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Third-Party Technology for the Equipment Finance Industry

Based on a Foundation research study, this article examines specialized applications, software, and services applicable to the industry. Themes include fraud and identification, credit automation, documentation, and personalization for digital experiences.

By Kristian Dolan, Justin Tran, and Jourdan Saegusa

Based on a Foundation research study, this article reflects Northteq's efforts to evaluate and map the existing landscape of specialized applications, software, and services applicable to the equipment leasing and finance industry.

Our researchers first compiled a master list of 44 companies from a list of financial conferences, online sources, and equipment finance and related industries. Then we categorized and evaluated the list based on a set of predefined criteria used to rate and analyze the findings. Lastly, we created a rating model to normalize the results and create an objective

summary of the findings, using the criteria of equipment finance applicability, age of technology and provider, company partnerships and reputability, and use cases for U.S.-based companies.

In addition to the resulting 44 companies highlighted in this article that are summarized by rating and category, we list 27 established services, to include companies that are widely accepted as the industry standard but still offer unique and top-tier specialized solutions.

TOP-RATED COMPANIES

Two lists of companies are identified as top-rated for the equipment finance industry. Top-rated companies are separated into companies that are lesser known within equipment finance (Table

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Editor's note: This article is based on a Foundation research report titled *Specialized Apps, Software, and Information Services for the Equipment Leasing and Finance Industry*, published in February 2023. It is available at www.leasefoundation.org.

Top-rated companies are separated into companies that are lesser known within equipment finance and companies that are more established in the industry.

1) and companies that are more established in the industry. We thus allow for a distinct dichotomy

between what is new and what is traditional knowledge (Table 2).

Table 1.

Top-Rated, Lesser-Known Companies by Category and Subcategory

| Fraud/Identity | | | |
|----------------|------------|------------|---------|
| Acuant | Incode | Neuro-ID | Socure |
| Alloy | Inscribe | Onfido | Trulioo |
| Ekata | Kount | Prove | |
| IDology | Microblink | Shufti Pro | |

| Credit | | |
|-----------|--------------------|---------|
| Accelitas | Credit Bureau Plus | Middisk |
| Akoya | FortifID | |

| Cashflow | | | |
|----------|------------|------------|--------|
| Finicity | MoneyThumb | Plaid | Ribbit |
| Flinks | Ocrolus | Prism Data | Yodlee |

| Financials | | |
|------------|-----------|------------|
| Codot | ForwardAI | Rutter |
| Enigma | Railz | Tax Status |

| Documentation and Funding | | |
|---------------------------|------------|----------|
| Able | Encapture | Lightico |
| Alkymi | FileInvite | Notarize |

| Portfolio Analysis |
|--------------------|
| DataRobot |

| Customer Experience | | | |
|---------------------|---------|-------------------|--------|
| Ada | Finn AI | Solutions by Text | Twilio |

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Cloud-based platforms are becoming increasingly prevalent largely due to the flexibility that platform-based businesses have when integrating with existing services, customizing features, and scaling efficiently.

Table 2.

Top-Rated Established Companies by Category and Subcategory

| Credit | | |
|--|---|---|
| CBC Dun & Bradstreet Equifax Experian | FICO GDS Link LexisNexis MicroBilt | Moody’s Analytics PayNet TransUnion |
| Pricing | | |
| Black Book SuperTRUMP | Price Digests Sandhills Global | TimeValue |
| Financials | | |
| Fincura | | |

| Documentation and Funding | | |
|----------------------------------|--------------------------------------|--------------------------|
| Avalara CSC DDI Technology | Dealertrack DocuSign Precisely | Vertex Wolters Kluwer |

HOW TO IMPLEMENT THESE TECHNOLOGIES

Implementing any of these technologies requires some form of integration. Cloud-based platforms are becoming increasingly prevalent across the equipment finance industry, largely due to the flexibility that platform-based businesses have when integrating with existing services, customizing features, and scaling efficiently.

Through the use of platforms, the transition to becoming a financial technology (fintech) firm in the 21st century is made simpler. Microsoft

Azure, Amazon AWS, and Salesforce are examples of companies offering cloud-based platforms that can be extended to accommodate specialized applications, software, and services.

An application programming interface, or API, is the universal method of communication that a platform uses to connect with an app, software, or service. To remain agile and retain a competitive advantage, a fintech company must be able to utilize the suite of technologies available across the industry marketplace.

For companies where an API approach might prove difficult, they can still utilize these services via a browser, versus having the service fully embedded into their business systems.

Many of the provided services listed in this research paper can be implemented with a relatively low-to-moderate initial investment and are quite flexibly implemented. The nature of a microservice architecture makes these implementations possible to achieve without any large replatforming or tech upgrade, given that the current business system operates with API connectivity or utilizes a platform approach. Existing equipment finance software companies can help build integrations to many of these providers.

Additionally, these providers often offer a standalone website, with a user portal and login to interact with alongside the API approach. For companies where an API approach might prove difficult, they can still utilize these services via a browser, vs. having the service fully embedded into their business systems.

DEFINITIONS

Several terms and acronyms are referenced throughout this article and are defined here.

Specialized applications and software. Specialized applications (apps) and software are technical solutions that are written or designed for a specific task rather for a broad application area. The prevalence of these solutions has risen dramatically with the advent of the internet and the transition

toward cloud-based platform business models.

Technology platform. A technology platform is the foundation for building and running business applications. The platform allows users to run their applications smoothly without worrying about the technology that supports them. At the same time, it allows technical staff to rapidly extend, enhance, or upgrade application software, increasing the speed of business.

Application programming interface (API). An API is an interface that provides programmatic access to service functionality and data within an application or a database. It can be used as a building block for the development of new interactions with humans, other applications, or smart devices. Companies use APIs to serve the needs of a digital transformation or an ecosystem and to start a platform business model.

Microservices. Microservices are an architectural and organizational approach to software development, where software is composed of small, independent services that communicate over well-defined APIs. These services are owned by small, self-contained teams. Microservices architectures make applications easier to scale and faster to develop, enabling innovation and accelerating time-to-market for new features.

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CATEGORIES

Researchers compiled a list of eight categories that were filtered from the compiled master list of total companies as the most common, relevant, and distinct themes within specialized applications for the equipment finance industry (Table 3).

Table 3.

