Alternative lending: Key considerations from a technology perspective

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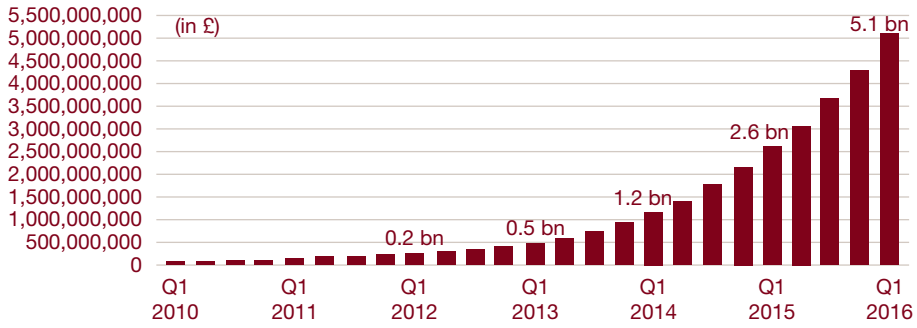
In the last few years, the world has witnessed the meteoric rise of a new category of companies belonging to what is commonly called the 'sharing economy'. These companies neither own products nor provide services; rather, they are simply aggregators who act as intermediaries between the consumer and the provider, offering a platform to connect the two. Some of the best known examples are in the space of cab aggregation services and online marketplaces for renting homes/offices. By leveraging technology, these companies have completely revolutionised their particular industries and tapped 'unmet demand' while simultaneously reducing 'unconsumed supply'. A similar technology-driven revolution has occurred in the financial services industry with the emergence of alternative lending (also known as online lending or marketplace lending) firms.

These firms bypass traditional lending mechanisms by creating an online platform for lenders (retail or institutional) to lend directly to borrowers (individual or corporate). Thus, these firms act as 'matchmakers' between lenders with an unconsumed supply of money and borrowers with an unmet demand of cash. However, this is a very broad definition and several variants exist across geographies depending on the local financial market landscape and regulatory norms.

The advent of alternative lending service providers has been described as a tectonic shift in the financial services industry by experts. This emerging segment has the potential to completely change the landscape of the industry in the coming years. The interest being shown by traditional powerhouses of the financial services industry in this niche segment is testimony to its relevance. More firms are entering into this space with each passing day, and regulators across the globe are scrambling to keep pace with the innovative offerings and business models being concocted by these firms.

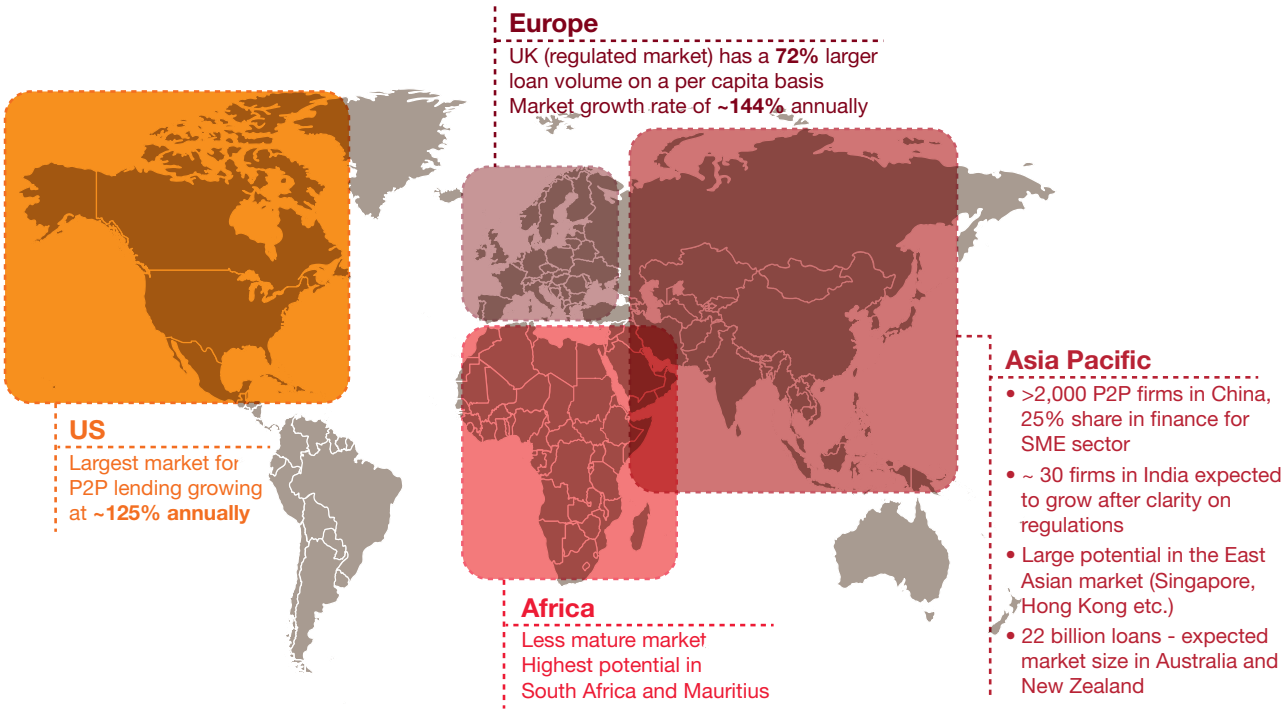
Cumulative lending through P2P platforms globally



