Crowdlending

Outlook on the stakes and opportunities for the banks

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1. Definition of crowdlending

1.1 Crowdlending overview

This analysis is focused on crowdlending, a category of crowdfunding, for which the crowd pools support for the financing of loans. By extension, it also covers the distributions of financial securities because a loan can be distributed as a debt instrument.

It does not cover the other categories of crowdfunding that are equity, debt, reward-based and donation-based. Neither does it cover loan financing without interest or dividends, known as “social business”.

Investments on a crowdlending platform typically have the following characteristics:

- Direct ownership of the asset, financed by the financier
- Active investment behavior requiring the selection of an underlying asset in a direct manner or access to automatic portfolio-making tools (such as LendingClub which allows the creation of portfolios based on risk-tolerance / return-targets and a selection of “tickets” from financed projects)
- Granular ownership of the underlying asset either by the “ticket” mechanism like on LendingClub, or by the limitation on the invested amounts (spread of the financing on a large number of people: “crowd” funding)
- Granular traceability of the underlying asset during the entire life cycle of the asset
- Detailed description of each asset, accessible online via self-service by each investor
- Exposure logic and social recommendations developed according to the investment policy of the platform and the maturity level (with social logic typically being reserved to the “early adopters” while the “mass market” clients are targeted by the more mature platforms)
- Client acquisition of both lender and borrower, mostly completed online
- Automatic documentation processing done online (at least partially)
- Document selection process that integrates external scoring services and/or new scores based on data captured online (this component is part of crowdlending but is not a fundamental component)

1.2 The innovation of crowdlending

Crowdlending is a radical example of innovation for various reasons, since it is:

- A new financing product,
- A new asset class,
- A new way of acquiring clients and managing finances

- As a financing product, crowdlending provides an alternative from the traditional banking products over large segments (retail, corporate, student loans, healthcare, etc.). Its characteristics (online subscription, "visual" presentation of the project, social visibility, investors and borrowers' affinity, etc.) clearly distinguishes itself from traditional banking loans for the borrowing community. Its characteristic of granular management and its capacity of exposing itself to risks, allows for a participation in areas under served by traditional bank financing (low loan amounts, sectorial or prudential risk profile, lack of credit history, etc.).
- As an asset class, crowdlending provides retail investors the possibility to invest directly into real assets with interesting yields (real economy loans: retail, business, student, etc.) while benefiting from total traceability and choice of allocation. No other allocation medium offers, to the wholesale market, access to such an asset class.
- As a new way of acquiring clients and managing financing, crowdlending integrates the end-to-end acquisition process by connecting the loan offer and demand of financing ("marketplace") all on an internet platform (client acquisition, KYC, client qualification, financing document completion, consultation and selection of projects, collection, etc.).

1.3 A direct intermediation model

Compared to a bank, a crowdlending platform does not perform any transaction. It acts only as a middle-man that puts investors and assets into direct contact.

Three elements are key in this middle-man activity and transfer activity:

