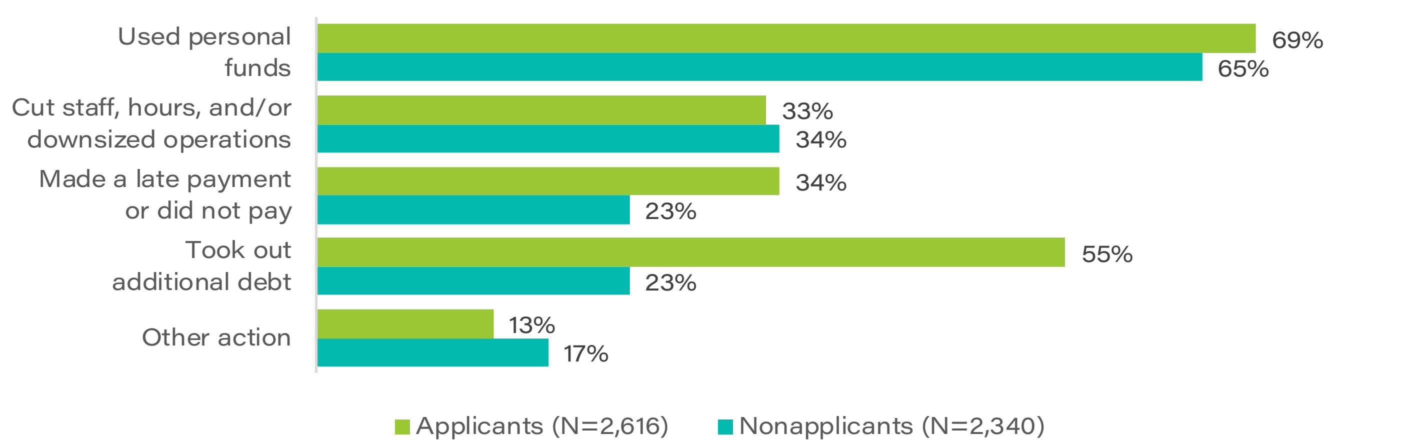
Factoring transactions are expensive sources of working capital. In a hypothetical example, an SME with a $1 million net 60 receivable may sell that receivable to a factoring company at a 4% discount. The factoring company then advances a portion of the net receivable (receivable less discount), which in this example we assume to be 75%. Once the entire original amount is received, the factoring company remits the balance to the SME. As many receivables are short-term in nature (30, 60 or 90 days), the effective interest rate from factoring is quite significant.

In our example, our SME has paid $40,000 in fees for access to $720,000 for 60 days, an effective annual percentage rate of 33.3%.

Other SME owners fund SME working capital needs by using personal lines of credit, including mortgages, credit cards and home equity lines of credit. While these loans often cause lifestyle limitations and incur substantial interest costs for the SME owner, they are often the only available means of financing. For SME owners who encountered difficulty or altogether inability to access more conventional SME financial products, 69% of applicants and 65% of non-applicants resorted to using personal funds. Others chose different avenues, including reducing operations, late payments, or alternate debt sources.

A final — and perhaps the riskiest — source of SME financing comes from owners using retirement funds to cover their SME's operating costs. Reddit message boards show extensive strategy sharing among SME owners to leverage retirement funds to meet temporary liquidity needs, although these actions come with substantial risk given IRS regulations around withdrawals and taxation. An SME owner may, for example, withdraw funds from his or her individual retirement account (IRA) to cover payroll expenses. However, to avoid ordinary income tax and perhaps a 10% early withdrawal penalty on these funds, the SME owner must redeposit funds into the IRA within 60 days. Funding working capital needs in this manner is quite risky, as any delay in receipt of receivables

TABLE 3: Actions taken as a result of financial challenges (% of employer firms with financial challenges)*



Source: Federal Reserve Banks, *Small Business Credit Survey, 2017.*

Notes: * Respondents could select multiple options. Response option 'unsure' not shown in chart. Data represents approximately the second half of 2016 through the first half of 2017.

could cause the SME owner to incur substantial tax. Further, the IRS only allows this strategy once annually, so the SME owner needs to carefully consider its timing.

TECHNOLOGY FOR GATHERING, ANALYZING DATA CAN NARROW THE GAP

As these substantial SME funding gaps have become more acute worldwide, certain regions have recognized that traditional underwriting criteria used by large banks are not appropriate for all borrowers. The traditional underwriting process has been designed around the information that has been feasible and available to collect cost-effectively, so the process has been shaped around larger firms for which more such information is available. SMEs suffer when these one-size-fits-all underwriting criteria are applied across businesses sizes and stages. If more and additional types of information around smaller businesses become available cost-effectively, new underwriting processes become possible.

Traction with these new underwriting processes began in the European Union with the advent of open banking, a process that allows broad access to anonymized bank transaction data for the purposes of extending tailored financial products at more competitive prices than traditional lending. The EU, recognizing the value of publicly disseminating complete data sets of SME depositors and borrowers, jump-started a new industry of firms that provide innovative data sets on SME borrowers to large banks, essentially employing alternative data sets that house predictive capabilities to evaluate the creditworthiness of SME borrowers. As the EU experienced success in its open banking initiatives, open banking has spread to other regions, including Canada and Australia. And in the United States, as alternative lenders have experienced dramatically higher costs of capital and a reduced supply of fresh funds to lend as a result of their dependence on now more cautious venture capital funds, former lenders have shifted their business models away from lending and now provide data to large institutions, which have used this data to shape new SME underwriting criteria.

EUROPE AND THE U.K. PROMOTE MORE EFFICIENT SME FUNDING WITH OPEN BANKING

In 2015, the EU passed Directive 2366, more commonly known as Payment Services Directive 2, or PSD2, which improved the data infrastructure surrounding electronic payments. This directive, in part, aimed to improve competition and access to transaction data, which banks or other authorized users may use to research concepts, aggregate payment data for a comprehensive view of consumer or business behavior, and improve overall access to financial products at lower cost. PSD2 took effect Jan. 12, 2016, and EU countries were required to incorporate it into national law by Jan. 13, 2018.

Similarly, the U.K.'s Competition and Markets Authority (CMA) mandated that data housed by the nine largest U.K. lenders be standardized and invited smaller banks to participate in the platform, all with the goal of fostering competition, innovation and lower costs for consumers. To date, approximately 90% of U.K. banks have participated in this open banking system.

Following the implementation of open banking, the CMA charged Nesta, a U.K.-based public charity, with holding a competition for technology startups to review open banking data and propose new products and applications for the standardized open banking data. A recurring theme among the finalists was improving access to lenders and alternative financial products. In June 2018, 12 finalists were chosen. They featured new financial products that share common themes of cash flow management and liquidity for small businesses, focusing on easing the short-term volatility of incoming cash and the need to meet current obligations to employees and vendors.

