



## Rethinking Credit Lending



### Abstract

Lending industry's dynamics are changing rapidly. A whole new breed of lenders are fundamentally transforming the industry and redefining its modus operandi. Most financial institutions (FIs) are still doing things the traditional way and grappling with the challenges of legacy systems, outmoded processes, and inertia to change. To remain relevant, the lending groups within FIs need to respond quickly to meet emerging challenges. This paper examines the key drivers for the financial institutions to reinvent themselves, key market trends in the current lending environment, how financial institutions are standing up to the challenges, some of the innovations in the financial industry and their disruption potential, and lastly this paper recommends what FIs can do to not just subsist but also flourish in this environment. The contents herein are equally applicable to both retail lending as well as small ticket business lending.

## Contents

Introduction	3
Business imperatives for change	4
How is the industry responding?	5
Customer centricity	5
Advanced analytics	5
Operational efficiency	7
'Out-of-the-box' ideas	9
What can financial institutions do?	10
Response Approaches	11
A word of caution	12
Final thoughts	13
How can Infosys help?	14
References	16

## Introduction

For borrowers, lending has traditionally meant filling up long application forms, submission of volumes of documents, some of which are not even readily available which meant spending long hours preparing them, several back and forth with lenders, followed by months long due diligence with some obscure methods with no status updates, and finally decision with no justifications and sometimes too late to be of any use. For lenders, this was characterized by huge data needs for underwriting, weeks long data collection, experiential data

collection, non-digitized data, manual and subjective underwriting processes, data spread across files and systems, and consequently less than optimum decisions.

In this age of consumer, the pressure is on financial institutions to keep consumers constantly happy with speed and convenience, while dealing the internal operational challenges and regulatory compliance. While large financial institutions are grappling with inertia to change, nimble technology firms are

catalyzing lending space by simplifying borrowing experience, and faster time to decision leveraging alternate sources of data (from ecommerce, UPS to payables and card network data) to sell better and manage credit risks better. With P2P lending through platforms expected to grow to around \$350 billion, and business lending through online platforms expected to reach around \$206 billion by year 2025, only in the USA<sup>1</sup>, there is merit in examining the environment and defining a charter for reformation.



# Business imperatives for change

The key imperatives that are driving FIs to reform are:

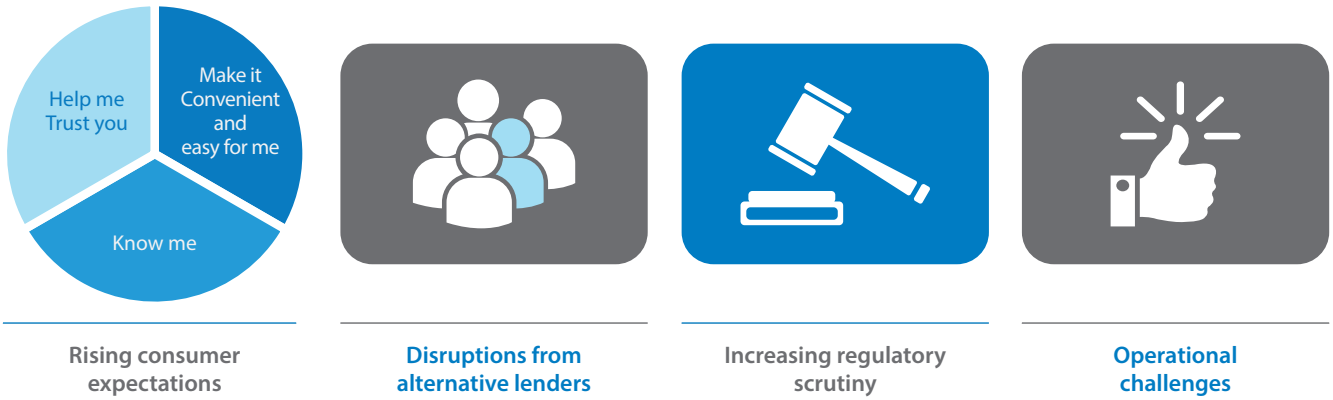


Figure. 1

## 1. Rising consumer expectations

With so many providers to choose from, consumers have become more demanding. They no longer need the standard ‘product’ offered by providers. Rather, they need ‘solutions’ for their problems, which translate into needs. For their credit needs, consumers are asking for:

- Easy and convenient lending experiences with speedy fund delivery
- Personalized services with implicit assumptions that providers remember them from past interactions
- Utmost transparency in the process and assurance of safety

## 2. Disruptions from alternative lenders

Alternative lenders mushroomed in 2005 with the launch of Zopa and gained attention in 2007 with Lending Club receiving major funding and subsequent

Securities and Exchange Commission’s (SEC’s) approval in 2008. With end-to-end technology-based operations, alternative lenders are offering all the convenience and speed consumers need and have become the first choice for small ticket loans. They can be classified as:

- Online marketplace lenders (P2P and balance sheet lenders): P2P lenders do not lend but connect lenders and borrowers using a fee-based model. Lending Club, Funding Circle, and Prosper fall into this class of lenders. Balance sheet lenders are lenders in the true sense of the term because they hold debt within their own balance sheets. Kabbage, OnDeck, and Can Capital are few examples of such lenders.
- Small Business Administration (SBA) backed online lenders e.g. SmartBiz