Source: Peer-to-Peer Finance Association

Expected global market size (by 2020)* –
150 billion USD

Expected India market size (by 2020) –
5 billion USD



*Source : PwC analysis

This thought paper highlights some of the notable trends in the alternative lending industry and then identifies and critically examines the key operational challenges being faced by alternative lending firms. It then elaborates upon the role technology plays in enabling these firms to overcome some of the challenges and suggests considerations that should be kept in mind while designing the technology stack for an alternative lending firm.

Notable trends in the alternative lending industry

1. ***Clear distinction between business models for developed and developing economies:*** In developed economies such as the US and UK, the focus is largely on consumer financing (refinancing existing loans, purchasing goods/services, payment of credit card dues or education loans). On the other hand, in developing economies, the goal of most firms is to reach under-/unbanked borrowers. These borrowers range from small and medium enterprises (SMEs) who find it difficult to obtain bank loans on amicable terms to individuals who are subprime for traditional lenders.

2. ***Emergence as a viable asset class:*** Alternative lending has evolved as a viable and relatively less volatile asset class for both retail and institutional investors. Less complex investment decisions and higher rates make it an attractive avenue for retail investors to place short-term funds. Investment banks, hedge funds and insurance companies have deployed massive amounts of funds by partnering with online lenders, thus altering the structure of the industry. It has been an exciting avenue for institutional lenders due to the higher annual yields, combined with a perceived low correlation with other asset classes.

3. ***Traditional players are reacting with agility:*** Banks across the world are closely watching this segment to ascertain the sustainability of the business models, and many are starting to get involved in some form or the other. A few large banks have partnered with various online lenders and are looking to join the bandwagon as investors. A few others have taken strategic equity stakes in some of these firms, while several others are looking to start their own online lending arms.

4. ***Transparency is the key to sustainability:*** The alternative lending industry emerged as a response to the lack of capital availability post the 2008 financial crisis. Transparency in transactions was touted as a virtue by industry pioneers at that time. However, the industry has seen its own share of frauds and financial crimes, which have severely dented investor confidence. The CEO of one of the biggest lending firms in the US ran into trouble following an internal probe over mismanagement of funds. In a similar case, more than 20 senior executives of the biggest lending firm in China were accused of embezzlement of funds. This led regulators in China to come up with clearer guidelines and stricter disclosure norms. While timely intervention from regulators and industry bodies should bolster investor confidence, it is imperative for any firm looking to stay in the business for long to give utmost importance to transparency and building trust. Two critical areas to build trust are clear pricing norms for borrowers and publicly available, standardised and easily understandable loan data for investors.

5. ***Evolving secondary market for online loans:*** Though at a nascent stage, some online lenders are looking to bundle small-ticket loans and sell them to institutional lenders. This securitisation enables lenders to spread some of the risk and provides additional sources of funding. Some firms have formed internal hedge funds and affiliated entities to act as investment advisors and participate in the securitisation of loans. For example, a major US-based peer-to-peer lending firm and another US-based marketplace lender providing student loan refinancing, mortgages and other types of loans have launched their own hedge funds.

These trends suggest that the industry has matured over the last decade in economies like the US, UK and China, where firms started early in this sector. With regulators in developing economies like India looking to provide a sound legal framework, this niche segment has huge potential for growth. Two primary reasons behind this expectation are:

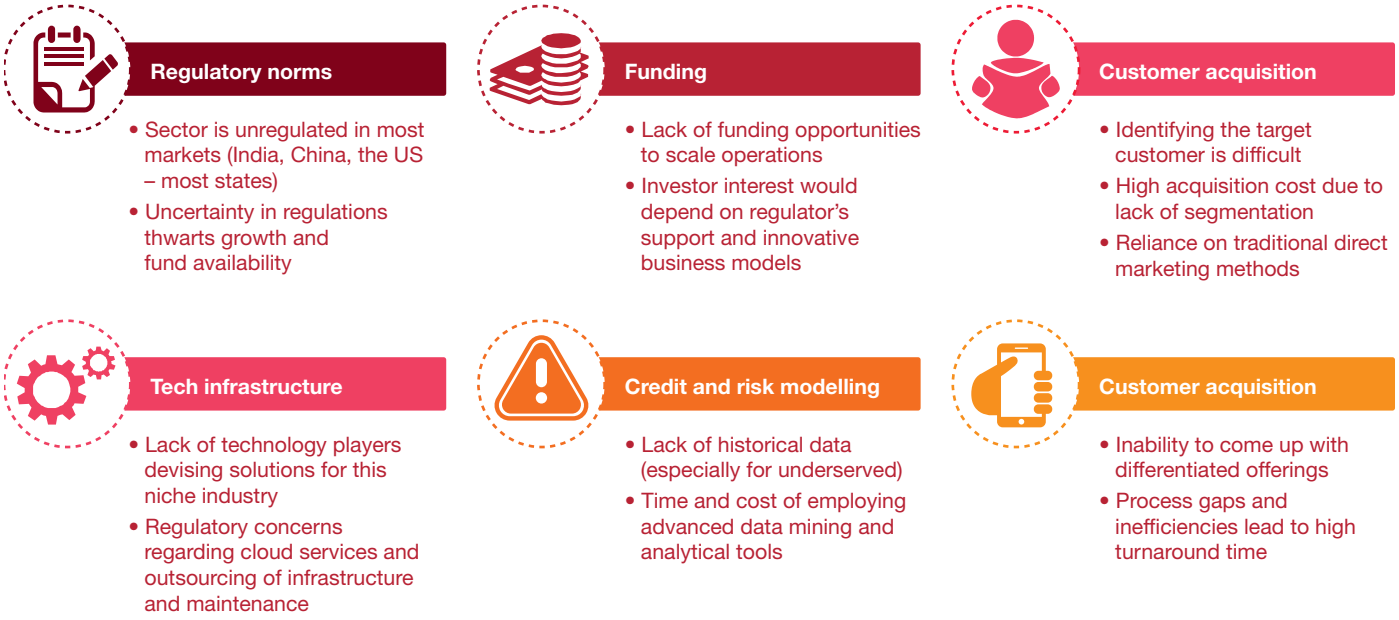
i. Firstly, the problem that this segment intends to address (that of dearth in supply of cash to a large section of the population) clearly exists.

ii. Secondly, the entry barrier for firms to start is quite low (enabled by the availability of low-cost technology solutions).

In the next section, we look at the major challenges that firms currently operating, or looking to start in this industry, typically face and the ways in which some of these challenges can be overcome.

Key operational challenges for alternative lending firms

While the alternative lending industry looks very exciting, it has its own unique operational challenges—meeting regulatory norms, securing funding, establishing a business model which is lean and low cost being some of them.



Markets where regulators have established well-defined guidelines have seen tremendous growth, whereas in unregulated markets such as India, firms are still tentative about their business models and are testing the waters. Uncertainty in regulations is also a hindrance in securing funds to scale operations. Thus, the long-term success of the industry would depend on the support from regulatory agencies and the investor community.

Being a nascent industry, acquiring new customers has been another major challenge since traditional marketing methods are expensive and building relationships based on trust takes time. Firms are now looking at innovative ways to reach their target customers, such as entering into strategic partnerships with other firms in allied industries (e.g. e-commerce platforms and traditional lenders). Due to the plethora of alternatives available to borrowers and lenders, firms have also found it difficult to retain them. Firms are looking at ways to differentiate themselves and reduce turnaround time in order to increase the number of transactions through their platforms.