Winners of the challenge included startups building lending networks, predictive credit platforms, and financial management tools. Target customers included bank and non-bank lenders, as well as SME borrowers themselves. None of the finalists were in the business of leveraging their own balance sheets but rather developed proprietary data algorithms and processes to make the lending process more accurate and faster. In certain cases, these finalists developed processes to streamline operational activities in ways that made borrowers better credit risks with more transparent operations. In each of these instances, the data aggregated by the finalist firm created a verifiable data set grounded in actual transactions, as opposed to more traditional underwriting documentation of self-reported financial statements for credit analysis. The end results are robust, predictive, and more-accurate data sets that can be used not only in lending decisions, but also to lower the collective risk of a loan portfolio through the predictive nature of transaction-level payment data.

Within the broader group of winners, those in the first category, lending networks, used open banking information to introduce borrowers to extensive networks of bank and non-bank lenders. Whereas borrowers typically had access to only eight major banks previously, these innovators expanded access to hundreds or thousands of firms.

Capitalise established a platform for 1,000 U.K.-based accountants to act as channel partners to refer clients to its network of more than 100 lenders. The platform matches SME clients with the type of funding desired according to lenders' specialties. Similarly, Finpoint anonymously matches SME clients with lenders including traditional banks, peer-to-peer lenders, trade-specific financiers and asset-based lenders.

Funding Circle expands the breadth of accessible lenders by integrating SMEs with a network of more than 70,000 retail investors, asset managers, insurance companies and government agencies. And Swoop takes financial products a step further, introducing grant and equity financing to its suite of financial management tools available to SMEs.

The second category of winners used artificial intelligence platforms that predict SME behavior based on past banking activity. For example, Credit Data Research operates in five EU countries and has a proprietary credit scoring system to determine SME creditworthiness. Lenders can use Credit Data Research to manage portfolio risk in a standardized manner across EU countries.

Bud enables financial service firms to integrate with its API to predict the behavior of new financial products and evaluate their effectiveness and risk across different populations. Bud operates in the U.K. and Australia, which both have open banking regimes, and is developing a portal for use by U.S. firms. Finally, Funding Options uses open banking data to identify SME borrowers at risk of default or delinquency and to prompt lender intervention before financial problems occur.

The final category of winners focused on financial management products for SMEs. Bokio uses open banking data to automate operations, including invoicing, collection, accounting and value-added tax (VAT) reconciliation. Fluidly automates cash flow management and credit exposure by client, and Akoni optimizes interest income based on projected operating cash needs.

Coconut uses open banking data to analyze self-employment income and deductions to help freelancers and other self-employed people retain proper funds to pay income taxes when due. OpenWrks integrates lenders and products to present the overall cost of banking products in a standardized manner so SMEs can minimize the cost of finance solutions.

TWO YEARS IN: EARLY EVALUATION OF OPEN BANKING PROGRESS

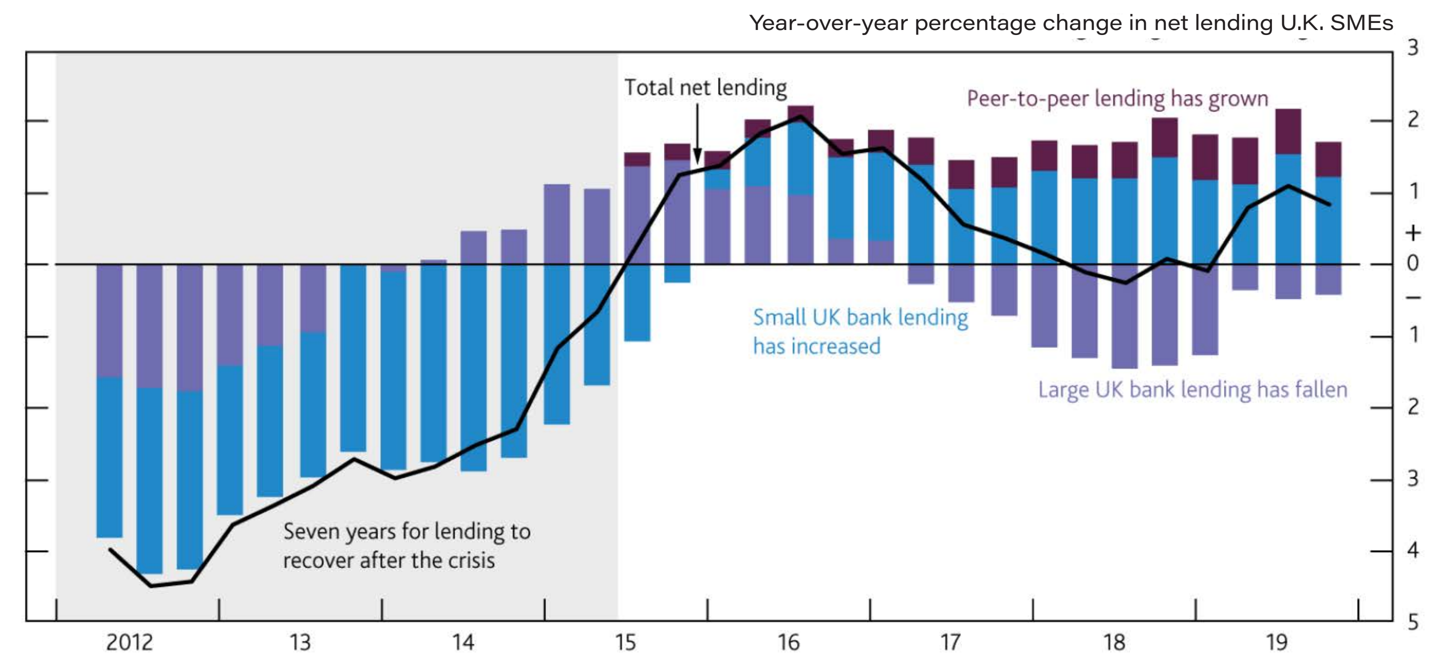
The open banking initiative continues to progress in the U.K. As of September 2019, standards have extended the breadth of data covered to include credit cards, virtual cards, loans and mortgages. As more data becomes accessible from the open banking system, we expect more financial products and alternative algorithms to be made available to banks and non-bank lenders to facilitate small business finance. We expect these products mainly to focus on liquidity needs; however, we see the potential for the standardized data to have application in equity financing, as was the case with Swoop.

Two years after the implementation of open banking in the U.K., the Bank of England commissioned a report, released March 10, 2020, to evaluate progress toward reducing the funding gap for U.K. SMEs. The report cites substantial success in improving the supply of loans to SMEs by way of increased data access, particularly by non-bank lenders. The report indicates the supply improvements resulted from data now being accessible to all relevant institutions rather than owned by one single institution. Previously, a large bank had an advantage in evaluating operational health and predicting liquidity based on an SME's unshared banking transaction data. Now, the open banking initiatives have shifted ownership of that data to the SME, and with open access, bank and non-bank lenders can use alternative metrics to extend credit, improving the quantity and the size of lending products available to SMEs.