Categories Within Specialized Applications

| Category | Description |
|--------------------------|--|
| Fraud/identity | Tools that help lenders comply with compliance and regulatory requirements for customer identification, validation, customer identification program (CIP), know your customer (KYC), anti-money laundering (AML), and protection of personal identifiable information (PII). Solutions in this category help reduce friction when gathering identification data, lowering costs, and mitigating risk associated with identity. |
| Credit – general | Tools that help gather and arrange customer information used to make a credit decision |
| Credit – cashflow | Transaction intelligence platforms that collect data from financial institutions to analyze transaction data vs. traditional underwriting. |
| Credit – financials | Intelligent data recognition is the next generation of OCR that uses artificial intelligence to review bank statements, tax returns, or other financial data to structure the data, populate financial models, and identify fraudulent documents. |
| Credit – pricing | Tools and services that help establish and evaluate economic variables including payments, profitability, and asset valuation |
| Documentation & funding | All processes associated with document generation, collecting documents, title perfection, tax calculations and assessments, e-signature, e-vaulting, and funding |
| Portfolio analysis | All processes that evaluate portfolio quality and trends and generate reports |
| Customer experience (CX) | Personalized responses for customers, addressing specific questions |

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The older a company, the more available resources there are and the lower the likelihood of implementation risk associated with their products/services.

RATING MODEL

Values for the evaluation criteria, as shown in Table 4, are used to evaluate and normalize each company to allow for comparison.

A sum of the five criteria is calculated for a cumulative rating for each company with a maximum score of 14.

Rating Value Assignments

- EF applicability
 - A 0–5 rating was given for EF applicability, to weigh the metric slightly heavier than all other criteria.
- High-profile customers
 - A 1–3 rating was given for high-profile customers. This metric was evaluated by identifying the reputability of partners/clients of a company predominantly found within their website.
- Maturity of technology
 - Individual companies were evaluated on technical solution descriptions, corresponding technology maturity levels, and estimated age of maturity for flagship products/services. Due to the difficulty of measuring the maturity, a binary > 2 years or < 2 years was given with corresponding ratings of 2 and 1 to easily sort new technologies from more established ones.
- Age of provider
 - A time scale of < 5 years, 5–10 years, and > 10 years was used to evaluate the age of the company. The older a company, the more available resources there are and the lower the likelihood of implementation risk associated with their products/services. A rating of 1–3 is given.
- U.S.-based
 - Companies that service U.S. businesses but are located outside of the United States are given a rating of 0, while

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Table 4.

Rating Model Values

| EF applicability | | High-profile customers | | Maturity of technology | | Age of provider | | U.S.-based | |
|------------------|--------|------------------------|--------|------------------------|--------|-----------------|--------|------------|--------|
| Value | Rating | Value | Rating | Value | Rating | Value | Rating | Value | Rating |
| High | 5 | High | 3 | > 2 years | 2 | > 10 years | 3 | Yes | 1 |
| Medium | 3 | Medium | 2 | < 2 years | 1 | 5 – 10 years | 2 | No | 0 |
| Low | 1 | Low | 1 | | | < 5 years | 1 | | |
| Minimal | 0 | | | | | | | | |

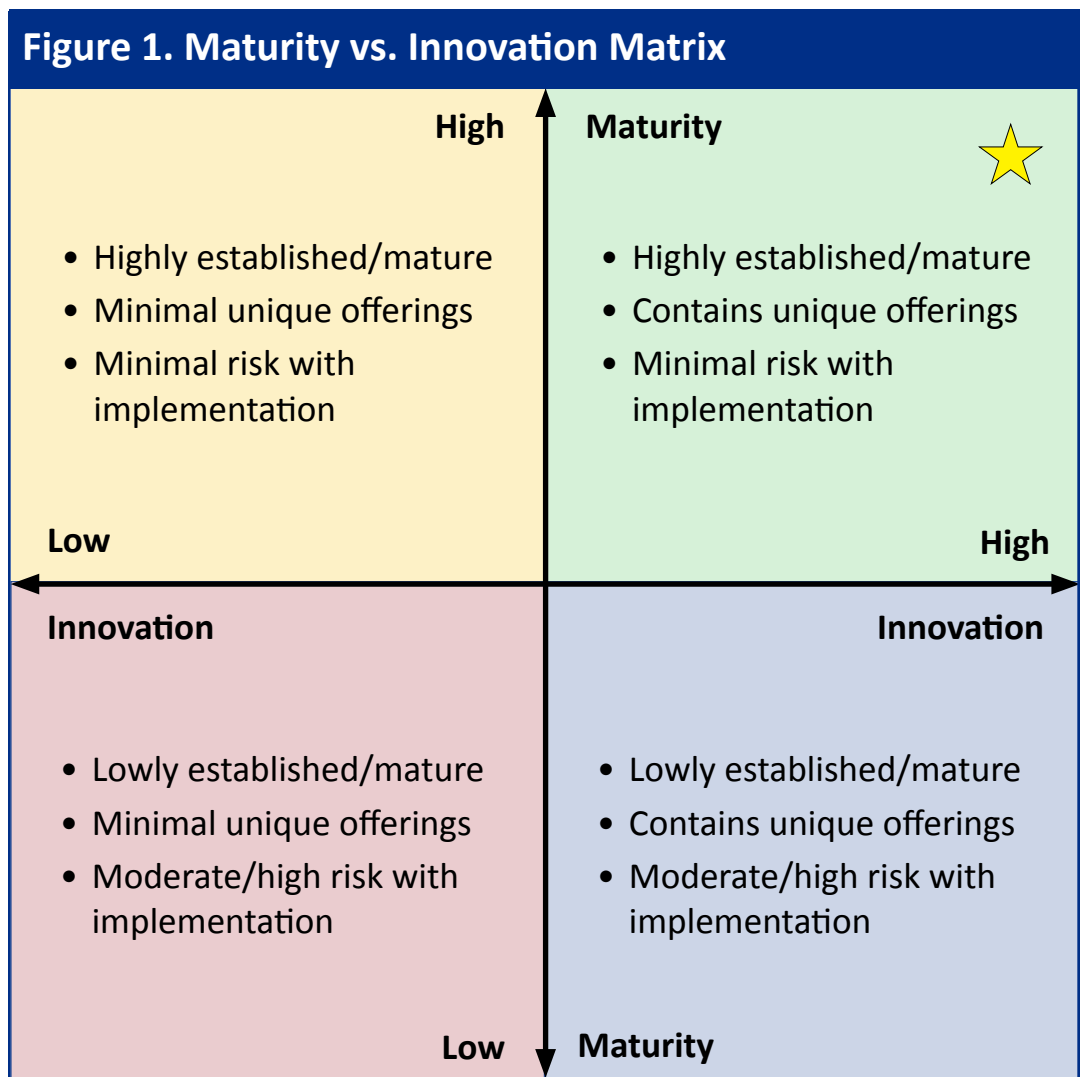
A company rating in the top right quadrant is the ideal candidate to implement, due to being both mature and innovative.