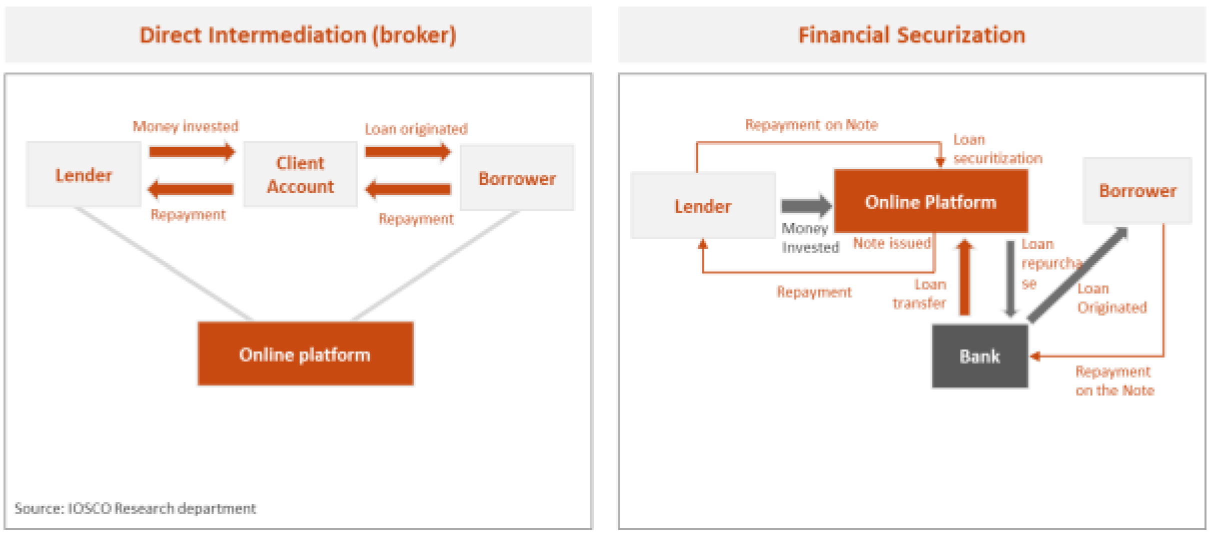
1. Financial flows
2. The contract and asset management model of asset ownership ("Contractualization")
3. The risk

1. Financial flows entrusted to a platform need to be secure by isolating the funds of the platform's activity, guaranteeing the transfer between an investor and their financed projects, and promising reimbursement in case of a platform failure
2. Contractualization is the foundation for the disintermediation that these platforms undertake as it directly connects investors to borrowers. It prevents the implementation of securitization mechanisms, while guaranteeing the effectiveness and governance of operational processes (notably delinquencies and defaults). These contractualization models are very much dependent on the existing regulatory environment, specifically with regards to the capacity to process loans and to distribute non-standard financial assets for a consumer market ("non-qualified")
3. Risk constitutes the main stakes of crowdlending due to the non-normalized and non-managed aspects of the underlying asset, and to the distribution of investments carried out among non-qualified investors

1.4 Crowdlending operational models

Two main models can be identified to manage these elements:

1. Direct intermediation (broker): direct ownership of the asset by the investor, contractualized directly by the project holders and intermediated by a platform supported with a Payment Service Provider (PSP) or an Investment Service Provider (ISP)
2. Securitization: origination of the loan by a bank while its transfer and immediate securitization occurs on the platform