## 3. Increasing regulatory requirements

Regulations are becoming more stringent with:

- New data and reporting requirements
- Pressure to invest in IT infrastructure
- Early detection of Capital at Risk (CaR)

## 4. Operational challenges

While the factors described above are external to an organization and beyond their control, operational challenges are internal and can be prevented. Firms typically employ long, manual, and subjective underwriting processes. They use multiple systems for processing and data is spread across systems with no single source of truth. Such firms face challenges related to:

- Legacy systems
- Process inefficiencies
- Data quality and integration





## How is the industry responding?

The response of FIs to the changing lending landscape has primarily been two-fold. First is keeping customers at the center of the organization and designing everything else around them. The second is a substantial increase in usage and deployment of technology-based solutions on all fronts. This has been fueled by both the advancement of technology in automation and data warehousing, and by an increased

understanding of the potential uses of technology. The actual steps taken by FIs can be classified under three broad categories:

1. Customer centricity
2. Advanced analytics
3. Operational efficiency

### 1. Customer centricity

Customer centricity entails building a customer's trust in the brand, moving away from the concept of a 'product' to a 'solution mindset,' helping clients

identify solutions, and providing advice while engaging customers. In the current environment, where the offerings of various providers have little differentiation, "the only sustainable competitive advantage left is an obsession with customers and the key to growth is customer loyalty"<sup>2</sup>. Therefore, the first step is providing customers with a superior experience as well as to ensure that customers trust the brand. This leads to customer loyalty and advocacy, which in turn become the source of competitive advantage.

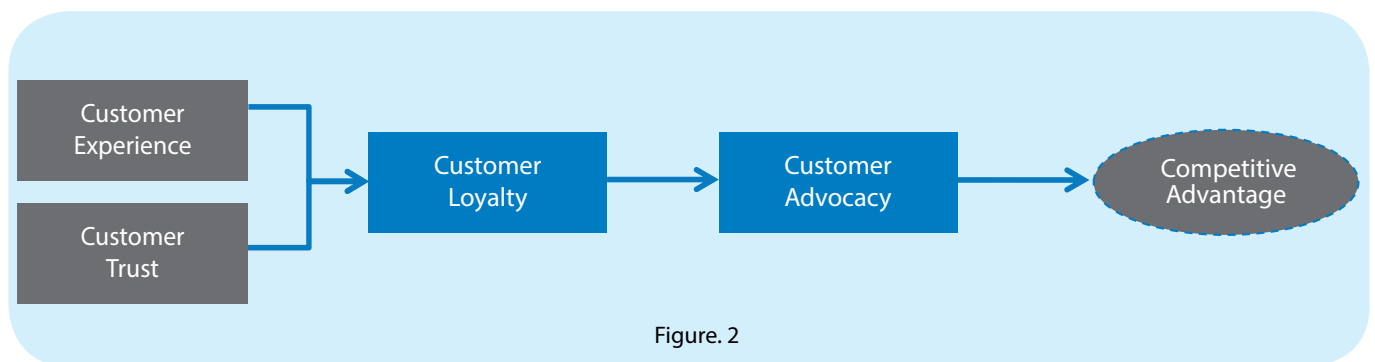


Figure. 2

Towards customer centricity, firms are making significant efforts on two fronts: building customer trust and augmenting customer engagement.

#### Customer trust

Firms are investing in building customer trust by:

- Proposing what is best for the customer by evaluating customer profiles and needs and providing best product / pricing options
- Providing visibility into the underwriting process by explaining it in detail and being upfront about the eligibility criteria
- Providing transparency in pricing by, for example, creating sliders on a website where pricing is provided upfront for every combination of loan amount and duration
- Holding value-based dialogues with customers without attempting to sell on every occasion. An example here would be publishing informational videos, blogs, and articles from experts on websites to help customers manage spending or articles on how to manage working capital for commercial customers

- Enabling reviews and ratings by creating consumer communities and forums on websites. This also helps in building the brand as consumers transform into brand ambassadors by solving the problems of other consumers using their own experiences

#### Customer engagement

Firms are providing free customer engagement tools on their websites for customers to 'play with' without actually selling. Customers are welcome to use the tools on the website unconditionally and help them solve their business problems. For providers, these tools are helpful in two ways: firstly, they provide rich insights about potential customers and secondly, these tools are designed to lead customers into an optional sales funnel and thus create sales opportunities.

### 2. Advanced analytics

Assimilation of large volumes of data, the ingestion and combination of newer types of data with traditional data, and usage of advanced analytical techniques for deeper insights, are becoming core to credit risk management. Machine learning techniques, like neural networks,

are being used to identify non-linear relationships between variables. Analytics is being leveraged to offer advisory capabilities based on customer data analytics to better understand customer needs and create 'sticky' relationships. Specifically, advanced analytics is being used for:

## Enhancing Customer Engagement

### Infosys Case Study

A large UK-based financial institution enhanced customer engagement by offering the following two interactive tools on its website.