The matrix provides high-level definitions and characteristics of the four quadrants.

companies that are located within the United States are given a rating of 1. This criterion is weighted lighter than other criteria due to the lesser importance of this metric.

A 2 x 2 matrix is used to classify each high-rated company into innovative and/or mature (industry-established) services. In the 2 x

2 matrix, the x-axis is labeled as Innovation with high/low on the right/left, while the y-axis is labeled as Maturity, with high/low on the top/bottom. A company rating in the top right quadrant is the ideal candidate to implement, due to being both mature and innovative. The matrix shown in Figure 1 provides high-level definitions and characteristics of the four quadrants.



Note. Definitions

Maturity: equal to the age of provider rating, company generally is more established and carries lower risk of implementation for lending companies.

maturity rating = age of provider + high-profile customers

Innovation: aggregate of EF applicability and the inverse of maturity of technology criteria, used to indicate companies with high EF applicability and newer, more innovative products/services.

innovation rating = [EF applicability + 1/maturity of technology]

TOP-RATED COMPANIES

The following companies are the highest-rated companies identified from the research. Researchers have identified these companies as highly promising apps, software, and/or services that have a relatively high applicability to the equipment finance industry, as of February 2023.

Table 5.

Top-Rated Companies by Score

| Company | Category | EF applicability | High profile | Maturity of technology | Age of provider | US-based | Cumulative rating | Innovation rating | Maturity rating |
|------------|-------------------------|------------------|--------------|------------------------|-----------------|----------|-------------------|-------------------|-----------------|
| Finicity | Credit – cashflow | 5 | 3 | 2 | 3 | 1 | 14 | 5.5 | 6 |
| Yodlee | Credit – cashflow | 5 | 3 | 2 | 3 | 1 | 14 | 5.5 | 6 |
| Enigma | Credit – financials | 5 | 3 | 2 | 3 | 1 | 14 | 5.5 | 6 |
| Encapture | Documentation & funding | 5 | 3 | 2 | 3 | 1 | 14 | 5.5 | 6 |
| Ekata | Fraud/identity | 5 | 3 | 2 | 3 | 1 | 14 | 5.5 | 6 |
| IDology | Fraud/identity | 5 | 3 | 2 | 3 | 1 | 14 | 5.5 | 6 |
| Trulioo | Fraud/identity | 5 | 3 | 2 | 3 | 1 | 14 | 5.5 | 6 |
| Ocrolus | Credit – cashflow | 5 | 3 | 2 | 2 | 1 | 13 | 5.5 | 5 |
| Plaid | Credit – cashflow | 5 | 3 | 2 | 2 | 1 | 13 | 5.5 | 5 |
| Notarize | Documentation & funding | 5 | 3 | 2 | 2 | 1 | 13 | 5.5 | 5 |
| Alloy | Fraud/identity | 5 | 3 | 2 | 2 | 1 | 13 | 5.5 | 5 |
| Incode | Fraud/identity | 5 | 3 | 2 | 2 | 1 | 13 | 5.5 | 5 |
| Inscribe | Fraud/identity | 5 | 3 | 2 | 2 | 1 | 13 | 5.5 | 5 |
| Socure | Fraud/identity | 5 | 3 | 2 | 2 | 1 | 13 | 5.5 | 5 |
| MoneyThumb | Credit – cashflow | 5 | 3 | 1 | 2 | 1 | 12 | 6 | 5 |
| Codat | Credit – financials | 5 | 3 | 2 | 2 | 0 | 12 | 5.5 | 5 |
| Middesk | Credit – general | 5 | 3 | 2 | 1 | 1 | 12 | 5.5 | 4 |
| Twilio | Customer experience | 3 | 3 | 2 | 3 | 1 | 12 | 3.5 | 6 |
| Kount | Fraud/identity | 3 | 3 | 2 | 3 | 1 | 12 | 3.5 | 6 |
| Prove | Fraud/identity | 3 | 3 | 2 | 3 | 1 | 12 | 3.5 | 6 |
| Rutter | Credit – financials | 5 | 2 | 2 | 11 | 1 | 11 | 5.5 | 3 |

| Company | Category | EF applicability | High profile | Maturity of technology | Age of provider | US-based | Cumulative rating | Innovation rating | Maturity rating |
|---------------------|-------------------------|------------------|--------------|------------------------|-----------------|----------|-------------------|-------------------|-----------------|
| Lightico | Documentation & funding | 3 | 3 | 2 | 2 | 1 | 11 | 3.5 | 5 |
| Acuant | Fraud/identity | 3 | 3 | 2 | 3 | 0 | 11 | 3.5 | 6 |
| Neuro-ID | Fraud/identity | 3 | 3 | 2 | 2 | 1 | 11 | 3.5 | 5 |
| DataRobot | Portfolio Analysis | 3 | 3 | 2 | 2 | 1 | 11 | 3.5 | 5 |
| Flinks | Credit – cashflow | 5 | 2 | 1 | 2 | 0 | 10 | 6 | 4 |
| Railz | Credit – financials | 5 | 2 | 2 | 1 | 0 | 10 | 5.5 | 3 |
| Solutions by Text | Customer experience | 3 | 1 | 2 | 3 | 1 | 10 | 3.5 | 4 |
| Microblink | Fraud/identity | 3 | 3 | 1 | 2 | 1 | 10 | 4 | 5 |
| Onfido | Fraud/identity | 3 | 3 | 2 | 2 | 0 | 10 | 3.5 | 5 |
| Prism Data | Credit – cashflow | 5 | 1 | 1 | 1 | 1 | 9 | 6 | 2 |
| Ribbit | Credit – cashflow | 5 | 1 | 1 | 1 | 1 | 9 | 6 | 2 |
| Tax Status | Credit – financials | 3 | 1 | 2 | 2 | 1 | 9 | 3.5 | 3 |
| Credit Bureaus Plus | Credit – general | 3 | 3 | 1 | 2 | 0 | 9 | 4 | 5 |
| Alkymi | Documentation & funding | 3 | 2 | 1 | 2 | 1 | 9 | 4 | 4 |
| FileInvite | Documentation & funding | 3 | 2 | 2 | 2 | 0 | 9 | 3.5 | 4 |
| ForwardAI | Credit – financials | 5 | 1 | 1 | 1 | 0 | 8 | 6 | 2 |
| Accelitas | Credit – general | 1 | 2 | 1 | 3 | 1 | 8 | 2 | 5 |
| Akoya | Credit – general | 1 | 3 | 2 | 1 | 1 | 8 | 1.5 | 4 |
| FortifID | Credit – general | 3 | 1 | 1 | 2 | 1 | 8 | 4 | 3 |
| ADA Support | Customer experience | 1 | 3 | 2 | 2 | 0 | 8 | 1.5 | 5 |
| Able | Documentation & funding | 1 | 2 | 2 | 1 | 1 | 7 | 1.5 | 3 |
| Shufti Pro | Fraud/identity | 3 | 1 | 1 | 2 | 0 | 7 | 4 | 3 |
| Finn AI | Customer experience | 1 | 2 | 1 | 2 | 0 | 6 | 2 | 4 |