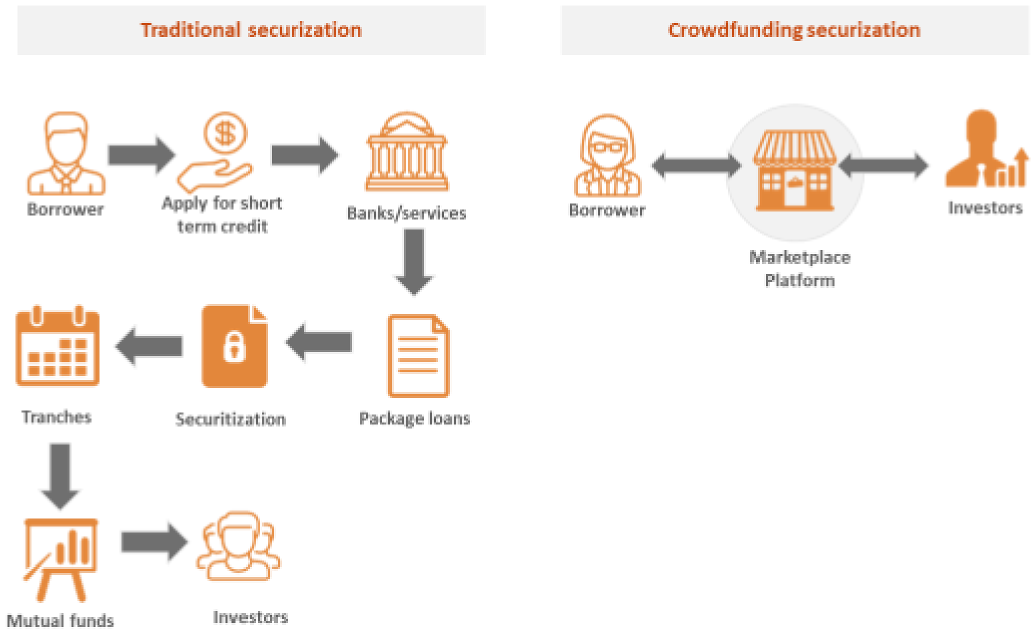


Operational models of crowdlending

- ➢ In the first model, the PSP or ISP collect the amounts on individual segregated accounts and transfers the investment flows to projects financed after the aggregation. The investors receive the contractual counterparties of their investment (loan contracts or debt security)
- ➢ In the second model, a credit establishment originates the debt securities and transfers them immediately to the platform that distributes them as specific securities representing the realized investments

- In comparison to a traditional securitization model via a securitization fund, the main difference resides in the direct ownership of the asset fractioned in tickets of low amounts ("crowd funded") and at the traceability of the asset during its whole lifecycle (reimbursement and interest recovery, eventual defaults, etc.).
- This characteristic prevents:
  - The intervention of an origination intermediary or the management of securitized assets in a vehicle
  - The intervention of a fund manager managing and arbitrating the securitized assets for the investor's account

- The stacking and the composition of the fund in order to find a specific risk/reward profile



Difference between traditional securitization models vs. crowdlending

1.5 Opening of crowdlending to institutional investors

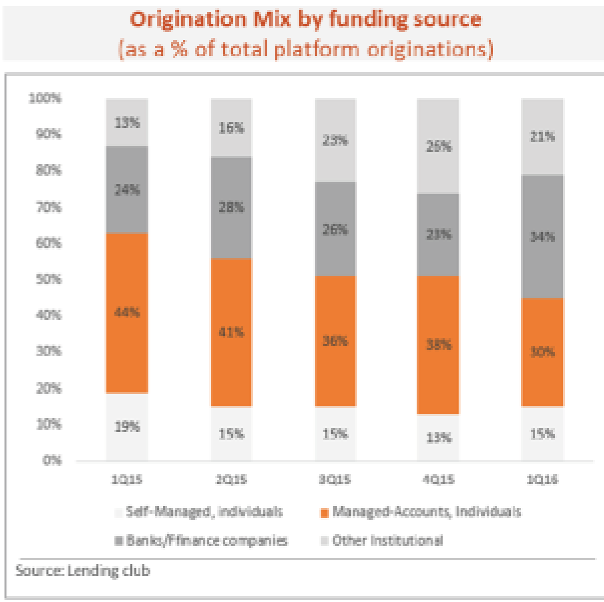
The growth in the amounts processed by crowdlending platforms, and in particular by the U.S. leader, LendingClub, has led to these platforms becoming attractive to institutional investors.

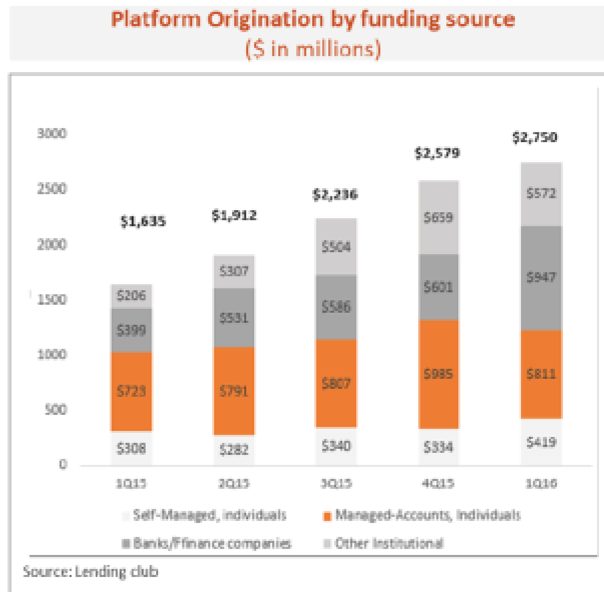
This trend is very pronounced at LendingClub who, beside the original "marketplace" channel, has successively added three other channels:

1. Direct individual subscription by self-service
   - Original crowdfunding model launched in 2007 by the platform
   - Based on "notes" that are financial securities specific to the platform in small amounts ($25-$50) representative of a fraction of attributed loans
2. Shares of mutual funds invested in the platform's loans via a broker (ISP)
   - Traditional model of mutual investment funds launched in 2011 by LendingClub
   - Funds issued by an asset manager owned by LendingClub's platform registered with the regulator and subject to the advisory model
   - Distributed funds aimed at the retail market by third-party financial distributers
3. Platform for wholesale loan market
   - Direct acquisition in securitization clustering of whole loans (not scattered between multiple clients)
   - Exclusively reserved to banks and financial institutions

- The loans are registered by client banks as assets in their own books but the loans are operated by LendingClub

These new channels have taken a significant portion of financing in LendingClub as illustrated by the figure below:





Split of the different channels of financings at LendingClub

2. Regulatory context and risk

2.1 Ownership and risk management of the underlying asset

In crowdlending, the risk is carried directly by the owners of assets who hold its identified properties and traceability. The risk of the borrower is neither carried nor managed by the account management establishment (model 1) nor by the originating bank (model 2). Likewise, asset or portfolio managers in charge of the set of loans and debt securities management do not exist.

The risk is thus managed in two ways by the investor/lender:

1. By setting thresholds for maximum amounts of investment in each project, independently from all due diligence (e.g. €1000 in the French regulation). The risk is therefore mechanically reduced by this maximum amount which in turn minimizes the risk exposure. An investor that wants to voluntarily invest more will have to confirm each time that an investment passes the maximum threshold and then raise his risk engagement (ref. "Jobs Act" for investments in start-ups or French regulation for loans in crowdlending).

2. By imposing a qualification on the level of expertise (based on financial grounds) and risk tolerance of the investor during the subscription to the platform. Additionally, by distributing him/her the corresponding securities associated to the level of risk of the underlying equity, fixed income or specific security (such as the "notes" of LendingClub).

2.2 Liquidity and default risk of the underlying asset

From the platform and the originating bank's (when this one is an actor) perspective, there is no liquidity risk because the asset distributed to the investors carries the same maturity and risk characteristics as the underlying asset. The individual investor takes on the liquidity and default risk linked to the underlying asset.

This implies:

- A theoretical absence of Risk Weighted Asset (RWA): the "hard" equity financing requirements for a similar prudential activity such as "brokerage" that does not require capital charge in the sense of traditional credit
- A liquidity consumption that is theoretically null: with the offer automatically creating the demand, the logic of traditional refinancing does not apply. The P2P lending platform is theoretically not a liquidity consumer per se in the short term and remains therefore without any impact on the traditional LCR ratio (equally valid for the NSFR).

This principle can be subject to evolution if regulators and rules evolve in such a way that it retransfers some of the risk to the platform in order to steer its behaviors. Regulators (notably in the Western markets) are progressively building their case around the modalities of "unanticipated" losses of such a business model. The rules are very likely to evolve in the coming months. This evolution should notably drive the imposition of a minimum threshold of equity funding for P2P platforms in order to guarantee the continuity of activity. The first initiatives (CFA) propose a logic of fixed capital charge. That being said, the amounts currently being required remain low and without common measure with the traditional Credit RWA.

- If such an evolution would occur, it would first affect the actors that also play a role in management and not only of financing structuration. Non-banking actors are also concerned such as mutual fund management firms like debt funds
- The evolution of crowdlending platforms regarding the provision of portfolio management tools that automatically form portfolios based on characteristics profiled by the unit ticket making up the financing of the projects, as well as the development of a secondary market, would emphasize the "management" characteristic of the platforms and therefore, the regulatory risk. Nevertheless, whatever the management tools that can be provided, they will not change the direct ownership of the asset by the investor nor the "granular" liquidity of processed tickets (the minimum amounts of the tickets are low – $25/50 at LendingClub for example –, the maximum amounts can be capped by the regulation based on the investor's profile)

2.3 Regulatory context on the ability to issue financing

Crowdlending offers investors access to underlying assets that provide loans to actors of the direct economy (consumers, corporates, students, etc.). It is a very attractive asset given its return and its manageable risk. The fact that it is not available in any other form makes it an even more interesting asset as most of the credit establishments, for liquidity reasons, are linked to banks.