Since 2017, the net growth in U.K. SME lending has come from small banks and non-bank lenders, which can now more accurately predict repayment behavior and overall financial health by using APIs to access open banking data. The Bank of England postulated that making still more data types available and standardized in the open banking API will foster continued financial innovation, as transaction data from a wider variety of sources further improves the quality of SME financing underwriting. Examples of data types that can be added to the open banking API include data generated by insurance companies, utilities, landlords, internet search engines, internet product and service reviews, and social media posts. The availability and standardization of such data types could go beyond reducing traditional credit risk and underwriting costs to also lower risks associated with anti-money-laundering compliance, which lenders report to be among their costliest compliance requirements.

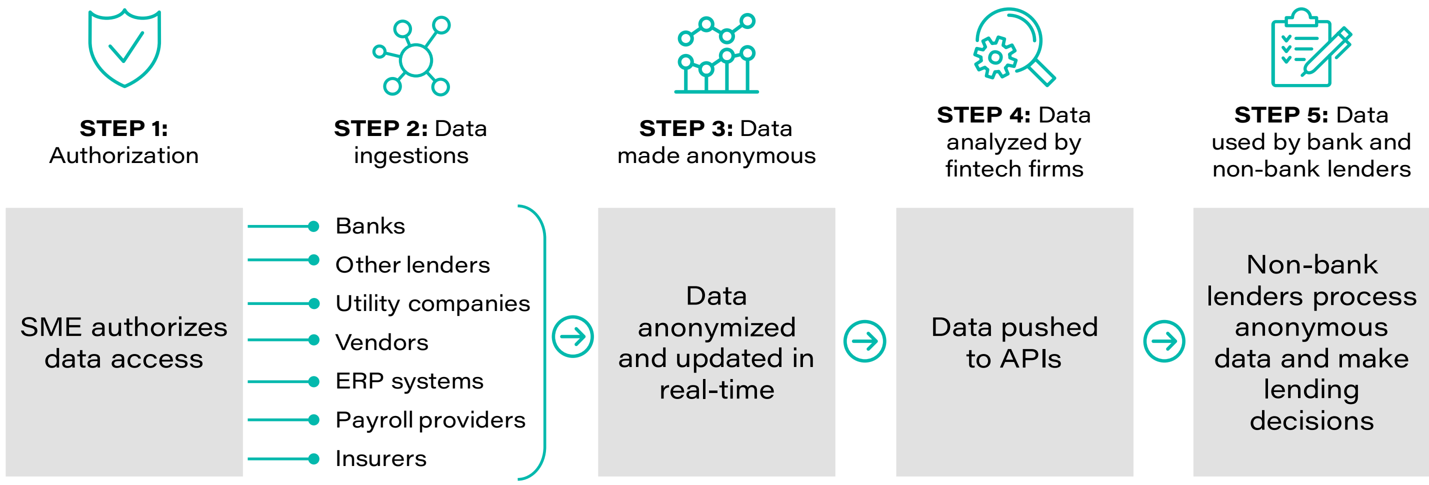
Ultimately, the Bank of England envisions a robust data set owned by SMEs and accessible at their discretion to data providers acting on behalf of traditional banks or non-bank lenders. This should continue to shift the supply curve to the right for lending products as the standardized data sets reduce the asymmetry of information between borrowers and lenders. Over time, we think it could also shift the demand curve to the right as

TABLE 4: Recent U.K. SME lending growth has come from small banks and non-bank lenders



Source: Bank of England, Peer-to-Peer Finance Association and Bank calculations.

TABLE 5: How Open Banking data makes its way to end users



Source: First Analysis.

more SME borrowers become aware of and attracted to the lower-cost, more accessible, and more diverse array of lending products.

POST-OPEN BANKING: FROM LENDER TO LENDER-AS-A-SERVICE

While the innovators in the emerging SME alternative financing market initially often embraced both using new and alternative underwriting methodologies and providing funding (taking credit risk), a number of firms have recognized the greatest value resides in the business of building and curating data sets and algorithms that can be used by financing providers to underwrite their products, rather than providing financing themselves. For example, in the EU, following the implementation of PSD2 by member countries in 2018, we have seen innovators in lending evolve their core offering from lending to reselling data to chartered banks.

Spotcap

Spotcap, based in Berlin, started as a lender, but with the avalanche of aggregated data in the EU following the implementation of open banking, demand for lending services quickly outstripped supply. Recognizing this growing trend and the limits of traditional banks' capacity to process such loans, in February 2018 Spotcap partnered with Bawag Group, one of Austria's largest lenders, to offer its proprietary analytics to inform lending decisions by traditional banks.

Spotcap's decision engine uses data based on a minimum of 180 days' transactions and recommends loan amounts based on cash flow volatility as well as comparisons with industry peers. Spotcap sells its offering to bank and non-bank lenders, configured to include more granular analysis at incremental cost. Premium products include the ability to manage individual borrower risk in addition to the risk of the overall portfolio and a predictive cash flow analysis product that allows lenders to run scenarios around risks and ensure liquidity and the overall health of their loan portfolio.

Spotcap remained in part a lender — in the United Kingdom, the Netherlands and Spain — prior to the COVID-19 outbreak. In late March 2020, Spotcap suspended lending in the United Kingdom. Given the potential for more expensive capital, combined with the temporary government subsidization of SME lending, we believe other alternate lenders around the world will evolve similarly, and Spotcap's recent partnerships, including a March 2020 deal with Swiss lender Cembra Money Bank, suggest the trend toward partnership with major lenders, who are now supported by governments, will continue.

waddle

Australia-based Waddle started as an underwriter for Australian businesses and is now a LaaS provider partnered with NatWest Australia, a subsidiary of U.K.-based National Westminster Bank (NatWest), to provide receivable-based loans for Australian businesses. In January 2019, the Royal Bank of Scotland (RBS), the parent of NatWest, commenced a pilot of the Waddle platform for business clients in the U.K. and the Republic of Ireland. In July 2019, RBS announced it had launched a new product, NatWest Rapid Cash, that was deployed to U.K. clients. Based on the information contained in Waddle bank accounts and Waddle's integrations with accounting software providers Xero, MYOB, and QuickBooks, Waddle extends invoice financing to businesses that bears interest at a 9.95% annual rate, with a fee of 1% for each funding draw. Rapid Cash employs Waddle's core functionality for early stage businesses, which includes verification of bank balances through the U.K. open banking system, with matching to paid invoices in a borrower's accounting software platform. Rapid Cash is targeted at incorporated firms that have been in existence for more than six months and invoice monthly for more than 100,000 pounds, offering maximum monthly credit of 300,000 pounds.