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A total of 44 companies was selected from the master list of companies to evaluate on the maturity vs. innovation matrix.

The companies are classified into individual categories. A maturity vs. innovation matrix is displayed for each category.

A maturity vs. innovation matrix for the category of Fraud/Identity as it relates to equipment finance is displayed in Figure 2.

The corresponding values for innovation, maturity, and cumulative rating (from Table 5) are displayed in Table 6 for Fraud/Identity companies. Fraud was the category that had the largest list of services available. It is also important to look at each service to understand which aspect of fraud they address.

A maturity vs. innovation matrix for the category of Credit – General as it relates to equipment finance is displayed in Figure 3.

The corresponding values for Innovation, Maturity, and Cumulative Rating (from Table 5) are displayed in Table 7 for Credit –

General companies. As with fraud, it is important to investigate each of these services independently as well. They provide unique data points to enable better credit underwriting.

A maturity vs. innovation matrix for the category of Credit – Cashflow as it relates to Equipment Finance is displayed in Figure 4.

The corresponding values for Innovation, Maturity, and Cumulative Rating (from Table 5) are displayed in Table 8 for Credit – Cashflow companies. This was the largest credit subcategory. These additional services and the ease of looking at cashflow should enable equipment finance companies to add this to their underwriting process if they have not already done so.

Figure 2. Top-Rated Companies by Fraud/Identity

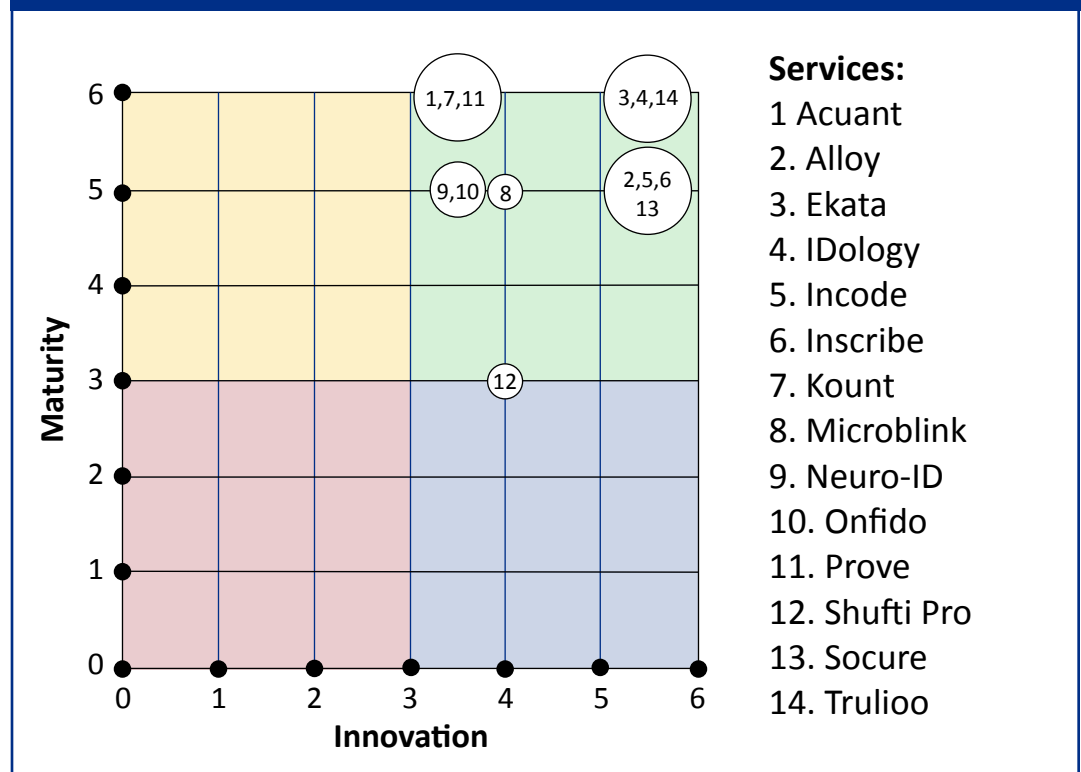
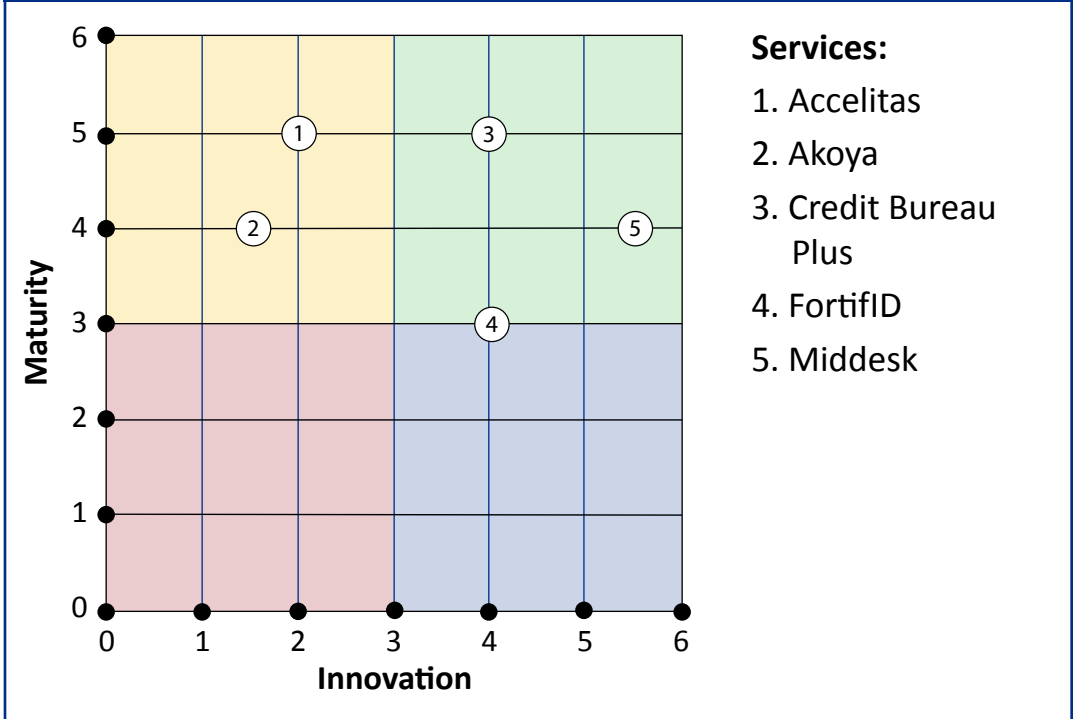