The financing capacity of crowdlending platforms in fact depends ultimately on the legal financing abilities of the investors who are themselves subscribed and very much linked to local regulatory contexts:

- In the UK, individuals have the right to lend to other individuals and to companies, and the crowdlending platforms are developing without any constraints in this regard
- In France, the banking monopoly gives only the right to banks to lend to individuals and companies. Only one regulatory exception authorizes individuals to lend to companies or students through a platform, but it is not possible to provide lending to individuals (non-students). Nonetheless, secondary exceptions do exist for loans to companies ("bon de caisse" that are transformed into "minibonds", or participative loans).
- In Germany, the regulatory regime for subordinated and participating loans (Partiarische Nachrangdarlehen) allows individuals to provide lending outside of the banking monopoly.
- In the U.S., direct individual loans are not developed, but the model of loans via "notes", for which the loan origination is performed by a bank, has been stimulated by LendingClub.

2.4 Regulatory context without the ability to issue financing

Independent from the ability to perform financing operations and investments and organize intermediation between them, these platforms are subject to existing national regulations:

- Identification and qualification of individuals and companies that are subscribing to financing in order to protect them from noncompliant financing demands or conditions (indebtedness, wear rate, etc.)
- Identification and qualification of individuals and companies to protect them from the distributions of investment products that are not adapted to their investor profile (e.g. debt securities or shares that are considered risky and require an adequate investor qualification for them to be distributed)
- Due diligence to be performed on financing requirements to give an appropriate risk assessment of selected profiles by the platform and the allotment of investors' funds
- Reporting and communication of the underlying asset performance (default rate, number of projects treated by the platform…) and regulatory reporting for the regulator.

2.5 Specific operational risk of crowdlending

Even though platforms do not undergo liquidity or default risk, they nevertheless take on certain risks:

- Operational risk
  - IT infrastructure failure, cyber fraud, loss or modification of data, etc.
  - Non-compliance or failure of operational processes: profile assessment, investor and borrower information, KYC due diligence or qualification of actor, loan follow-up, recovery process
  - Failure of regulatory controls: money laundering, anti-fraud and flow control
    - Internal regulatory controls: imposed by the regulator to the platforms (e.g. reporting or communication of failure rate in the French regulation for Intermediary Funding Bodies)
    - Regulatory controls delegated to the platforms by regulated actors in charge of their flow management (PSP, ISP, banks for which platforms are the distributors, agents or intermediaries)
- Execution and liquidity risk of fund transfer operations
  - These risks are generally covered by the need to be supported by regulated actors in charge of the segregation and transfer of funds (such as PSP, ISP depending on the regulation)
- Risk of operational continuity related to platform failure
  - This risk concerns the continuity of execution of existing loans if the platform fails. This continuity is assured by the regulated actor in charge of the isolation and transfer of funds or the origination of loans or the security depositor (depending on the model and the regulation). In theory, the end client, or the issuing company that holds the record (security), is the bearer of the debt obligation or of the representative security and has the right to obtain legal support (debt). In practice, this becomes very complicated.
- Loss on “dry operations”
  - Certain operations that do not raise any due diligence or operational failure of the platform can prove to be difficult to comprehend by clients and can be subject to be covered by the platform. It mostly has to do with an instant failure (bankruptcy of a company right after the procurement of a loan) or a rapid failure following a fraud of the borrower, even without the platform being responsible.
- Risk of a strong dependency on the regulatory, legal and fiscal evolutions. This point is all the more interesting as many regulatory documents (in particular a U.S. congress report) underline the dependency on the economic model at a specific date
  - The same economic model is thus immediately put at risk as soon as the initial environment is changed. The probability of this happening is significant. The evidence being, a major P2P lending actor encountered difficulties when the commitment was made to the market to create a “note” in order to show reliability of the exchange methods between lenders and borrowers. Unprepared, the actor had to temporarily suspend its transaction in order to comply with the new regulatory requirements. The French regulation, AMF in this case, having a more wait-and-see policy, shows that such scenarios are very much a reality.