#### 1. Working Capital Profiler:

Allows the customer to have a graphical representation of their working capital and cash requirements. Once profiled, this information provides the key to create tailored offerings

#### 2. Working Capital Finance Finder:

Allows customers to generate a range of funding options that meet their requirements. They can then request a quote for an option they have selected

## Decisioning 'thin-file' customers

The lending industry has so far focused primarily on 'thick-file' customers. These are customers with sufficient credit data to feed the credit models and includes their credit account information and financial statements. A person with no credit record or a sparse credit report ('thin file') will often not receive a credit score based on traditional models. Led primarily by new-age financial technology (aka FinTech) firms, alternative data sources are now being considered to underwrite 'thin file' customers. This alternative data is over and beyond the traditional credit data and is used as a proxy for credit worthiness. This type of data can be classified as:

### 1. Conventional alternative data

Credit worthiness is fundamentally the ability and willingness to pay. It is assessed on the basis of how the borrower has performed on loan repayment in the past. Conventional alternative data is the data that closely resembles the repayment data. It is the data related to repayment of bills of utilities, suppliers, and other services. Payments for services has a strong correlation with payments of loan installments, both being obligations on beneficiary and especially since service suppliers bill their customers typically on a monthly basis or at

regular intervals that resemble repayment cycles used by many lenders. Given that, supplier payment data can be used as a proxy for both ability and willingness to repay loan.

*VantageScore* credit scoring model, developed jointly by Equifax, Experian, and Transunion; uses conventional alternative data for credit scoring, in addition to traditional credit data.

### 2. Experimental alternative data

This is data from sources such as social media (Facebook, Twitter,

LinkedIn), web clickstream, location, shopping, etc. It does not have a direct correlation with credit data but is used as a proxy for credit worthiness of the borrower in a non-linear relationship. This data becomes useful in the absence / deficiency of credit data. The reason it is experimental is that the efficacy of such data to assess true credit worthiness of borrowers is yet to be proven.

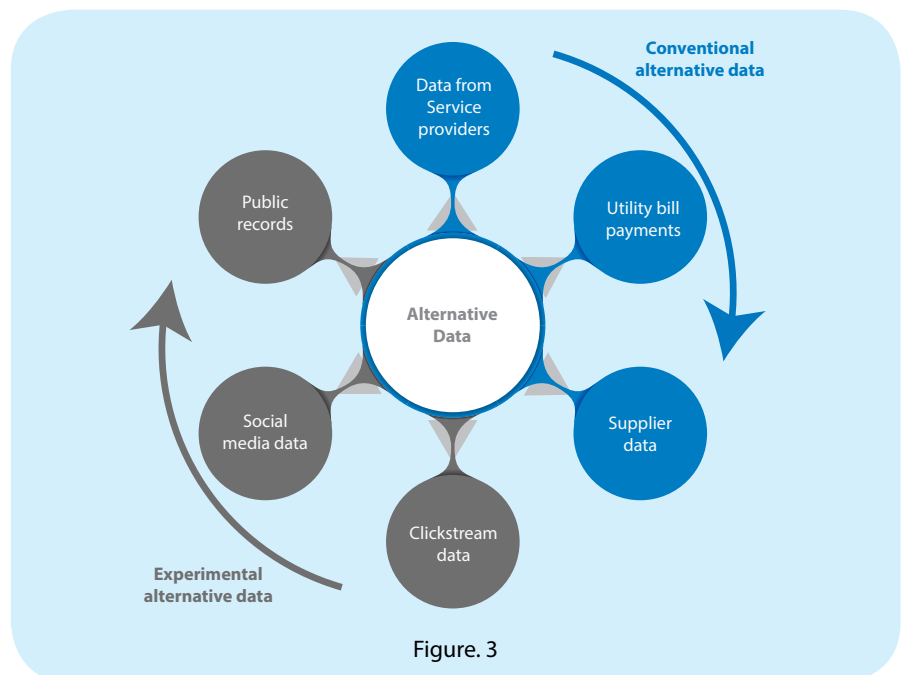


Figure. 3

#### Supplier data

Suppliers maintain history of payments of their business customers, which can be used as a proxy for the ability and willingness to repay, in addition to estimating revenue flow and working capital.

- A McKinsey study discovered that the contractual terms and resulting cash flows between small businesses and their key suppliers were extraordinarily predictive. With a Gini coefficient of 35, this factor compared favorably with the best variables offered by developed-market credit bureaus (Gini coefficients for which typically range from 25 to 45)<sup>3</sup>

#### Clickstream data

Websites visited prior to filling online loan applications, the nature of the affiliate partner driving the traffic, the amount of time spent on related pages, such as

terms and conditions and product features, all serve as useful predictors of post-application behavior, including possible future attrition<sup>4</sup>.

- Marketplace lenders have found that the longer a person spends sliding the loan amount and pricing level (online lenders have started providing innovative sliders on the website for loan amount and durations), the more likely it is that they will pay back<sup>11</sup>

#### Social media data

- Location data from personal social network and ecommerce sites to validate occupancy and stability of residency<sup>10</sup>
- Customer reviews to understand popularity of businesses<sup>10</sup>
- Network of people with high-income jobs, the potential for high-income jobs or stable employment, in addition to other data to understand job stability<sup>10</sup>

#### Public records

- Government and regulatory reports; for example, government contracts and construction index
- Public data; for example, business licenses, Sec of State data, health inspection reports, police reports, etc.
- Industry association data; for example, American Medical Association, bar associations, etc.