THE ENVIRONMENT FOR OPEN BANKING IN THE UNITED STATES

While the United States has not formally implemented an open banking directive, we already see progress by public and private firms in aggregating anonymous banking information to develop and offer financial products that meet SME lending needs. We expect continued progress in the United States even without formal open banking regulation.

We see early evidence of a desire to develop innovative products based on alternative data sets, but an integrated approach will require cooperation among banks and other financial service providers. Some more international banks, such as HSBC, Barclays and Santander, have a head start on more U.S.-focused competitors. Still, we see a limited appetite across the board to open proprietary U.S. data sets, with one U.K. bank expressing concern that opening up data could give competitors an advantage if there is not uniform participation. The same bank noted selective participation limits the data's utility in any case, and it thinks only regulation will drive data aggregation in the United States.

The United States is a far larger country in which to implement an open banking system relative to the U.K., but a July 2018 report by the U.S. Department of the Treasury, *A Financial System That Creates Economic Opportunities: Nonbank Financials, Fintech, and Innovation*, indicates the United States has a sound foundation for data aggregation and API access that may expand as the U.S. government seeks to return to a more normal state post COVID-19, one without the need for public funds to support SME liquidity.

The Treasury Department's report calls out the contributions of non-bank financial service firms in accelerating financial product innovation and expanding access to financial products for all consumers. The report encourages development of innovative financial products to benefit traditional lenders but acknowledges that for many customers, traditional lending platforms' products are outdated and expensive.

More importantly, the report cites the value of the vast stores of data residing in non-bank financial firms as a key driver of continued innovation in products being developed by both traditional banks and non-bank lenders. To the extent that traditional banks are successful, they will need to view these non-bank financial services firms as partners rather than competitors. Put simply, the traditional banks do not have the data needed to understand how SME businesses operate and so design and develop financial products that will support these businesses. Further, we believe the evolution of business models and processes in the broader U.S. economy means that innovation in financial products for SMEs will need to continue at a pace that likely far exceeds banks' ability to innovate on their own.

The report indicates the non-bank sector has responded opportunistically to contractions in products and services offered by the traditional banking sector, with startup non-bank lending platforms offering their clients increased efficiency. Many of these startups have grown substantially and quickly, making them going concerns firmly embedded in clients of various sizes. Because these non-bank innovators have improved their clients' processes and profitability so rapidly, they are well positioned to participate in traditional banking activities, either through partnerships with traditional financial institutions or with alternative lenders with similarly innovative technology platforms that better serve their clients' needs. In a complementary manner, borrowers that value innovative, logical and straightforward financial services are loyal to providers that share the same values, and such borrowers tend to direct their business accordingly. In this regard, the report highlights key themes that should continue to drive the evolution of financial products, including cloud services, big data analytics, artificial intelligence and machine learning.

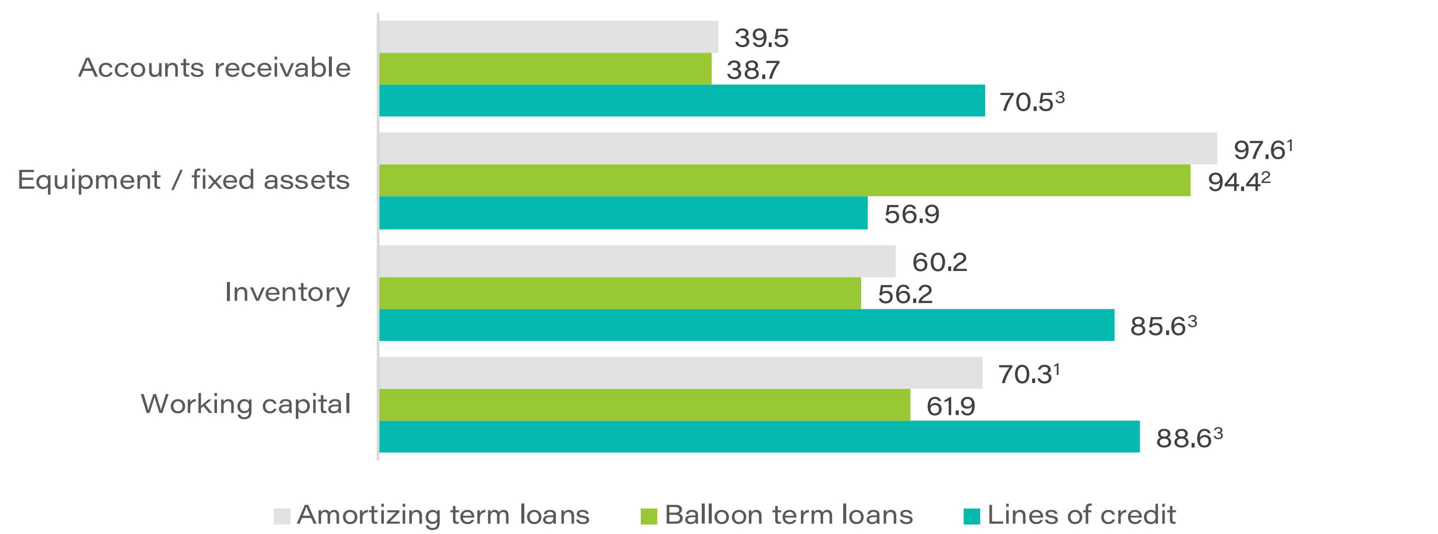
The Treasury Department recommended four broad measures in this study:

- Adapt regulations to the dynamic process of capturing and using financial data in order to support the development of key competitive technologies,
- Create new lending products by adopting regulations that support new competitive and innovative technologies that enable such lending products,
- Update regulations that govern non-bank financial institutions, with an eye toward aligning regulations with the non-bank financial sector's increasing technical sophistication,
- Modify regulations to encourage experimentation in the financial sector, particularly in terms of new financial products.

The report referenced the rapid evolution of alternative credit models and processes to improve the outcomes and speed of credit underwriting decisions. The Treasury Department specifically states these new credit models and alternate data sets may be far more predictive than traditional credit methods, and regulations should be modified, where necessary, to support the continued development and testing of these new data sources to improve access to – and the quality and pricing of – financial services.

While the Treasury Department's report focuses on how innovative data sets can benefit borrowers, we believe an equally important benefit will be reduced risk associated with new financial products. Whereas previous extensions of credit relied on sub-

TABLE 6: Percentage of banks that cite this as the purpose for which their number one loan product to small businesses was used (all banks combined)



Source: Federal Deposit Insurance Corp., FDIC Small Business Lending Survey, 2018 Question 22C.

Notes: Banks may select multiple answers; results will not sum to 100%.
At the statistical significance of 10%:
1 Amortizing term loans are more likely than balloon term loans and lines of credit to be used to purchase equipment/fixed assets, and more likely than balloon term loans to be used for working capital
2 Balloon term loans are more likely than lines of credit to be used to purchase equipment/fixed assets
3 Lines of credit are more likely than amortizing and balloon term loans to be used for accounts receivable, inventory, and working capital.

jective analysis of stale data, the non-bank financial sector's data sets are more accurate and current and contain valuable predictive capabilities that should materially lower the risk of financing decisions for lenders.