Table 6.

Company Attributes and Ratings by Fraud/Identity

| Company | Innovation, maturity | Cumulative rating |
|------------|----------------------|-------------------|
| Acuant | (3.5, 6) | 11 |
| Alloy | (5.5, 5) | 13 |
| Ekata | (5.5, 6) | 14 |
| IDology | (5.5, 6) | 14 |
| Incode | (5.5, 5) | 13 |
| Inscribe | (5.5, 5) | 13 |
| Kount | (3.5, 6) | 12 |
| Microblink | (4, 5) | 10 |
| Neuro-ID | (3.5, 5) | 11 |
| Onfido | (3.5, 5) | 10 |
| Prove | (3.5, 6) | 12 |
| Shufti Pro | (4, 3) | 7 |
| Socure | (5.5, 5) | 13 |
| Trulioo | (5.5, 6) | 14 |

Figure 3. Top-Rated Companies by Credit – General

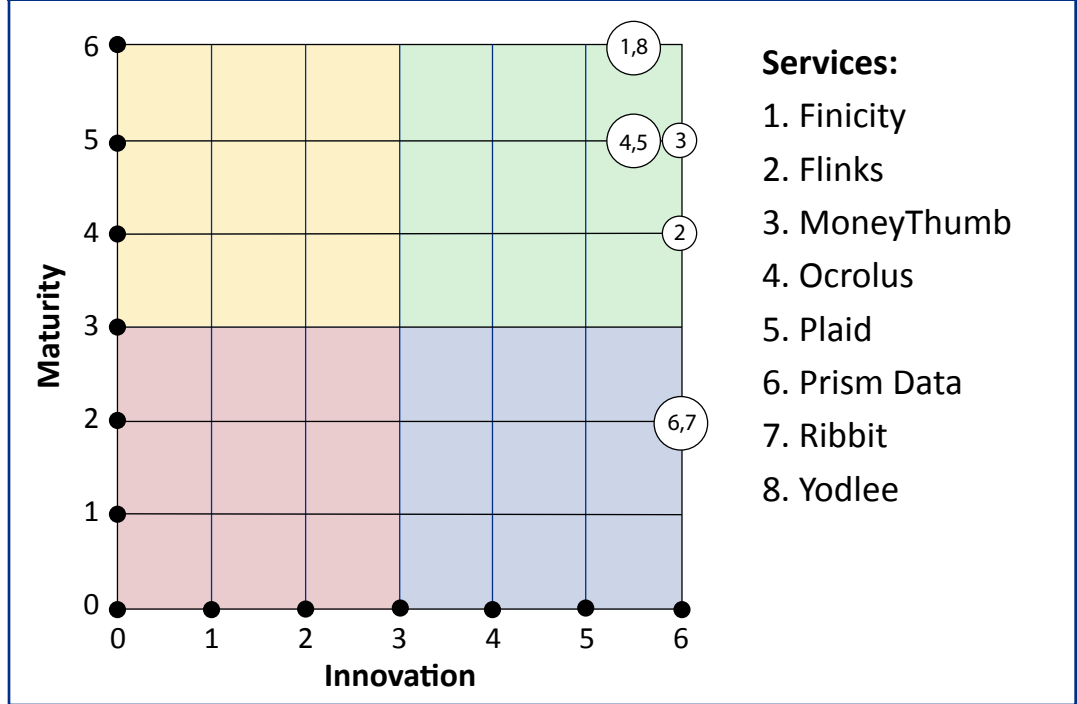


With the increased use of cloud-based accounting systems, the data available for financial data that is digitally available has increased significantly.

Table 7. Company Attributes and Ratings by Credit – General

| Company | Innovation, maturity | Cumulative rating |
|--------------------|----------------------|-------------------|
| Accelitas | (2, 5) | 8 |
| Akoya | (1.5, 4) | 8 |
| Credit Bureau Plus | (4, 5) | 9 |
| FortifID | (4, 3) | 8 |
| Middesk | (5.5, 4) | 12 |

Figure 4. Top-Rated Companies by Credit – Cashflow



A maturity vs. innovation matrix for the category of Credit – Financials as it relates to equipment finance is displayed in Figure 5.

The corresponding values for Innovation, Maturity, and Cumulative Rating (from Table 5) are displayed in Table 9 for Credit – Financials companies. With the increased use of cloud-based accounting systems, the data

available for financial data that is digitally available has increased significantly.

A maturity vs. innovation matrix for the category of Documentation and Funding as it relates to equipment finance is displayed in Figure 6.

The corresponding values for Innovation, Maturity, and

Cumulative Rating (from Table 5) are displayed in Table 10 for Documentation and Funding companies. Building on top of the

efficiencies gained by e-signature, these companies can help streamline the documentation process.

Table 8.