#### Utility bill payment

- An Asian lender found that delinquencies on mobile-phone bills were 60% more predictive of small-loan defaults than delinquencies on loans from other lenders. Even the choice of payment plan for the phone bill was found to be just as predictive as the second-best variable available from the credit bureau [sic]<sup>3</sup>

- First Access predicates risk-scoring products for lenders in emerging markets, predominately on prepaid mobile phone usage<sup>12</sup>
- A Latin American consumer lender found that analyzing recharge behavior—the pattern in which consumers top up their prepaid mobile phone account—more than doubled its predictive power, compared with the use of simple demographic data alone [sic]<sup>3</sup>

#### Data from service providers

- Intuit is trialing with a platform where they use (with the permission of small businesses) QuickBooks data, which they store in the cloud, to create a predictive, small business, credit score
- Alibaba has created a credit score it calls “Ali-loan,” derived from the transactions conducted on its portal. It then sells this score to lenders. With a bad-loan rate of just 0.35 percent, this data source is something that makes even developed-market lenders envious<sup>3</sup>
- Fundbox and Bluevine underwrite customers simply by evaluating their QuickBooks, Xero, or FreshBooks data

Beyond alternative data, the owned proprietary data — information as simple as the balances and transaction patterns of existing customers’ past relationships — which was ignored due to non-availability in digital format, is now helping in better assessment of credit worthiness of customers through digitization.

#### Example

One successful lender found that it actually already had paper records of interactions with some small businesses it wanted to target; it had overlooked the records because they were not in a digital format. A team manually entered the data into an electronic system, enabling the provider to conduct the analysis required to identify qualified borrowers<sup>3</sup>

### Enhancing credit scoring models

Recently, some unconventional statistical methods are being incorporated in analytics engines to enhance credit scoring models. Even though these are in investigational stage, the results are promising and include:

- **Kalman filters:** Initially used for in-course adjustments to a rocket’s trajectory after experiencing atmospheric turbulence, it identifies the best predictor, given the old and new data. The baseline scoring model is updated dynamically with new data coming in from successive months, like payment pattern and suppliers<sup>4</sup>
- **Singular value decomposition:** Is a factorization of a real or complex matrix. It has many useful applications in signal processing and statistics. Used to turn hundreds of tracking variables representing behavior over time into an individual ‘DNA’ for each borrower<sup>4</sup>
- **Ensemble:** Allows each model to solve the portion of the problem for which it is best-suited. Used to blend together a range of credit scoring models, such as logistic regression, decision trees, and artificial neural networks<sup>4</sup>
- **Weight of evidence:** Provides flexible tools to recode values in continuous and categorical predictor variables into discrete categories automatically and assigns each category with a unique weight. It also easily incorporates new predictive information – like a change in payment patterns or a riskier use of a credit line – without requiring an entire model rebuild<sup>4</sup>
- **Adaptive control systems (ACS):** ACS brings consumer behavior and other attributes into play for decisions in key management disciplines (line management, collections, and authorizations), so as to reduce credit losses and increase promotional opportunities. It uses behavioral scoring for continuous monitoring of risks at the individual and portfolio level and adjustments to exposures, pricing, and terms and conditions. TRIAD, developed by Fair Isaac, is one such ACS<sup>5</sup>.

### 3. Operational efficiency

Straight-through processing, enabled by simplification and standardization

### Examples

- ZestFinance uses 70,000 data signals — everything from financial information and technology usage — to gauge how quickly a user scrolls through its terms of service and ten, parallel, machine learning algorithms to assess loans.
- Fundation, an online business lender using proprietary analytics, provides real-time, interactive feedback to the customers on their credit profile as they gradually provide information in the credit application interface, so that customers can exactly understand how the application is being evaluated.

of process steps, and automation of business rules with rule engines, is the general direction of the industry. In addition, lenders are striving to simplify the credit application process.

#### Reduction in ‘asks’ from customer

Reduction in asks from customers is on two fronts: firstly, reduction in the amount of information itself required for underwriting and secondly, reduction in the amount of information to be provided by customer or fetching the information directly from other sources, without bothering the customer.

Alternative lenders have significantly reduced ‘asks’ on both fronts. Many small businesses are willing to pay the higher price of the alternative lenders just to be able to get their capital and move on, rather than spend days and weeks just for credit application initiation.

Lenders like Kabbage and Iwoca offer simple three or four step credit application process with an emphasis on speed and convenience, which takes not more than 30 minutes to complete. Most such lenders have simple, straight forward, data and document requirements, which are displayed upfront on websites; thus, preventing the hassle of multiple rounds of data collection.

SmartBiz, an online SBA loan provider, forgoes the traditional business plan and income projections, thereby reducing

the load of data requirements from borrowers.

On the direct data collection front, some firms are using API-based integrations to automate collection of customer information from either the accounting systems of customers directly, or from the service providers of the customers. All that is required of customers is to share credentials and links to their service providers.

### Examples

- Kabbage allows customers to link any of the following services in their credit applications: Square, Authorize.Net, Sage, Stripe, Intuit Quickbooks, Xero, Yahoo, Etsy, Amazon, PayPal, Ebay, and Business Checking. The data is fetched directly from these service providers and used for qualifying customers
- OSMO Data Technology Ltd. connects securely with the accounting packages (support for 240+ accounting systems) of customers (sales ledger, purchase ledger, invoice line data, or management accounts - P&L, balance sheet, and cash flow), collects data confidentially, and converts the stored data formats created by each accounting system into a single, unified form, which is then passed to the client's system (the lender).