Finally, we believe the non-bank financial data sets contain even more valuable information for SMEs themselves. With independent, verifiable data about payment behavior, SMEs will be able to use non-bank financial data to evaluate the creditworthiness of clients, particularly for accounts receivable, working capital and inventory – key factors influencing SME loan demand.

We view the vision expressed in the Treasury Department's report as more progressive than the U.K. open banking system in that it recognizes the predictive nature of non-bank data sets and seeks to leverage these data sets to improve traditional banking products, whether those products are provided by bank or non-bank institutions, with higher accuracy and at lower cost to the end customer. While the U.K. version of open banking can provide enhanced visibility into SME finances, the data collected by implementing standardized open banking data through an API are lagging indicators. Artificial intelligence models can predict cash flows based on prior banking data, but those predictions assume businesses continue to operate in a steady state, with predictable deposits and withdrawals. As any SME owner will attest, SME operations are often volatile, with business models, clients, employees and vendors constantly evolving.

A year and a half after the Treasury Department report, bridge loans are being extended to SMEs acutely affected by COVID-19, as the federal government recognizes that many SMEs are too illiquid, with very limited access to capital, to weather government-mandated economic shutdowns. These government loans, which may be forgivable, contain favorable terms versus available marketplace alternative lending products. As the pandemic subsides and the Treasury Department continues to pull back from its participation in SME lending, we expect it to encourage the private sector to provide access to capital to support SMEs that endured the crisis and supported their employees. We believe the resulting products will leverage the vast data sets housed in the non-bank financial sector, with the ultimate outcome being greatly expanded access to financial products at lower cost.

Taking into account both the Treasury Department vision and the U.K. open banking regime, we conclude there is a way to marry the best of both approaches – the Treasury Department's focus on using data held by non-bank financial services firms and the U.K.'s focus on integrating multiple data sets. By combining these approaches, the end result could be a powerful data set with more use cases and more users than either would yield by itself. Nonetheless, we believe government efforts will remain more focused on the end goal of improving liquidity for SMEs than on promoting specific avenues of innovation. We think the private sector, including venture capital and private equity, will be the main driver of investment in research and development, product innovation, and new concepts.

SME LENDING INNOVATION IN THE UNITED STATES

In 2014, the non-bank lending market was growing substantially, and proponents of these platforms suggested these businesses had the opportunity to put banks out of business. 2014 saw the initial public offerings of lending platforms such as LendingClub (NYSE: LC), aimed at consumers, and OnDeck Capital (NYSE: ONDK), aimed at SMEs, both of which advanced short-term loans. Following these successful IPOs, venture capital flowed into small firms that took unique, technology-rich approaches to lending.

This emerging non-bank lending sector encountered turbulence in May 2016 when the CEO of LendingClub was fired due to various missteps, including misrepresentation in conjunction with the securitization of a loan portfolio. Valuations for LendingClub and OnDeck Capital took immediate hits, with LendingClub's stock falling 35% on May 9, 2016. While non-bank lending didn't dry up immediately, the damage was done. The plunges in valuation for non-bank lenders caused a drought of venture capital for the non-bank lending space. Smaller firms, dependent on continued capital raises to fund growing loan portfolios, suddenly found themselves unable to source fresh capital. Many of these firms shuttered operations quickly after the LendingClub scandal. For example, New York-based DealStruck shut down lending operations in November 2016, becoming only a servicer of its existing portfolio.

As the size and value of the loan portfolios eroded, some of the non-bank lenders pivoted their business models to prioritize selling services to banks. In October 2018, both OnDeck and Chicago-based Avant, a former darling among non-bank lenders, launched LaaS platforms for large banks. Other companies followed suit, and those that were well-capitalized survived the turbulence, with some becoming big winners by providing rich data sets and monetizable algorithms to better-capitalized bank lenders. Part of the challenge in making this transition was surviving the accompanying elongation of the sales cycle from the three days it took from the time of a loan application being submitted to loan funding to the 12-month sales cycle for LaaS sales to regional and national banks. The American Bankers Association (ABA) has observed this trend, noting the solutions can be white labeled for use by banks for due diligence on SME lending prospects or be a platform for connecting SMEs to alternative lenders.

OnDeck's launch came in the form of a wholly owned subsidiary, ODX, which provides a scalable LaaS platform for banks to automate their origination and servicing processes. The ODX platform is now more customizable to bank lending preferences and risk models, and OnDeck reported on its Q4 2019 earnings call it had recent wins with regional banks in 2019, including PNC and Investors Bank.

Avant also began in the non-bank lending space but with a focus on consumer lending. Like OnDeck, Avant launched a subsidiary, Amount, in October 2018 to provide a consumer LaaS platform to large regional and enterprise banks. Avant's Amount platform focuses on automation and scalability for large national banks that have worked on legacy systems with limited innovation and in-house technology. By providing a scalable solution, Avant is now seeking to help banks with $50 billion to $500 billion in assets grow assets strategically and in a risk-appropriate manner.

Likewise, Southfield, Mich., based Credibly has evolved its strategy toward partnership with lenders. While Credibly still extends working capital and growth capital loans to small businesses using $70 million of debt financing raised in 2016 from SunTrust Banks and AloStar Bank of Commerce, it has expanded its platform to focus on using its proprietary data to help partner organizations qualify SMEs and tailor analysis for various financial products. Independent sales organizations, which provide businesses equipment leases, Small Business Administration loans, credit card advances and other short-term lending products, can use Credibly's platform on a direct or white-label basis to inform decisions on the amount or terms of credit, as well as to understand the risk of their overall portfolios. For larger lending institutions, Credibly offers a LaaS platform for customizing the data science platform embedded in the Credibly platform to enhance loan origination, loan servicing, and the process for securitizing loan portfolios.

A select few companies subscribed from the start to the idea that national and regional banks were best capitalized to offer loans to SMEs at competitive prices, although such banks were often unable to do so due to their antiquated platforms and processes for evaluating prospective borrowers. These companies developed software to analyze data aggregated by Chicago-based Paynet, which amassed a large proprietary set of data through decades of partnership with bank and non-bank lenders. Paynet's extensive database of commercial credit and payment behavior was developed by partnering with banks and evaluating commercial loan portfolio behavior and transactions. Paynet sells its data to banks to use in evaluating loan portfolios, managing risk and predicting industry and regional trends. Paynet has compiled one of the largest and most comprehensive databases in the United States, and the accuracy of its database leaves Paynet uniquely positioned to identify trends and predict risks based on the wide data sets it collects. Paynet was acquired by Equifax in April 2019.