Company Attributes and Ratings by Credit – Cashflow

| Company | Innovation, maturity | Cumulative rating |
|------------|----------------------|-------------------|
| Finicity | (5.5, 6) | 14 |
| Flinks | (6, 4) | 10 |
| MoneyThumb | (6, 5) | 12 |
| Ocrolus | (5.5, 5) | 13 |
| Plaid | (5.5, 5) | 13 |
| Prism Data | (6, 2) | 9 |
| Ribbit | (6, 2) | 9 |
| Yodlee | (5.5, 6) | 14 |

Figure 5. Company Attributes and Ratings by Credit – Financials

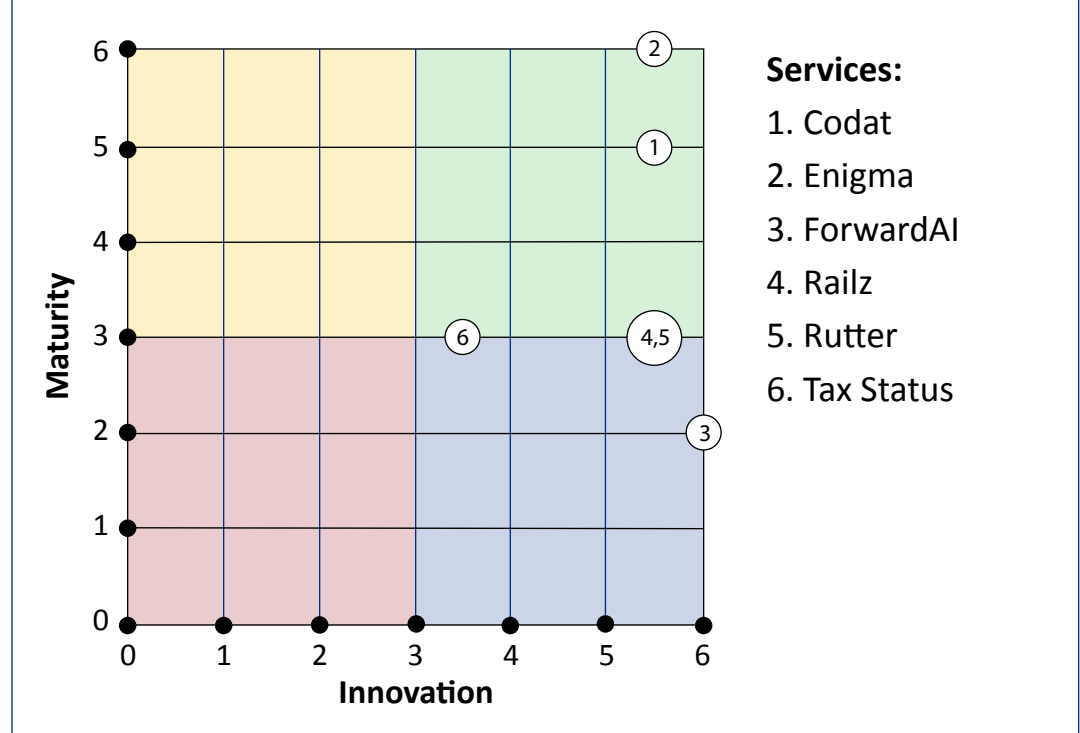


Table 9.

Company Attributes and Ratings by Credit – Financials

| Company | Innovation, maturity | Cumulative rating |
|------------|----------------------|-------------------|
| Codat | (5.5, 5) | 12 |
| Enigma | (5.5, 6) | 14 |
| ForwardAI | (6, 2) | 8 |
| Railz | (5.5, 3) | 10 |
| Rutter | (5.5, 3) | 11 |
| Tax Status | (3.5, 3) | 9 |

Figure 6. Maturity vs. Innovation Matrix – Documentation & Funding

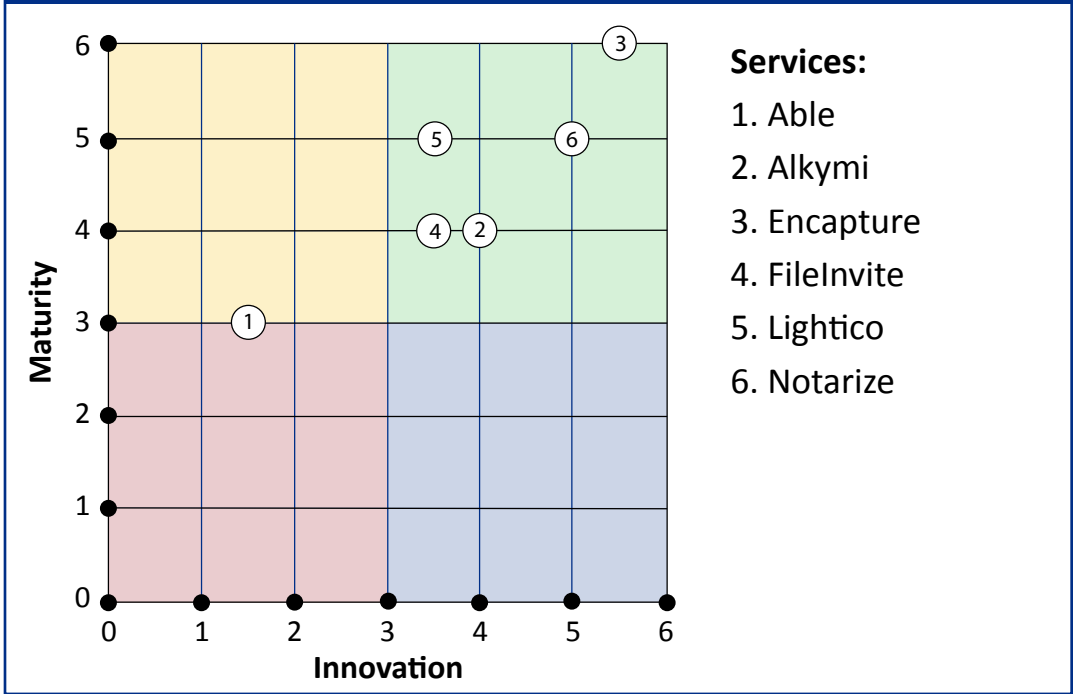


Table 10.

Company Attributes and Ratings by Credit – General

| Company | Innovation, maturity | Cumulative rating |
|------------|----------------------|-------------------|
| Able | (1.5, 3) | 7 |
| Alkymi | (4, 4) | 9 |
| Encapture | (5.5, 6) | 14 |
| FileInvite | (3.5, 4) | 9 |
| Lightico | (3.5, 5) | 11 |
| Notarize | (5.5, 5) | 13 |

Customer Experience is a broad category that could be expanded with several other providers. However, it is limited to the ones that focused on the lending industry.

A maturity vs. innovation matrix for the category of Portfolio Analysis as it relates to equipment finance is displayed in Figure 7. This was the smallest category. There were not many services in that category focused on Portfolio Analysis.

The corresponding values for Innovation, Maturity, and Cumulative Rating (from Table 5) are displayed in Table 11 for Portfolio Analysis companies.

A maturity vs. innovation matrix for the category of Customer Experience as it relates to equipment finance is displayed in Figure 8.