### Process re-engineering and automation

None of the above would make sense unless the processes are re-engineered to reduce processing time, eliminate redundancies, reduce errors, and avoid reiterations. To that end, FIs are:

#### 1. Modernizing processes

- Fetch client data from archives wherever there is no change
- Capture errors upfront in the process
- Capture data tailored to the type of request (system guided)
- Develop system-triggered need for valuation, bureau check, and title search
- Identify data difference for re-process requests
- Capture data once and reuse for downstream processing and subsequent requests
- Identify and eliminate capability redundancy across underwriting toolsets
- Segment by risk profiles and create standard templates for underwriting each segment
- Create role-based workflow to support insight into the full history of previous activity and access relevant documents and data
- Institutionalize individual experience and subjective judgments into standardized underwriting templates: Credit Evaluation Grids<sup>6</sup>
- Capture digital data – self-service portals for customers to enter data with support for multiple channels
- Execute digital contracts with e-signatures
- Minimize manual reconciliations

and data breaks through exception management

- Pre-approve credit limits supported by automated underwriting rules
- Provide visibility into decision timeline (move away from SLA to customer waiting time)
- Create system functionality to allow changes to the request without reprocessing deal

#### 2. Deepening automation:

- Early warning systems to monitor the internal and external environment and generate triggers for reevaluation
- Event-based triggers with an events library, based on internal and external assessments
- Automated data extraction using optical character recognition (OCR) from images, electronic feeds, or paper documents that supports various formats - PDF, XLS, TIFF, JPG, email, fax, text; including interpretation of footnotes
- Automated financial spreading with industry-specific normalization to the organization's required standards
- Automated suggestion of credit limit for each case by breaking down organization-wide risk exposure limits to deal level and combining with credit scores
- Automated generation of loan agreements, contracts, terms and conditions, and other documents in pre-defined templates
- Automation of business rules using rule engines
- Automated covenant tracking
- Automated workflows - queue management, case routing, case tracking, notifications, and status alerts

## Process re-engineering and automation

### Infosys Case Study

Infosys partnered with a financial utility organization to transform data and document capture leveraging advanced technology by:

- Providing a dedicated user interface for every client to upload data and documents
- Using rules engine system automatically to determine the type of documents that are required based on geography, legal entity structure, and KYC norms. Huge library of KYC norms and legal frameworks from all over the world support the rules engine in the background
- Developing an interface that prompts user to upload specific documents based on preliminary information entered
- Using OCR technology from Recognos Financial to extract data from documents. The ability of the tool improves progressively with an increased number of documents passing through it
- Enabling OCR to leverage vast document taxonomy to support document variations (types, formats, layouts) from all over the world



## 'Out-of-the-box' ideas

There are also some completely unconventional ideas for credit underwriting which are gaining attention. It is needless to say that their efficacies are still to be proven. They include:

### 1. Psychographic underwriting:

EFL has developed a 45-minute psychographic query that gauges a potential borrower's truthfulness, ethics, and optimism to determine whether that person, relative to other borrowers and potential borrowers, will pay back his loan [sic]<sup>7</sup>. Here is how the query works:

- The query works on the basic principle of relativism: the more someone feels that other people are, say, untruthful, the more untruthful that person is considered to be. In other words, people justify their actions based on their perception of other people, a sort of 'everyone steals, so I can steal' mindset [sic]<sup>7</sup>
- By combining the psychographic evaluation of EFL with voice verification and voice analysis of VoiceTrust, a biometric / psychographic underwriting process takes shape [sic]<sup>7</sup>

### 2. Fitness data in underwriting:

This uses FitBit data for credit underwriting. Walkmore's models claim to show the more people move — tracked through smartphone apps or wearable computing devices — the more likely they are to pay dues on time. This allows fitness data to be crunched alongside more traditional data sources that relate to environment and finance (all the data will be anonymous)<sup>8</sup>

### 3. Credit Information Platform:

This is a cloud-based patent-pending platform from Credit2B. Here is how it works:

- It is a credit information platform and reporting service that integrates credit bureau data with real-time industry trade reporting, all backed by analysts
- It is based on the 'Intelligence of the community', that is a network of thousands of leading credit professionals and credit grantors coming together to share information



## What can financial institutions do?

Although the paper has focused primarily on the credit underwriting part of lending, the concepts can be extrapolated to the whole lending process, which includes sales and prospecting, servicing and risk monitoring, in addition to underwriting. Accordingly, there are reformation opportunities across the entire lending value chain, which FIs can undertake.