Two private companies that packaged Paynet data to sell risk management and underwriting criteria to regional and national banks were Portland-based Mirador and Chicago-based Akouba. Mirador packaged data for resale to banks with standard credit criteria. The underwriting engine was standard and sold as a white-label product for banks to automate the underwriting process. Over time, Mirador saw headwinds in packaging a standardized underwriting decision module, as that model was, in certain cases, not consistent with banks' risk management criteria. Now, Mirador is focused on automating the steps prior to underwriting and making credit decisions, streamlining the application process and document collection according to borrower characteristics and the type of loan desired. Mirador was acquired by Cuna Mutual Group in December 2018. Cuna Mutual partners with credit unions to provide financial technology and insurance services to grow assets while managing portfolio risk.

Akouba also integrated with Paynet to analyze data and automate the application and decision process for SME lending. As non-bank lenders focused on loan volume, Akouba focused on partnership with well-capitalized regional and large banks that had the capacity to extend SME loans but lacked the internal resources to automate the application, underwriting and approval processes. Using Paynet data, Akouba captured data elements that have predictive value based on loan performance captured in the Paynet database, with particular emphasis on identifying trends that signal opportunity or risk by industry or geography. A key differentiator of the Akouba solution was it allowed its lender clients to customize the platform to their own underwriting criteria and manage risk dynamically. Its clients were able to iteratively model projected performance and risk based on the Paynet data. Akouba was recommended by the American Bankers Association as the premier LaaS solution for institutions lending to SME clients. Akouba was acquired in June 2018 by Velocity Solutions, a Fort Lauderdale, Fla., based financial services firm that analyzes consumer transaction behavior and recommends maximum levels of overdraft coverage to banks.

Other providers are taking a more integrated approach with accounting systems and banking systems to analyze payment data. To do this, these firms build tools to integrate with commonly used accounting software systems and verify inputs by reconciling to bank ledgers, which they access through proprietary widgets that allow customers to authorize the lender to have read-only access to data. Toronto-based FundThrough reconciles a business' banking with accounting information contained in systems of record, including QuickBooks, FreshBooks, Xero, and Sage, among others. Salt Edge, also based in Toronto, uses its own widget to provide direct access in regions where open banking has not yet been implemented, including the United States, Asia, Africa and Oceania.

Chicago-based FinanceFuel provides accounts receivable loans to SME clients. Using its own account login to an SME's accounting software, FinanceFuel creates a report card for the subject company based largely on payment behavior by customers. FinanceFuel then presents an offer for short-term financing to an SME. We view this concept as innovative and perhaps as lower risk than traditional accounts-receivable financing due to the reliance on historical payment behavior by the borrower's customers.

Certain firms have not only used data to predict repayment from outstanding accounts receivable, but they have also overtaken the primary banking relationship to analyze payment data within their own platform, and then to establish a first lien on the funds from invoice payment when existing accounts receivable have been pledged as collateral for loan repayment. BlueVine, based in Redwood City, Calif., requires companies receiving accounts receivable financing to establish a banking relationship with

BlueVine, wherein invoice payments hit the BlueVine account and are immediately applied to satisfy outstanding balances, and then customers may transfer funds by ACH daily to their primary banking relationship.

It bears mention that while valuations of non-bank lenders remained pressured following the initial valuation declines in 2016, Akouba and Mirador were acquired in the 2018 to 2019 period, suggesting liquidity and value exists for firms that provide data to well-capitalized lenders as strategic and financial investors have shifted their focus away from SME lenders to providers of data services. We believe this trend will continue, particularly among small firms that are compiling proprietary algorithms that large banking clients will likely use after the pandemic's shift to government-supported SME lending reverses. In the meantime, we believe these firms can be a key tool for banks to manage risk by verifying compliance with the requirements of the March 2020 PPP, including by helping verify compliance with PPP loan requirements that allow the loans to be forgivable.

Further, non-bank lenders have made significant headway in the market despite the hit they took in 2016. A 2018 ABA report entitled "The State of Digital Lending" cites the sharp increase in non-bank digital lending, which grew 93% in 2015 and 58% in 2016 and is expected to reach $122 billion by 2020.

We believe the trend toward LaaS may be accelerated by the current COVID-19 environment. With the temporary deterioration of SME finances, we believe there is substantial risk to portfolios of alternative lenders. Further, underwriting by alternative lenders will likely be pressured pending better clarity on the economic climate as well as performance of existing portfolios, especially once firms exhaust emergency measures extended through the PPP. These lenders will likely increasingly look to reduce their risk and pursue growth by pivoting to LaaS business models wherein they partner with better capitalized and more traditional lenders.

ESTABLISHED SME BUSINESS SERVICE PROVIDERS MAY MAKE LAAS INROADS

We see initial signs of major procurement platforms leveraging their networks of SME vendors to facilitate lending. Bottomline Technologies (Nasdaq: EPAY) announced on April 2 it is offering its bank clients a pre-configured application that uses Bottomline's back-end to enable its banks to provide easier access to PPP loans. We believe Bottomline is perhaps the best positioned procurement platform to cooperate with banks to offer financial products to SMEs. Bottomline is a longstanding source-to-settlement platform leader.

In the short-term, this is a strategy for Bottomline to attract new banks to its digital banking platform, through which Bottomline can use customer banks as channel partners to sell its Paymode-X procurement and payments platform. Through additions of enterprise and mid-market clients into Paymode-X, Bottomline can substantially grow its vendor network as these customers pay vendors through Paymode-X.

The Paymode-X platform ingests invoices, secures payment approvals, schedules payments, and executes transactions. As a result, Bottomline collects an extensive amount of data on vendors' receivables flow, and we see the potential for Bottomline's bank clients to use this data by building integrations through which they could see invoice status, including approval status and payment dates, and use this as the basis for extending short-term loans to vendors.

Medium- and longer-term, we believe the expansion of Bottomline's vendor network, combined with its integration with digital banking clients, may allow digital banking customers to capture data that Bottomline could provide or sell to its member banks to develop financial products to deliver to its vendor network, many of those being SME customers.

Bill.com (NYSE: BILL), which automates accounts receivable and payable for SMEs, is similarly well positioned to use data contained in its platform to provide information that helps assess SME creditworthiness. Through the Bill.com platform, vendor customers are able to invoice their clients. Clients that are members of the Bill.com network can schedule payments through the platform, yielding valuable data on the status of an SME's current receivables, as well as payment behavior client by client. For non-network members, Bill.com's integration with an SME's operating accounts may provide further evidence of payment behavior, also according to client, and similar to Bottomline Technologies.

Bill.com already partners with large banks, including J.P. Morgan Chase & Co., Bank of America and PNC, which white label the Bill.com solution for customers, primarily SMEs. As it is already partnered with many of the largest U.S. banks, we believe that Bill.com is uniquely positioned to strengthen its commercial bank relationships by providing data to banking clients and thereby improve the availability and cost of credit for SMEs.