The corresponding values for Innovation, Maturity, and Cumulative Rating (from Table 5) are displayed in Table 12 for Customer Experience companies. This is a broad category that could be expanded with several other providers. However, it is limited

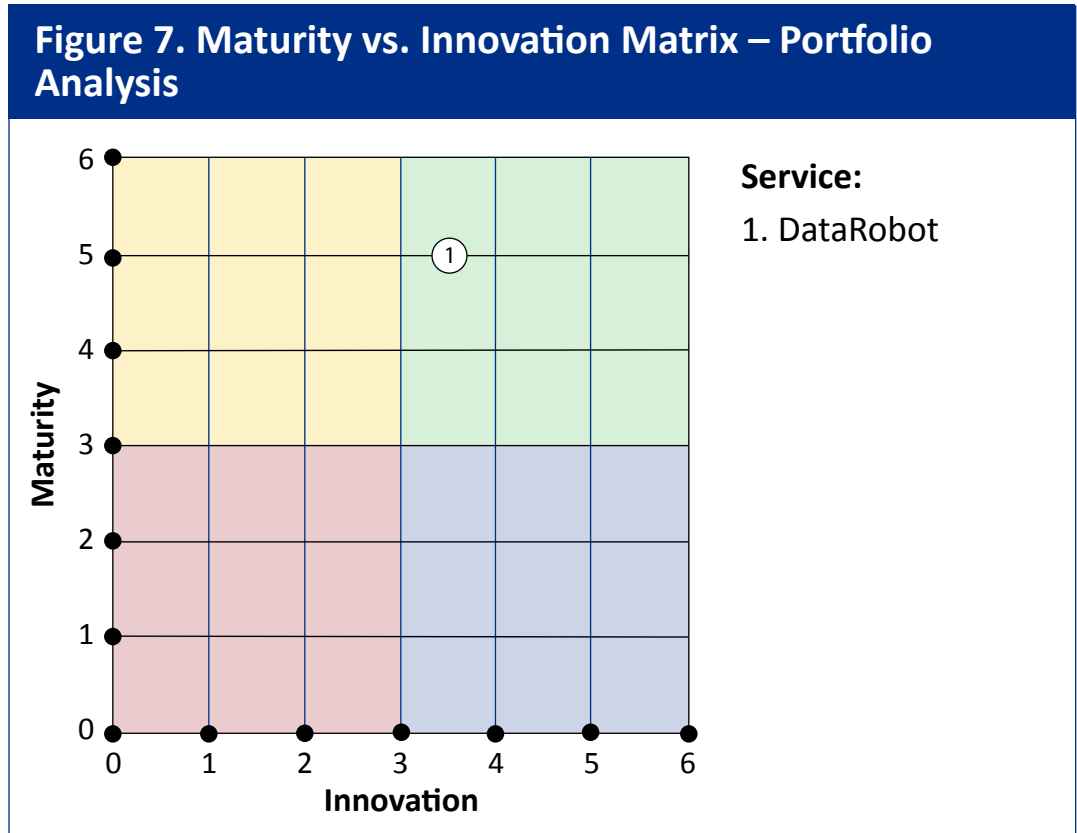


Table 11.

Company Attributes and Ratings by Portfolio Analysis

| Company | Innovation, maturity | Cumulative maturity |
|-----------|----------------------|---------------------|
| DataRobot | (3.5, 5) | 11 |

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Researchers invited established companies to highlight any relevant new services that have been released or revamped in the last 24 months. The results are available in the full research report.

Figure 8. Maturity vs. Innovation by Customer Experience

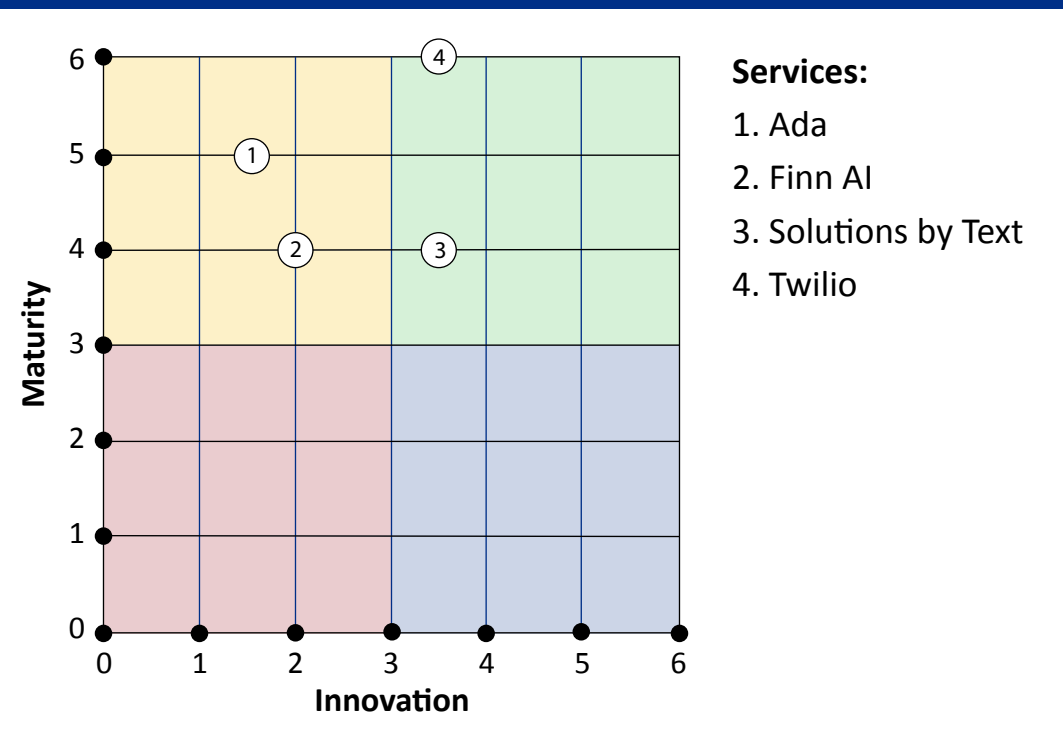


Table 12. Company Attributes and Ratings by Customer Experience

| Company | Innovation, maturity | Cumulative rating |
|-------------------|----------------------|-------------------|
| Ada | (1.5, 5) | 8 |
| Finn AI | (2, 4) | 6 |
| Solutions by Text | (3.5, 4) | 10 |
| Twilio | (3.5, 6) | 12 |

to the ones that focused on the lending industry.