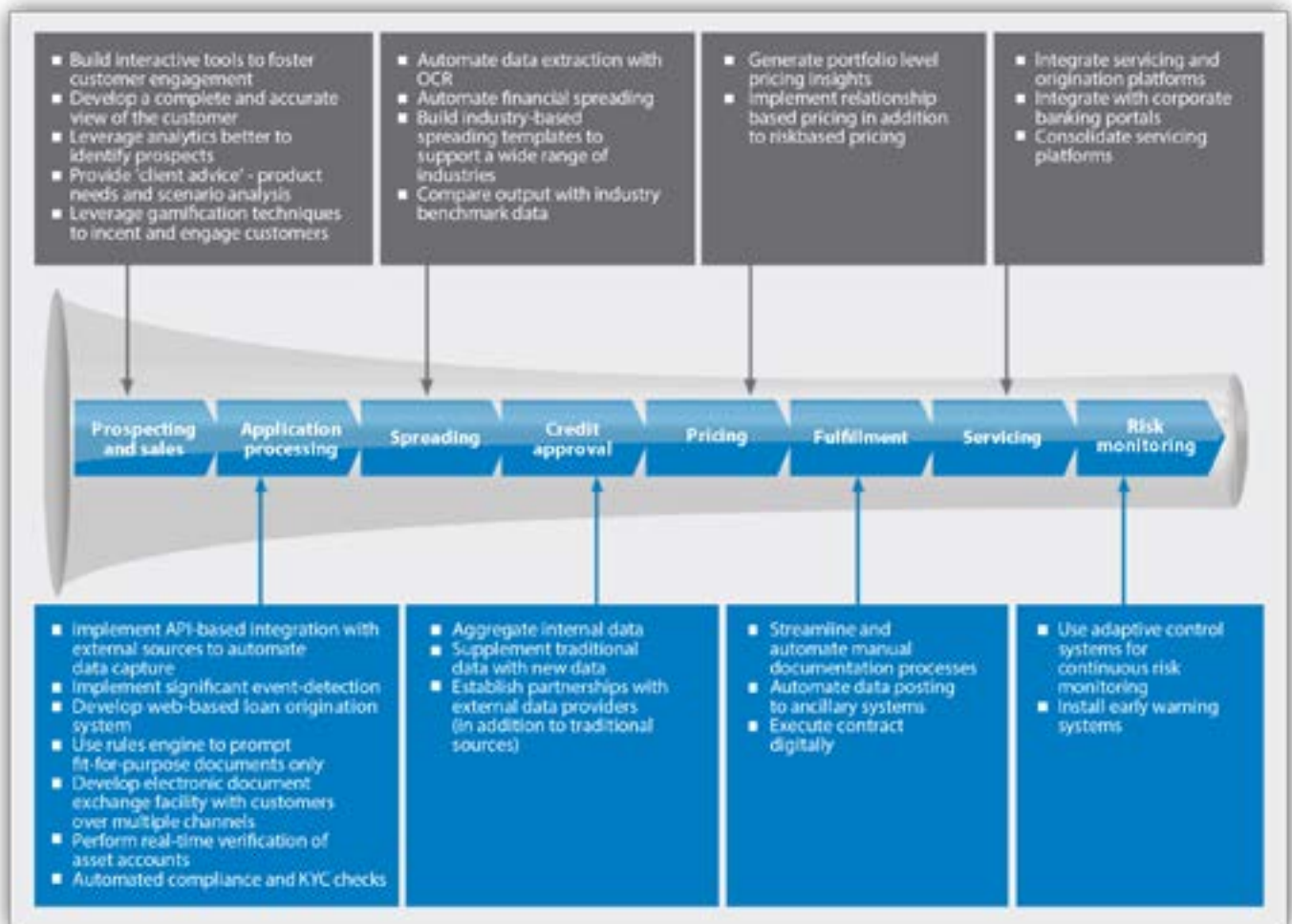


Figure. 4

## Response Approaches

Financial institutions are taking various approaches to kick-start their transformation journey. These approaches are collaboration, investment, and brownfield development. Following are the examples of each of these approaches<sup>13</sup>:

### Collaboration

UPS Capital	Partnered with Kabbage to offer real-time access to capital for customers with small businesses
RBS	Partnered with Funding Circle and Assetz Capital to provide alternative sources of finance to small businesses
Citibank	Citibank and Lending Club, with the help of Varadero Capital, will provide loans worth USD 150 million towards fulfilling Citi's community re-investment obligations. Citi will provide these loans through Lending Club's marketplace platform, utilizing their proprietary borrower scoring. Varadero, will then buy the loans off Lending Club's website through a credit facility from Citi
KIKKA CAPITAL	Kabbage announced licensing of its engine by Kikka Capital. Kabbage will provide the platform to enable onboarding, underwriting, and monitoring; while Kikka will manage operations, marketing, funding, and loan servicing
BBVA Compass	BBVA Compass is teaming with OnDeck to offer business owners short-term loans. BBVA Compass will market OnDeck loans to its small business banking customers. OnDeck will make the loans and collect repayments
MasterCard	MasterCard will lend its network of acquirers to Kabbage. Kabbage Inc., announced the launch of the Kabbage Card powered by MasterCard, which gives businesses the ability to pay for items at point-of-sale with a purchasing card tied to their Kabbage account

### Investment

Deutsche Bank KeyBank	Deutsche Bank, Key Bank, and Square1 Bank, jointly committed over USD 130 million of credit facilities to OnDeck
Westpac WELLS FARGO	Westpac Banking Corporation's new venture capital (VC) fund has taken an equity stake in Sydney-based P2P lender SocietyOne FastPay, a startup offering credit lines to digital media companies, has raised USD 25 million in new funding from Wells Fargo Capital Finance, plus a combination of debt and equity from SF Capital Group
Credit Suisse J.P.Morgan Asset Management	Prosper has raised USD 165 million, Series-D, financing led by Credit Suisse Group AG, a Swiss provider of financial services with participation from J.P. Morgan Asset Management and SunTrust Banks Inc.
Santander	Spanish banking-giant Santander has set up a USD 100 million venture capital fund to invest in Fintech start-ups globally
Goldman Sachs	USD 80 million credit facility has been committed by Goldman Sachs and Fortress Credit jointly to OnDeck loans for small businesses