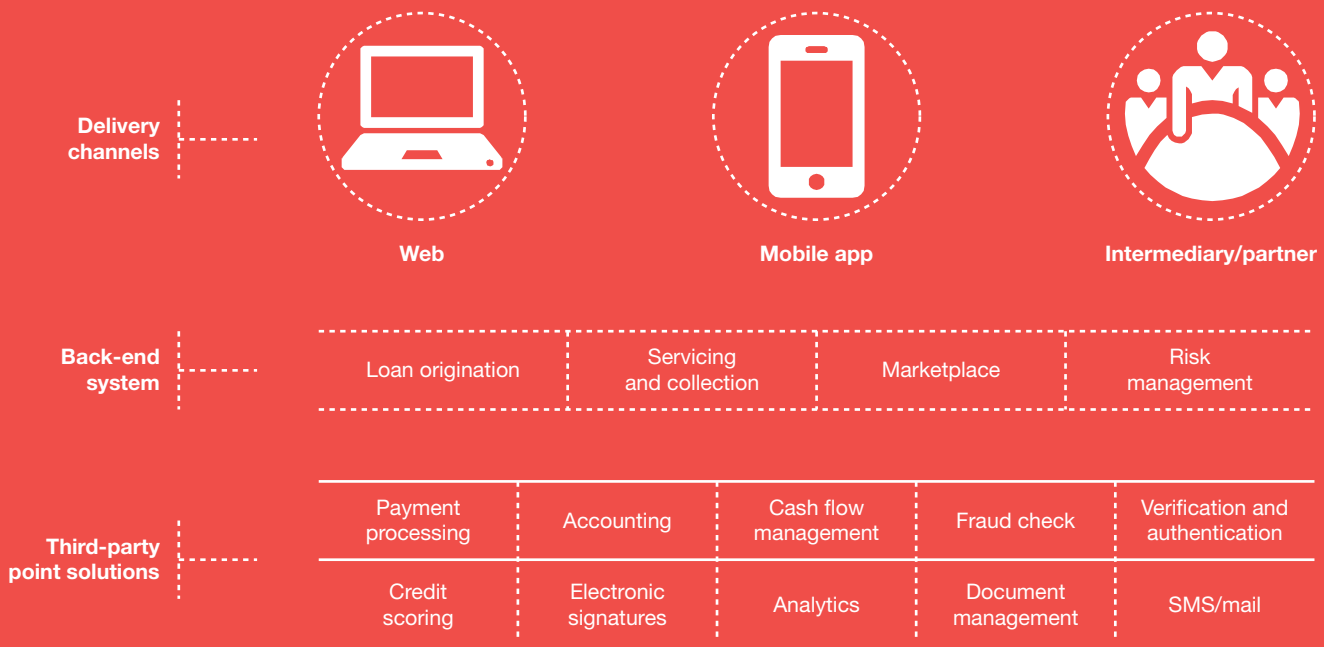
Also, as a firm's competitive advantage depends on lean operations and low transactional cost, establishing suitable technology infrastructure which helps in achieving these advantages has been a challenge. Very few players provide low-cost technology solutions that meet the specific requirements of this industry. The success of alternative lending firms also depends on the identification of the right borrower to lend to. Devising appropriate risk and credit models has been another testing area for the firms.

The role of technology

A closer look at the operational challenges reveals the criticality of the selection, design and construction of an appropriate technology stack for an alternative lending firm. While robust and scalable technology infrastructure ensures smooth day-to-day operations, it also provides an opportunity to differentiate. A credit assessment framework aided by the requisite analytical capability enables a firm to select the right borrower in the crowd. This is the single most important factor determining the long-term success of a firm and has to be diligently developed. Since digital channels are predominantly used to interact with customers, the challenges of customer acquisition and experience can be tackled through the implementation of up-to-the-minute user interface design solutions.

Components of the technical architecture of an alternative lending firm

The technology stack of an alternative lending firm would typically have three components: delivery channels (point of interaction with customers), back-end system (for managing the life cycle of a loan and customer journey) and third-party point solutions (to plug gaps in the technology infrastructure through integration with multiple solutions).



Critical considerations while developing technology infrastructure for alternative lending

In this section, we look at each of the components in detail and examine the critical considerations to be kept in mind while developing robust and scalable technology infrastructure for alternative lending.