The following companies are mature companies that can be considered as more established providers (Table 13). These companies have been in the industry long enough to become largely well known. Included is a list of new or revamped services within the last 24 months from

companies that responded to researchers.

Our researchers asked established companies if they would like to highlight any new services relevant to equipment finance that have been released or revamped within the last 24 months. Several responded. The results are available in the full research report.

Table 13.**Top-Rated Established Companies by Category**

| Company | Category |
|----------------------------|---------------------------|
| Credco | Credit – general |
| Dun & Bradstreet | Credit – general |
| Equifax | Credit – general |
| Experian | Credit – general |
| FICO | Credit – general |
| GDSLlink | Credit – general |
| LexisNexis | Credit – general |
| Microbilt | Credit – general |
| Moody’s Analytics | Credit – general |
| PayNet | Credit – general |
| TransUnion | Credit – general |
| Blackbook | Credit – pricing |
| Ivory – SuperTRUMP | Credit – pricing |
| Price Digests | Credit – pricing |
| Sandhills Global | Credit – pricing |
| TimeValue | Credit – pricing |
| Fincura | Credit – financials |
| Avalara | Documentation and funding |
| CSC | Documentation and funding |
| DDI Technology | Documentation and funding |
| Dealertrack | Documentation and funding |
| DocuSign | Documentation and funding |
| Precisely | Documentation and funding |
| Vertex | Documentation and funding |
| Wolters Kluwer – CCH | Documentation and funding |
| Wolters Kluwer – eOriginal | Documentation and funding |
| Wolters Kluwer – iLien | Documentation and funding |

IDENTIFIED THEMES

During the research process, several industry themes and trends became apparent. Many services that appeared in the sources master list focused on

topics such as fraud prevention and ID verification, creating personalized experiences in an increasingly digital world, and other lending themes related to credit underwriting and analysis, documentation, and

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Several new service providers offer bank and revenue forecasting via bank data. Historically, one challenge for indirect lenders is getting the business to opt in by providing its bank credentials.

compliance. Each of these themes depicts an overarching picture of where resources and capital are being concentrated and where innovation is most prevalent within the financial digital application landscape. After reviewing the master list of sources, researchers consolidated their findings into six key themes, as follows.

Fraud and ID Verification

A byproduct of the convenience of conducting business digitally is the added risk that comes with online interactions. Today, fraud and ID verification are commonplace within the microservice and API landscape. Numerous companies are expanding on the possibilities of verification technologies to improve on existing know your customer/know your business (KYC/KYB) procedures. Technologies such as facial recognition, scoring models for fraud, background checks, and credit underwriting decision analysis tools are a few types of these solutions. As the demand for online convenience and efficiency increases, so will the need for ID verification and fraud prevention solutions.

Personalized Experiences

The push toward digitization has left many businesses and customers wanting a more personalized experience. There are many specialized apps and services aimed at improving the customer experience through personalized methods such as short message service (SMS) notification systems,

customer relationship management (CRM) automation, and other methods of communication.

Cashflow Underwriting

Several new service providers offer bank and revenue forecasting via bank data. This is not necessarily new: both Plaid & Yodlee have provided these services for several years. Historically, one challenge for indirect lenders (broker/vendor channel) is getting the business to opt in by providing its bank credentials.

However, there has been a big influx of providers offering services to autoscans, extrapolate, and predict cashflows based on PDF bank statements (like Ocrolus and Moneythumb), using intelligent character recognition. Many of these services rely on machine learning to help augment the “learning” of different formats. They also provide services to identify if bank statements have been altered to help reduce fraud.

Nontraditional Financial Analysis

With the increase in e-commerce as well as standardized online merchant systems, such as Shopify and Woo Commerce, the ability to connect with these systems is becoming more prevalent. This feature allows lenders to see sales directly from their point of sale and payment-processing systems.

Many of these same providers will also connect with the borrowers’ accounting systems directly to

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One of the missing links in full credit automation has been accurately validating the business against the secretary of state registration information in a timely manner.

extract financial data. This allows for immediate intake of financial statement data directly from the source. Many of these function like Plaid and other systems in that they require the business to opt in by providing their accounting credentials.

Document Execution and Management

One of the missing links in full credit automation has been accurately validating the business against the secretary of state registration information in a timely manner. Existing services such as CSC, Wolters Kluwer, and Dun & Bradstreet have provided similar services. New providers such as Middesk have integrated directly with the states' registration databases to accurately and cost effectively validate business identities, including registration dates, legal names, and registration status. There are new workflow tools such as FileInvite that manage the document life cycle of retrieving and completing forms. Many of these workflow tools have APIs that can be built into existing workflow systems.

Regulatory Risk and Compliance

The regulatory environment for commercial lending is constantly evolving, an example being commercial finance disclosure requirements recently imposed in California and New York. A growing number of consumer lending regulations are beginning to find their way into the commercial

lending space. This increase in regulations has raised the bar for equipment finance companies to meet stricter accounting and compliance standards.

Disparate data sources and unstructured data can be problematic when structuring and generating reports, and enterprise risk management (ERM) technology can be costly. To address these challenges, AML and payment monitoring technologies are beginning to gain traction across the industry. Applications for innovative technologies such as blockchain are being explored to manage risk and maintain a clear audit trail for regulators.

CONCLUSION

The availability of specialized apps, software, and microservices continues to grow. For commercial lenders, opportunities are plentiful to streamline business processes, improve credit underwriting and decisionmaking, automate and reduce documentation, enhance customer and user experiences, and minimize risk and fraud. Our research identified key trends across the digital landscape.

Underlying broad industry trends related to the shift toward online include the push for fraud/identification services as well as creation of increasingly personalized experiences. These trends have become even more pronounced as a result of Covid-19. The goal of this research was

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to provide equipment finance companies a list of third-party providers, to assist in creating a frictionless borrowing experience for their customers and partners and to reduce fraud, deliver timely and accurate credit underwriting

data, and to help with regulatory risk and compliance.

Future iterations of this study are welcomed by the researchers, given that the landscape for technology shifts so rapidly.



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Jourdan Saegusa has held leadership roles in sales and capital markets, and he was the founding member and COO of two Monitor Bank 50 companies. His diverse background and practical approach to business challenges provides him with a unique perspective and ability to improve operating environments, enhance the customer experience, and drive innovation throughout the lending life cycle and beyond. Mr. Saegusa studied journalism at Texas State University and received a bachelor's in business administration with a concentration in management from the University of Phoenix.

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