### Brownfield development

Goldman Sachs	Goldman Sachs is planning to launch peer-to-peer (P2P) lending platform which will enable it to directly compete with Fintech startups
SunTrust	SunTrust acquired an online lending portal in 2012 to support LightStream — its super-prime, online lending platform. LightStream is an entirely online process, where the funds are deposited directly into the borrower's bank account
Bank Leumi	One of Israel's largest banks, Bank Leumi, will launch a new P2P lending service. This may be the first P2P service from a global bank Leumi will receive a fee from every P2P loan that it coordinates, and would also be capable of providing underwriting and an educated debt rating on existing customers – but that may not be the point

### A word of caution

While adapting to challenges is necessary, FIs need to keep a good eye on the regulations to make sure they are not getting into the cross hairs.

The efficacy of credit scoring based on experimental alternative data is still unproven and its usage presents new compliance challenges and uncertainties. It is not crystal clear how this form of credit scoring will cope with reporting requirements and fair lending laws and the industry has raised concerns over compliance with the Equal Credit Opportunity Act (ECOA) and Foreign Contribution Regulation Act (FCRA).

### Reporting challenges

In spite of so many years of operation, credit bureaus are still struggling to maintain the integrity of baseline credit data. A large number of consumers report about material inaccuracies in their credit data and file disputes with bureaus. Imagine this for alternative data. Given the massive volume and the large number of sources for procurement, maintaining the accuracy and completeness of this data is a challenge not for the faint-hearted.

With an even more complicated credit profile, an additional complication is justifying and explaining to consumers

about the specific reason for an action taken, under Regulation B<sup>9</sup>.

### Fair lending challenges

With proliferation of numerous, new data types and models for credit scoring, the challenge is ensuring that no data point is discriminatory towards any applicant. It is hard to predict what data might be discriminatory without knowing how a model evaluates that data. With no formal guidelines, it is up to the lenders to ensure that they are not in violation of ECOA<sup>9</sup>.





## Final thoughts

Consumers are yearning for a simple, straightforward borrowing process and want money in the bank account instantaneously. While that may be utopian, alternative lenders have realized the need and are improvising to the extreme to make lending 'instant'. They are in a better position than traditional lenders to do so, given their nimble processes, high technology quotient,

and innovation culture. As expected, most of the innovations in lending are being driven by alternative lenders. Also, what started out as a retail lending model has already expanded to small business lending, and is moving towards commercial lending. Even though alternative lenders are largely unregulated, except at the state-level and by Securities and Exchange Commission (SEC), imminent regulations may not change much given the exponential

expansion of this form of lending.

Many financial institutions have begun to take cognizance of the business imperatives of change and several have launched full-fledged transformation, or at least piecemeal initiatives. The disruptions caused by alternative lenders, besides presenting challenges, have also opened a plethora of opportunities. It is therefore, worthwhile for FIs to take cues and rethink credit lending.



## How can Infosys help?

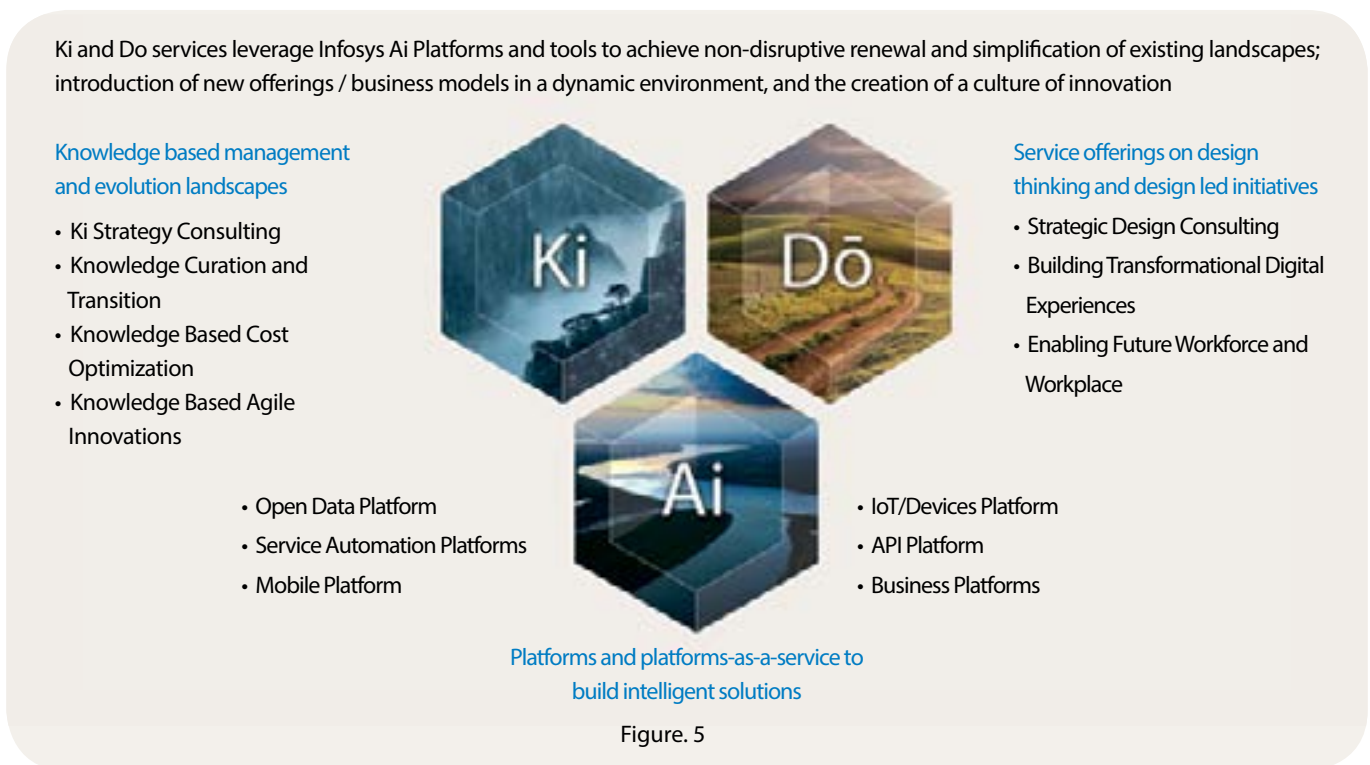
Infosys Consulting helps global corporations - in over 20 countries – to develop unique solutions that address their complex business challenges and create value through sustainable innovation. As pragmatic consultants with an eye on execution, we help you design and achieve market-leading, performance roadmaps by combining creative thinking, technology expertise, and global reach.