1. Delivery channels

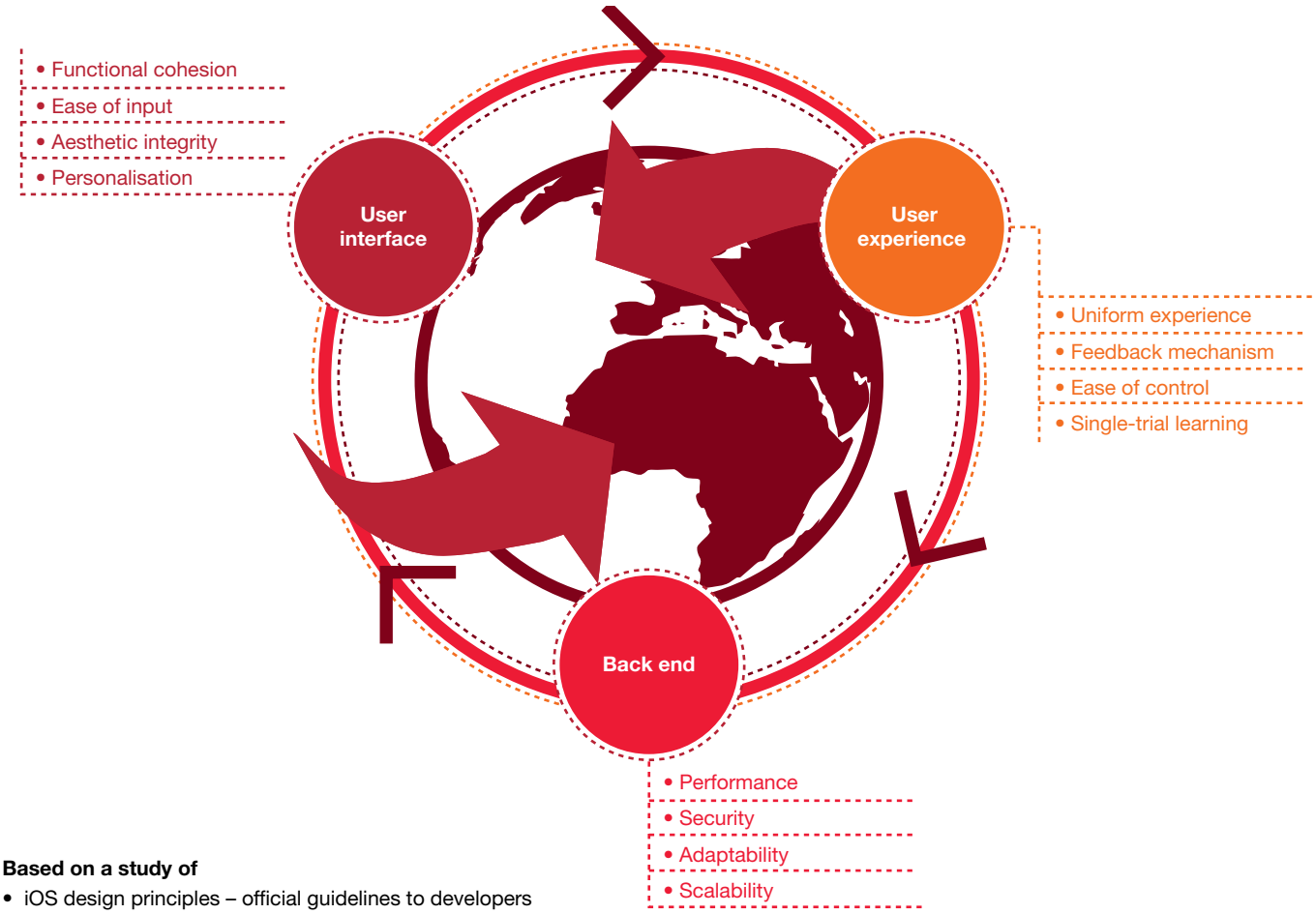
The design of a delivery channel would depend on the business model of the firm and the customer set that it is targeting. In the case of a firm providing SME loans, the web interface would be the primary mode of interaction for the borrower, while for a firm providing student loans or personal loans, a mobile app would be checked more often. Providing a consistent experience across the various channels would enable the user to interact more frequently with the service provider on a platform of his/her choice.

Understanding the user's requirements and expectations thus becomes critical for customer acquisition and retention.

What does the customer want?

Customer profile	*Customers' demands and expectations*
Digital consumer	Perform transaction (financial and non-financial) **swiftly** with a sense of **security and trust** Exchange information (to and fro) which is **useful** in an easily **understandable format**

The three elements of 'customer centricity' of delivery channels:



Based on a study of

- iOS design principles – official guidelines to developers
- Android design principles – official guidelines to developers
- PwC internal mobile app usability study
- ISO – usability standards
- Metrics for usability standards in computing

A. User interface

i. ***Functional cohesion*** *(understand what you want your user to do and how)*: Firms often make the mistake of initiating front-end design without completing the process design. It is imperative for firms to undertake an exercise to define the 'to-be' business processes (both the internal and end customer's) with clarity and then design the front end as per the processes.

ii. ***Ease of input*** *(critically examine each element of every point of interaction to ensure minimal effort on the user's part)*: The design should enable a user to complete intended activities with as much ease as possible. Being asked a plethora of questions and for many documents at the time of registration can deter users from registering and exploring the website.

iii. ***Aesthetic integrity*** *(the design should evoke curiosity and propel users to transact through the platform)*: Factors such as colour, margins, amount of text, amount and orientation of icons and pictures determine the aesthetic suitability of the interface. Transitions between elements, responsiveness of the interface and ease of navigation need to be assessed to ensure integrity of the medium.

iv. ***Personalisation*** *(empower the user to gain trust)*: The objective of personalisation is to empower the user to consume information and content in a format that is understandable to him/her. For example, dashboards should be available with options to generate reports based on user inputs in order to give users a sense of security and accessibility of information, which is crucial to cultivating trust.