ESTIMATE U.S. LAAS TOTAL ADDRESSABLE MARKET AT $1.2 BILLION TO $2.0 BILLION

In estimating the addressable market for LaaS platforms, we note the lack of comprehensive, uniform data on aggregate SME lending. However, we have developed estimates of the U.S. addressable market based on government data and pricing structures of LaaS platforms in Europe.

Using the Federal Reserve's Report to Congress on the Availability of Credit to Small Businesses, which is updated every five years and was last delivered in September 2017, we estimate U.S. SME lending, defined as lending to partnerships and proprietorships, amounted to some $1.25 trillion in 2019. Of that $1.25 trillion, $87.5 billion was net new loan volume. While the Federal Reserve's report does not specify average maturity of SME lending products, we analyzed data from the Kansas City Federal Reserve's 2020 Small Business Lending Survey, which stated that over the past ten quarters, for fixed rate small business loans, the average loan duration was 61 months, implying an annual refinance volume of $246 billion, for a total amount of loans originated annually of $333 billion. Also according to the Small Business Lending Survey, over the past ten quarters, the average loan size was $122,851, implying 2.7 million loans originated annually.

The COVID-19 pandemic presents an interesting opportunity for estimating the addressable market for LaaS platforms. In developing our estimates, we have taken into account the potential demand for SME lending based on funded PPP loans. While the below-market interest rate for PPP loans, along with their forgivability when certain criteria are met, have undoubtedly driven the overwhelming demand for these loans, we believe they are still helpful in assessing the true magnitude of SME lending needs.

The PPP program saw significantly higher volume than the Federal Reserve sources cited above indicated as businesses that were formerly unable to secure traditional financing were eligible for PPP financing designed to keep workers employed. We note some businesses within the size parameters of PPP financing did not pursue PPP loans, either because they were not materially affected by the COVID-19 pandemic or because they did not meet eligibility requirements. Nonetheless, as of Aug. 8, 5.2 million PPP loans had been funded with a total loan volume of $525.0 billion, implying an average loan amount of $100,729, approximately 18.0% less than the average loan size cited by the pre-pandemic Federal Reserve statistics as indicated above.

We use European Laas firms as a guide for the U.S. economic model for LaaS firms. European vendors typically charge institutions for LaaS services based on the number of loans and also assess a success fee for funded loans. Our research indicates a rough benchmark for annually recurring revenue based on nominal loan amounts to be about $137 per loan per year. Additionally, success fees are negotiated but range from 5-10% of the 50 basis point net income from each loan origination. For purposes of this analysis, we use 2.5 basis points as a success fee to model the addressable market.

The data derived from Federal Reserve statistics serves as the lower bound of our range of addressable market for the U.S. LaaS industry. Based on 2.7 million loans originated annually, the subscription fees approximate $370 million, and based on $333 billion of loans underwritten annually, the success fee approximates $832.5 million, for the lower bound of the U.S. LaaS total addressable market of $1.2 billion.

Using data derived from participation in the PPP program, we calculate the upper bound of our U.S. LaaS total addressable market. Based on 4.9 million loans originated, the subscription fees for the U.S. LaaS addressable market total $714.1 million. And based on

TABLE 7: Total addressable market of U.S. lending-as-a-service market

	Federal Reserve's availability of credit to small businesses	Loan volume through the PPP program
New loans	$87.5 billion	
Refinanced loans	$246.0 billion	
Total loan volume	**$333.5 billion**	**$525.0 billion**
Average loan amount	$122,851	$100,729
Implied number of loans	2,715,000	5,212,128
ARR based on loan volume *(loans x $137 ARR per loan)*	$372 million	$714 million
ARR based on loan amounts *(loan volume x 2.5 bps)*	$834 million	$1.313 billion
Total addressable market	**$1.206 billion**	**$2.027 billion**

Source: First Analysis.

$525 billion of loan volume, the annual success fee approximates $1.3 billion, for a total addressable market of $2.027 billion annually.

We see a number of opportunities for the TAM to expand materially beyond these estimates. For example, traditional banks may also use the data algorithms LaaS firms provide to underwrite larger firms with junk credit ratings. This would require integration with more sophisticated accounting systems. However, the core theme remains that traditional banks will improve the analysis through which they extend credit, making repayment predictions transaction-based and timelier relative to traditional credit analysis.

We estimate 2020 revenue from LaaS platforms at $50 million, based on existing industry research, segments of publicly traded companies and our own research. Based on the calculated TAM range above, this implies a current penetration of 3-4%, which is consistent with our sense of the penetration rate based on our industry discussions and observations of the LaaS industry.

We estimate the U.S. TAM will grow by about 18% annually for the next five years. Our estimate is based in part on an April 2020 report by the OECD, which cites growth in factoring loans and venture capital, two primary sources of alternative financing by U.S. SMEs from 2016-18, plus normalized GDP growth of 2.1% annually. It also incorporates our expectation of higher demand for SME credit following the exhaustion of PPP loan funds and further progress toward open banking in the United States. Increased demand may also come from large banks that wish to continue lending to entities that successfully applied and discharged PPP loans.

We expect penetration of the TAM to increase by about 35% annually, approximately double the growth of the TAM based on the acceleration in the TAM's growth rate from 2017-18 versus 2016-17. Three factors support this view. First, increased velocity towards solutions that mirror open banking in the United States should provide numerous solutions that allow lenders to customize the criteria and risk they deem acceptable. Second, early-stage businesses that previously focused on lending will likely transition to LaaS models due to the increases in cost of raising capital for lending. These early-stage businesses may also realize their proprietary data sets receive substantially higher valuations when decoupled from traditional metrics that value loan portfolios. Finally, we believe numerous payment and procurement SaaS platforms that gather transaction settlement data will monetize these data sets and serve their networks of clients and vendors to provide access to working capital at competitive rates.

COMPANY PROFILES

UK OPEN BANKING INNOVATORS: LENDING NETWORKS

Capitalise
London

Through a channel partner network of 1,000 accountants, Capitalise helps its accountant adviser network identify potential funding needs and then work with their client bases to validate, and where necessary, seek funding. Once a funding need is identified, Capitalise works with a network of 100 lenders to match financial products with the nature of an SME's particular needs.

Finpoint
London

This business funding platform uses standardized open banking data to link SMEs with a network of over 100 lenders that include traditional banks, peer to peer lenders, trade-specific financiers and asset-based lenders. SMEs are introduced to lenders anonymously, and based on the data inputs from Open Banking, SMEs seeking the best terms can choose a more lengthy competitive screen, while SMEs that want a quick decision and funding may use an expedited decision option.

Funding Circle
London

A global small business loan platform, Funding Circle operates in the U.K., United States, Germany and the Netherlands and links borrower SMEs with bank and investor lenders. Funding Circle has a network of more than 70,000 retail investors, banks, asset management companies, insurance companies, government-backed entities and funds that have extended 4.5 billion pounds of loans to 45,000 SMEs. Using open banking data, Funding Circle also advises SMEs on how to better manage finances and improve their chances of loan approval.