Our passionate consultants go beyond being traditional advisors and aggregators of past knowledge. We help develop bold innovations and new partnerships that empower clients to disrupt markets. Our experts view business challenges differently and re-imagine solutions by leveraging design thinking — combining new and existing technologies to transcend the limitations of traditional software and accelerate the response of complex technology landscapes.

Key capability areas and engagement types		
<b>Large business transformation</b> <ul style="list-style-type: none"> <li>• Vision and roadmap definition</li> <li>• Business architecture development</li> <li>• Change management</li> </ul>	<b>Strategy definition</b> <ul style="list-style-type: none"> <li>• IT strategy</li> <li>• Data management strategy</li> <li>• Business case development</li> <li>• Strategy assessment / validation</li> </ul>	<b>Package-led programs</b> <ul style="list-style-type: none"> <li>• Buy vs. build analysis</li> <li>• Package selection</li> <li>• Package implementation</li> </ul>
<b>Process</b> <ul style="list-style-type: none"> <li>• Assessment and benchmarking</li> <li>• Re-engineering</li> <li>• Optimization</li> <li>• Modeling</li> </ul>	<b>Project Management Office</b> <ul style="list-style-type: none"> <li>• Program management</li> <li>• Set-up of PMO</li> </ul>	<b>Business optimization</b> <ul style="list-style-type: none"> <li>• Client onboarding</li> <li>• Finance transformation</li> <li>• Client reporting</li> <li>• Regulatory reporting</li> </ul>
<b>Mergers and acquisitions</b> <ul style="list-style-type: none"> <li>• Spin offs</li> <li>• Buy backs</li> <li>• Post-merger integration</li> </ul>	<b>Compliance / risk advisory</b> <ul style="list-style-type: none"> <li>• Compliance advisory</li> <li>• Risk advisory</li> <li>• Enterprise risk taxonomy</li> </ul>	<b>Cost reduction</b> <ul style="list-style-type: none"> <li>• Process optimization and outsourcing</li> <li>• Application portfolio rationalization</li> <li>• Decommissioning</li> </ul>

## Ai Ki Dō Service Suite

Our Ai Ki Dō Service Suite enables clients to focus energy and knowledge to find, frame, and solve important problems.



## Infosys led lending transformation at a leading global financial services firm with end-to-end assessment of capabilities, building future state vision and envisioning product

Faced with operational challenges, long lead times and difficulty in meeting customer expectations, the Client wanted to relook its current commercial underwriting capabilities from functional and technology standpoint.

In the first phase of the engagement, Infosys conducted functional and technology assessment of commercial underwriting capabilities, performed industry benchmarking of commercial underwriting capabilities and recommended future state. Additionally, Infosys conducted two day 'Design Thinking' workshop with Client organization to build the vision for future state

### Phase one concluded with:

- Establishment of a common understanding of the current state capabilities and their maturities, across

the end to end underwriting process within the organization

- Granular level challenges in the current state with priority and business impact
- Vision of future state capabilities supported by appropriate technology architecture that focused on customer centricity, deepening business insights through advanced data analytics, and increasing operational efficiencies
- Roadmap highlighting list of strategic and tactical initiatives to achieve target state

In the second phase of the engagement Infosys helped build the platform to support the future state vision by:

- Identifying the key capabilities / features for future state commercial underwriting and elaborating the requirements through high level business processes and user stories
- Supporting PMO in development of the business architecture for the development of the Commercial Underwriting Capability
- Coordinating with technology units to align on the key components and data needs and developing sprint plans

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