B. User experience

i. ***Uniform experience*** *(users should be able to intuitively engage with the interface)*: The user's experience across channels should be consistent and predictable.

ii. ***Feedback mechanism*** *(engage and assist the user in navigating the platform)*: Whenever users complete a process that involves a set of disparate steps, they should be provided with information on the status of the action and the number of steps completed. Such a reactive feedback mechanism bolsters ease of usage.

iii. ***Ease of control*** *(wow the user by anticipating and catering to needs)*: Users should feel in charge while interacting with the platform, thus evoking trustworthiness. Every time a user logs in to the platform, he/she would intend to complete an activity. For example, a user who has already availed of a loan and logs in to the platform a few days before the scheduled payment date will most probably be looking for details on the EMI. It is critical to anticipate a user's need (based on factors such as user life cycle, level of engagement, date, time and duration of stay on the website) and provide an interface that is responsive to those needs.

iv. ***Single-trial learning*** *(anticipate and resolve user challenges)*: The litmus test for a web platform is that users should be able to complete intended activities on the first trial without requiring training videos.

C. Back end

i. ***Performance:*** The integrated system should be high on performance. The time taken for the application to load on the user's device and swift response to inputs are important factors for acquiring user acceptance.

ii. ***Security:*** As the transactions involve financial data, the highest standards of security should be met. These should be evaluated to ensure that the system is foolproof against cyberthreats.

iii. ***Adaptability:*** Technology is a space where innovations make change fast and turbulent. Hence, the system should not be based on obsolete technology and should be adaptable to upcoming innovations.

iv. ***Scalability:*** Many systems fail when the load on the back end increases. The use of load optimisation techniques ensures that the system operates under volatile load and access.

2. Back-end system

While the front end serves as a channel to interact with the customer, the back-end system serves as the backbone of the enterprise by providing a medium to store and process data and integrate with the front end and third-party systems in order to provide access to the data in the desired format. This is also the layer where decision-making (aided by analytics and risk management solutions) happens and, hence, selection and design of the back end should be done in a planned and curated manner.

i. Loan management system

The components of the back-end system would depend on the business model and product offerings of the firm. A typical system would have three components:

a. Origination – which integrates with the front end or other channels of loan origination

b. Marketplace – a component where actual matchmaking happens and decisions on the terms of a loan are taken. It would hence be closely integrated with the risk management system.

c. Servicing and collection – takes care of stages in the loan life cycle post approval and disbursement till closure

As the alternative lending industry has been growing and gaining critical mass, a number of technology firms have come up with back-end platforms tailored to the needs of the industry. As most alternative lending firms desire to focus on their core proposition of 'matchmaking between investors and borrowers', the services of technology partners who are focussed on the back end are being availed of.

As most firms will not transform their core back-end system within a few years of inception, it is important to select a technology solution which caters to the long-term business strategy and product roadmap of the firm. Strategic alignment should be followed by a test of functional and technical alignment.

Another key decision criteria would be the time required to deploy and degree of customisation required in the base vendor product. The cost of acquisition of the solution and operational and maintenance expenses required are closely evaluated by start-ups in the business.

Solutions with a modular design (rather than enterprise design) are preferred by firms as they support easy customisation and often cost less. Cloud-based solutions are gaining traction and popularity, especially among firms looking to be at the fore of innovation while operating in a lean fashion due to similar reasons.

ii. Risk management system

The profile of a typical customer should be clearly derived from the business strategy of the firm and the entire risk management system should then be devised to identify the customer and offer a product as per the customer's risk appetite.

Innovation in risk management and the underwriting mechanism is the key to the long-term success of an alternative lending firm. Firms are looking to reduce reliance on traditional credit bureaus and identify alternative input sources to determine the creditworthiness of an applicant. Various big data tools are being employed by firms to capture data from thousands of sources and apply 'proprietary' algorithms to ascertain the risk category of an applicant. Another area where firms are looking to innovate and differentiate is in the underwriting mechanism that enables firms to reduce turnaround time. This is being done by automating large parts of operations, thus minimising the requirement of human intervention and reducing process redundancies.

3. Third-party point solutions

The availability of third-party point solutions facilitates the plugging of gaps in the technology infrastructure and has been critical in two aspects:

i. These point solutions reduce the time required to get the infrastructure up and running quickly.

ii. As these solutions are priced on a 'pay-per-use' basis, they reduce the operational expenses of firms and help in scaling up as per requirements.