Swoop
London

With thousands of funding providers on its platform, Swoop connects SMEs with traditional banks and non-bank lenders and is the one open banking competition finalist that provides both grant and equity financing. Whereas numerous open banking users are focused on providing short- or medium-term financing based on liquidity needs, by providing access to equity capital, Swoop helps SMEs finance growth capital.

UK OPEN BANKING INNOVATORS: CREDIT INTELLIGENCE / PREDICTIVE PLATFORMS

Bud
London

This financial services API provider enables third parties to develop new financial products based on the categorization of customers and underlying open banking data. Bud's developer portal enables technology firms, working on behalf of banks or independently, to use Bud's API to integrate with clients' technology to segment target populations and evaluate the effectiveness of new financial products. Bud operates in the U.K. and Australia and is developing a portal for use in the United States.

Credit Data Research
London

This platform uses open banking information to evaluate the creditworthiness of SMEs, establishing a proprietary risk score based on publicly available data. This scoring system can be used to match SMEs with lenders and also by SMEs to manage counterparty risk. Credit Data Research operates in five European countries, seeks to have a uniform credit profile by company, and offers a standardized platform across countries with different implementations of PSD2.

Funding Options
London

An online marketplace for business financing options, Funding Options has historically worked with U.K. SMEs and 50 lenders to enable approximately 100 million pounds annually in SME loans. Funding Options uses aggregate open banking data to demonstrate that once an SME hit its overdraft limit, there is an 80% likelihood it will have recurring overdraft problems. Using artificial intelligence, Funding Options uses open banking data to identify at-risk SME customers for banks, who in turn use that data to proactively advise customers of solutions to potential financial problems and continued access to loan facilities and liquidity.

UK OPEN BANKING INNOVATORS: FINANCIAL MANAGEMENT

Akoni
London

This solution is focused on providing businesses with visibility into near-term (next 12 months) cash flow needs and then helping businesses maximize interest income by laddering cash deposits at the highest possible rates. Akoni scans current bank deposit rates in the open banking network and then recommends various banks and their products based on the user's cash profile and projected cash needs.

Bokio
Gothenburg, Sweden

This operational platform automates numerous financial operations, including invoicing, collections, accounting and VAT reconciliation. Using the open banking platform, Bokio seeks to integrate banking, administration and accounting and leverage the open banking platform for reconciliation.

Coconut.

Coconut

London

Targeted at self-employed individuals and freelancers, Coconut manages an individual's running tax liability to ensure sufficient funding is available to pay taxes when due. Coconut analyzes both income and deductible expenses. Using open banking data, Coconut automates accounting processes and uses predictive modeling to forecast cash flows.

Fluidly

Fluidly

London

With a focus on an SME's cash flow, Fluidly automates cash flow management, including collections, with an eye toward medium-term visibility on cash flow forecasting. Further, Fluidly has automated credit control tools so that businesses can control credit exposure by client, industry or other key business characteristics.

OpenWrks

OpenWrks

Nottingham, England

This platform encourages collaboration among banks and SMEs by improving transparency and seeking to lower the all-in cost of financial products. OpenWrks solicits bids from multiple lenders using open banking data and standardizes the presentation of comprehensive costs of banking products. OpenWrks also has a compliance testing platform to ensure members are in compliance with applicable U.K. or EU regulations.

GLOBAL PLATFORMS

FundThrough

FundThrough

Toronto

FundThrough has two different loan application options: Express Invoice Financing, which provides funding in 24 hours, and Velocity Invoice Factoring, which finances invoices in excess of $50,000. Based in Toronto and Houston, FundThrough uses a network of accountants, bookkeepers, brokers and independent service organizations. The platform links to business bank accounts and accounting and finance software, including QuickBooks, FreshBooks, Cortex, Jobber, Xero, Sage 50 and Sage One. FundThrough's Velocity Invoice Factoring costs 2.5% of the receivable invoice amount per 30 days of term. Velocity Invoice Funding analyzes a company's accounts receivable and integrates with QuickBooks.

BlueVine

BlueVine

Redwood City, Calif.

BlueVine offers SMEs lines of credit, invoice factoring and term loans. Financing is structured as a lien against business operations and requires a personal guarantee. BlueVine offers loans from $5,000 to $5 million and verifies outstanding invoices by connecting to accounting or accounts receivable software, particularly QuickBooks. BlueVine requires SMEs to establish a business checking account that integrates with the BlueVine platform. When an invoice used for collateral is paid, BlueVine debits the remaining balance and the SME is then able to transfer any residual funds back to its primary bank.

Salt Edge
Toronto

Salt Edge sells open banking data to banks, non-bank lenders and financial services firms worldwide. Partnering with 3,000 lending institutions in 60 countries, Salt Edge has a heavy emphasis on lending within the EU. Salt Edge is connected to open banking APIs in the EU and uses direct access in America, Asia, Africa and Oceania. The Salt Edge direct connect widget allows for direct access to U.S. institutions and the capture of transaction data.

Waddle
Chippendale NSW, Australia

Waddle provides accounts receivable financing. The platform integrates with Xero, MYOB and QuickBooks. Customers of a Waddle borrower pay into a Waddle bank account, thereby affording Waddle a first lien on the business's receivables. Waddle charges a 1% draw-down fee on any amount financed, plus an annual interest rate (currently 9.95%) calculated daily. Waddle is a certified add-on in the QuickBooks app store, an add-on in the MYOB marketplace, and the No. 1 user-rated direct lending add-on in Xero. Waddle partners with NatWest Australia for loan funding.

Spotcap
Berlin

Spotcap presents perhaps the most intriguing case study for the evolution of the lending environment in the EU. Based in Berlin, Spotcap was formerly a direct lender, but after the implementation of open banking in several European countries, demand for loans quickly outstripped supply. Spotcap changed its business model to provide LaaS to banks and financial services firms, using predictive analytics to project performance and risk, based on its own loan portfolio and data from new financial service client portfolios. Spotcap may provide important insight into the evolution of the U.S. SME lending segment as alternative lenders morph into data aggregators and sell their algorithms to banks with far more lending capacity but less technically sophisticated platforms.

Credibly
Southfield, Mich.

Traditionally Credibly functioned as a non-bank lender but transitioned to providing financial services to bank and non-bank lenders. Through its Lending as a Service platform, Credibly provides predictive credit products to lenders and white labels its proprietary lending platform. Credibly launched its own application portal for the PPP in the spring of 2020.

PeerIQ
New York

The PeerIQ platform analyzes an institution's credit portfolio and uses its own intelligence to predict prepayments, defaults and cash returns should the institution wish to securitize or value its portfolio, as well as benchmark returns. PeerIQ raised $12 million in a Series A funding led by TransUnion, Hearst Communications and Macquarie Group in August 2017.

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