Some of the leading solutions available under various technology streams are:

Strategy alignment

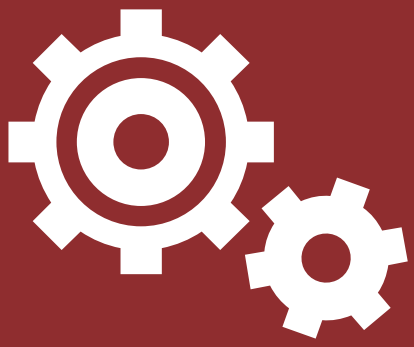
– Evaluate fitment with long-term product roadmap

– Assess vendors' commitment to invest in R&D and innovate

Functional alignment

– Should be preceded by high-level process design

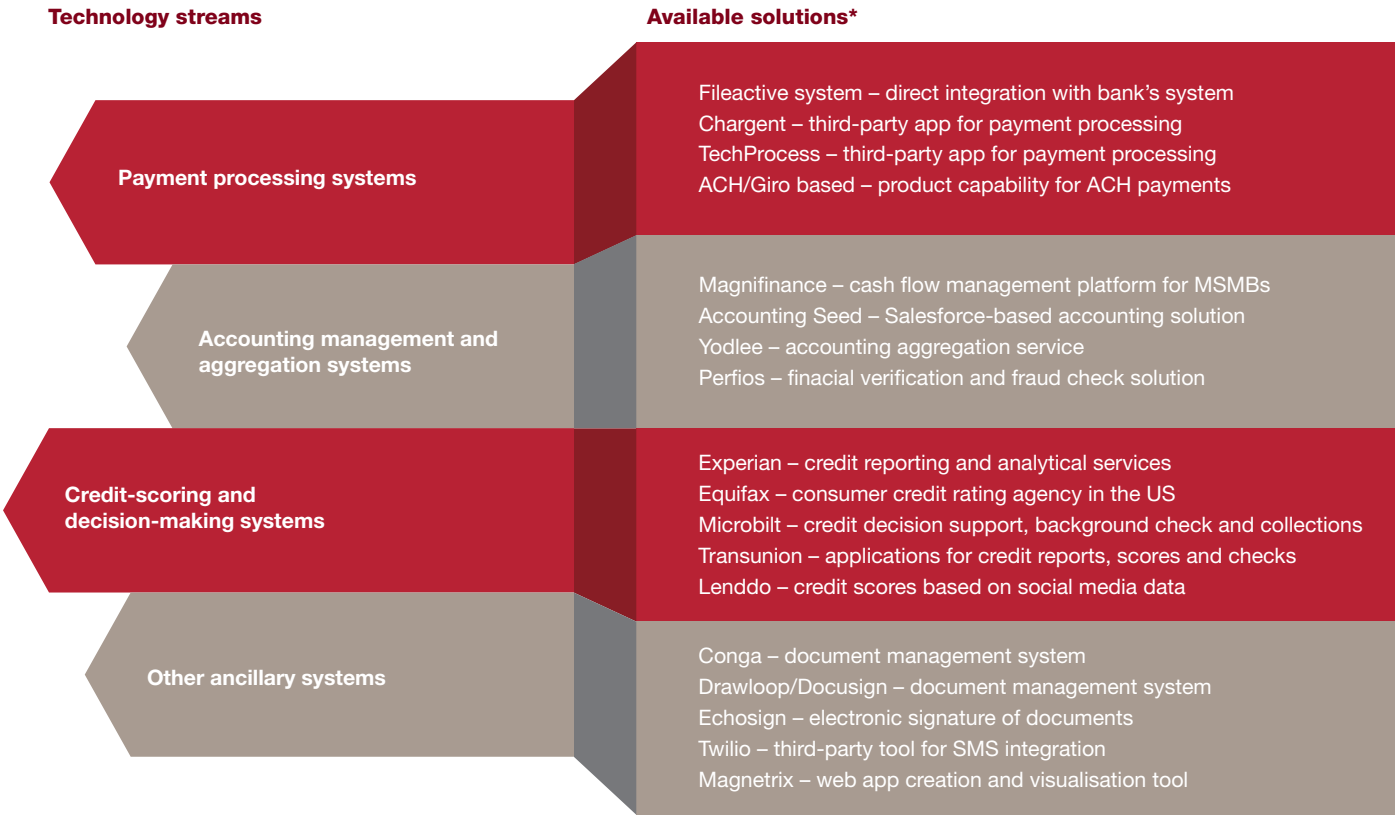
– Ease of usage (for end users) needs to be ascertained (based on elements of customer centricity)



Technical alignment

– Evaluate fitment from performance, security, robustness and scalability perspective

– Ease of integration with legacy applications and point solutions



*This is an indicative list.

While multiple solutions are available in the market for each of the technology streams, the selection of the 'most fit' solution as per the business model of the firm and its unique requirement is important. These point solutions communicate with the back-end system through application program interfaces (APIs) and web services. Ease of integration of these solutions with the back-end system and compatibility also need to be evaluated. There are technology players who have come up with integrated solutions where the back-end system needs to be connected at one point (which is internally connected with multiple third-party systems), which further reduces the time to operationalise and allows individual solutions to be switched off and on as per the business requirement.

While the alternative lending industry presents huge potential, the long-term success of firms would depend on their ability to keep innovating, developing dynamic credit models and reducing transactional costs, thereby enabling operations in a lean fashion. Thus, it is critical to create a technology stack which is appropriate to the business requirements of the firm, can support innovation, can be deployed quickly, and can be operated at low costs. Hence, involving an implementation partner with the requisite skills—functional know-how (process and domain expertise), technical competence, and implementation experience—is imperative.

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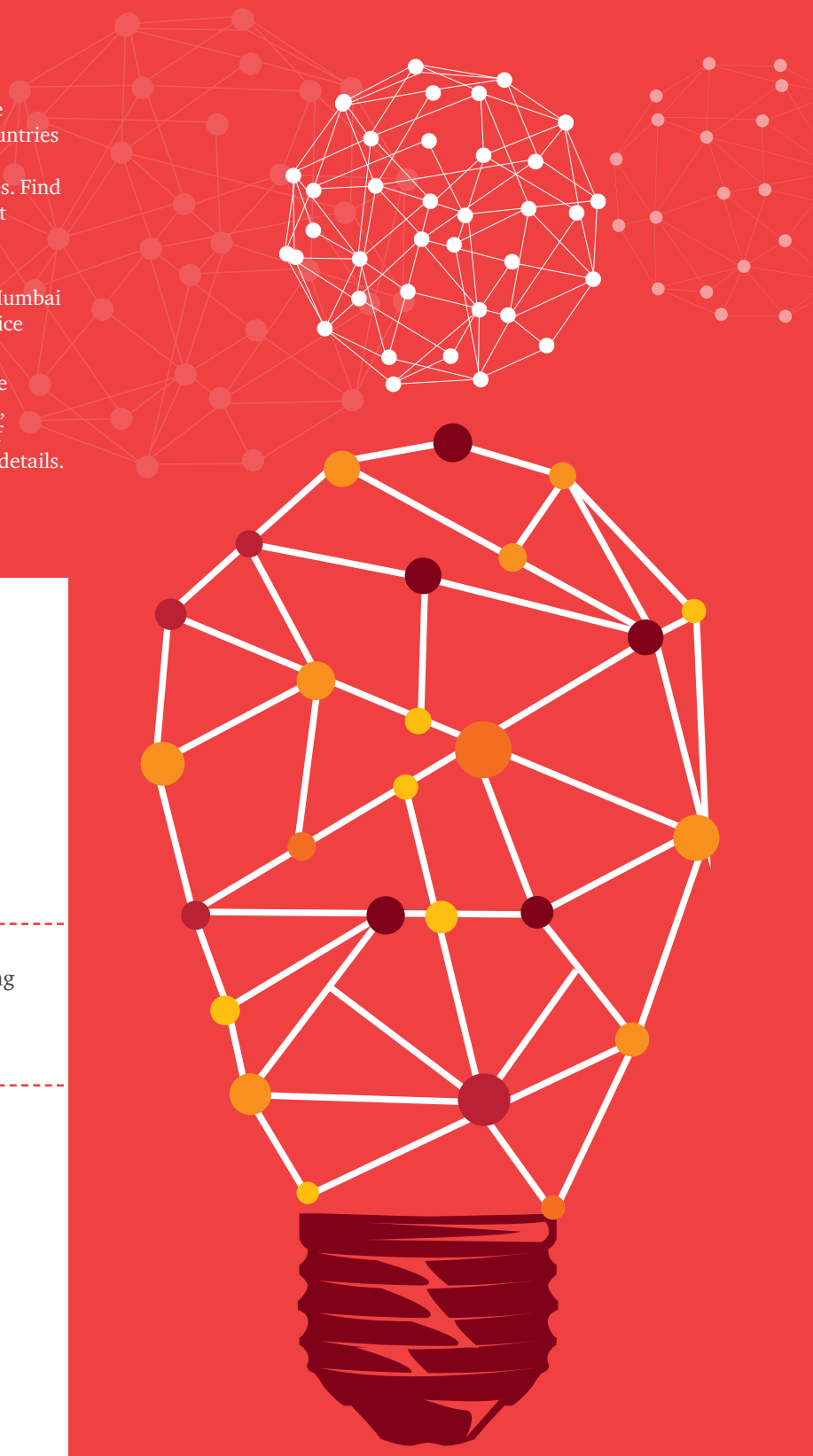

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