- Risk of obsolescence from technical tools and marketing
    - The viability, design, practicality and originality of websites and exchange tools (as well as the ones from competitors and new-entrants) are just as much explanatory factors of potential revenue growth, as they are a risk. This is equally true for the particular sensitivity of actors today as it can create a higher volatility of clientele than in the traditional credit framework (more captive clients). The "headlong rush" effect of marketing and technical tools is serious (constantly evolving since clients can easily change platforms).

2.6 Mastering of credit risk

As described previously, the credit risk is not carried out by the platform, but its performance directly impacts the reputation and drawing power of the platform and as a result it impacts the continuity of its activity and its capacity to develop further.

The credit risk of crowdlending introduces atypical characteristics. Thus, it is worth noting that:

- Traditional credit scoring cannot be replicated blindly on a P2P population. The classic credit score application led to a poor appreciation of the credit risk by certain actors. The traditional variables do not have the same explicatory power: especially because P2P borrowers have not had access to classic financing and so have "unconventional" profiles (riskier).
- The life duration of credit scoring tools is theoretically much more reduced than the traditional journey: the renewable rate of a client portfolio as well as its rapid increase does not allow usage of a lasting sample on the long term. The scores should be monitored closely and actualized on a constant basis (vs. between 3 to 5 years in retail banking)
- A peculiar point needs to be mentioned on scoring performance: the intermediary agent, usually the one assessing the credit risk for the lender's account and the quality of the rating, does not have power over the selection of clients. It is also a differentiating element in that the image and reputation of the platform will become strongly dependent on it. This point is, according to us, underestimated today. Its importance should grow over time.
- The quality of the recovery is determinant: in the same way, if the quality and the know-how of the recovery remains a factor in the risk assessment, they will be equally important as being directly correlated to the brand image of the platform. We may add as well that based on recovery methods and for certain types of credits (auto, leasing, etc.) a residual risk could be supported by the platform. This risk, though unusual in a traditional financing scheme, is rarely mentioned in P2P lending.
- In the end, the legitimacy of a P2P lending platform will thus be directly linked to its know-how in terms of assessment, detection and anticipation of credit risk

2.7 Market sensitivity of the risks

Crowdlending represents a strong sensitivity to the evolution of the cost of risk. More than in the traditional banking framework, the constant increase of the cost of risk is negatively correlated to the number of clients on the platform. Since more than two thirds of the investments are concentrated on the borrowers with the best ratings, an increase in cost of risk is interpreted in 3 ways by investors:

1. An increased risk of loss, so long as the loan terms remain the same
2. An opportunity cost leading to a risk of arbitrage: if the cost of risk increases, the initial risk reward is less attractive for the investor. He does not optimize his risk appetite anymore
3. An underperformance of risk measurement tools by the platform: in the present case this generates a pullback from investors (as a result of the elasticity of the number of investors to the quality of the scoring given by the platform). In addition, if the constant increase of default is a risk, its volatility is a risk as well. The absence of the monotony of historical default rates is considered a major break for the investor because this reduces its ability to estimate future cash-flow (uncertainty principle). This is all the more true now as default rates published by the actors specialized in crowdlending are not considered reliable. The actual definition of default rate is not in fact homogeneous from one actor to another

Moreover, other impacts must be identified:

- The risk of dependency of the business model to interest rates. This point merits a deeper dive and we are summarizing it by emphasizing the fact that the situation of the current near-zero interest rates contributes to P2P lending growth. A reversal of the current market situation could be translated in various consequences that very few actors have in mind or have directly experimented:
    - An acceleration of the "embedded options" effects sensitive to the credit contract: a change in the interest rate situation can cause premature reimbursement making the investments a lot less attractive. This point, very rarely mentioned, appears underestimated to us notably by the accelerator effect that could happen in a P2P environment (vs. the classic scheme)
    - A reconsideration of the profitability structure: that the platform works in fixed fees, in % of the amount / product / rating, by combination, with or without added caps and floors, the methodology for generating P&L will be indirectly but significantly impacted. A profitable fixed fee model in a given moment could become unprofitable, and it could happen in a rather rapid fashion if interest rates change
- The risk of being unable to conduct projections, stress testing or back testing: as alluded to earlier, projections and anticipations must be taken with a grain of salt rather than trusted at face value. The quantitative elements are subject to caution in a young market full of upheaval.
- Money laundering and fraud risk: as important as this risk is, we can consider that a major banking actor entering the P2P market will be much more equipped than any other actor. Even though the severity of this risk is significant, we consider that it is relative in accordance to profiles. Some seem a lot more mature than others on this topic to be able to fully appreciate it (no underestimation of the phenomenon).
- The replication of traditional liquidity and market risks for investors in the case of "note" issues: this P2P scheme can lead to a pricing risk of these notes based upon the interest rates

(equivalent to bond pricing on a secondary market). Thus it is an important investor risk that the platform needs to keep in mind if it implements systems of guaranties or loan safekeeping. The liquidity risk is induced because the difficulty for an investor to resell his "note" dries up the market. In fact, one of the points that experts highlight is the characteristic of not necessarily being able to exchange the "notes" from one platform to another. This is less true today but the risk remains real.

- The complexity and contamination risk: the flexibility of P2P lending and its workings can bring about certain actors (funds) to regain reflexes conducive to securitization mechanics, with junior tranches being the riskiest. As such, the tranching models of "notes" and the synthetic reproduction of "note" baskets (in particular high yield) are not to be excluded. Here, we are presenting this as a risk even though it could be considered as an opportunity. It is simply worth drawing our attention to the potential increase of systemic risk for the years to come on this type of platform.

3. Crowdlending opportunities for a bank

3.1 Crowdlending innovation levers for a bank

In an environment of near-zero interest rates in which yields of loans are declining and refinancing risks are growing, the question of substituting a transformation model into an intermediation model becomes relevant, especially with the emergence of crowdlending models.

A bank can harness each of the crowdlending innovative levers previously described in separated or combined ways:

- As new financing products complementing those of traditional banking products or spreading traditional products on territory currently uncovered
    - Lack of history (newly created company, 1st financing of a new client)
    - Sector of activity or specific investment profile with particular risk (transportation, restoration, fishing fleet, electronic cigarettes, etc.)
    - Uncalibrated scenario in the analysis ratio (intellectual services, e-commerce, growing company, etc.)
    - Types of investment (quality project, certification, business development…)
    - Lack of guarantees or collateral
- As new investment products with specific characteristics attractive to the investors
    - Transparency and traceability of the underlying asset
    - Choice of asset and a controlled investment allocation policy
    - Investment in the real economy
    - Access to an attractive risk/reward asset
    - Innovative characteristics, "social" independence from banks
- As a new method for client acquisition and funding management

- Specific characteristic of crowdlending (novelty, online exposure, social aspect, independence from banks, etc.) can generate interest for these financing products independently of the financing or investment characteristics
- Acquisition and fulfillment of financing online allows for a reduction in processing costs and an improvement of service (24/7 availability, progress visualization of a project, document exchanges, etc.)
- The appeal of the product (transparency, traceability, choice, etc.), low participation amount, and ease of entering into relationships (limited KYC with "mechanical" risk limitation rules)
- The dynamic characteristics of the product (underlying asset reimbursement events, investment roll-over, new proposed projects, "social" comparison of the portfolio, etc.) generates opportunities to interact with the client and fosters communication and cross-selling opportunities

3.2 Potential scenarios of crowdlending implementation for banks

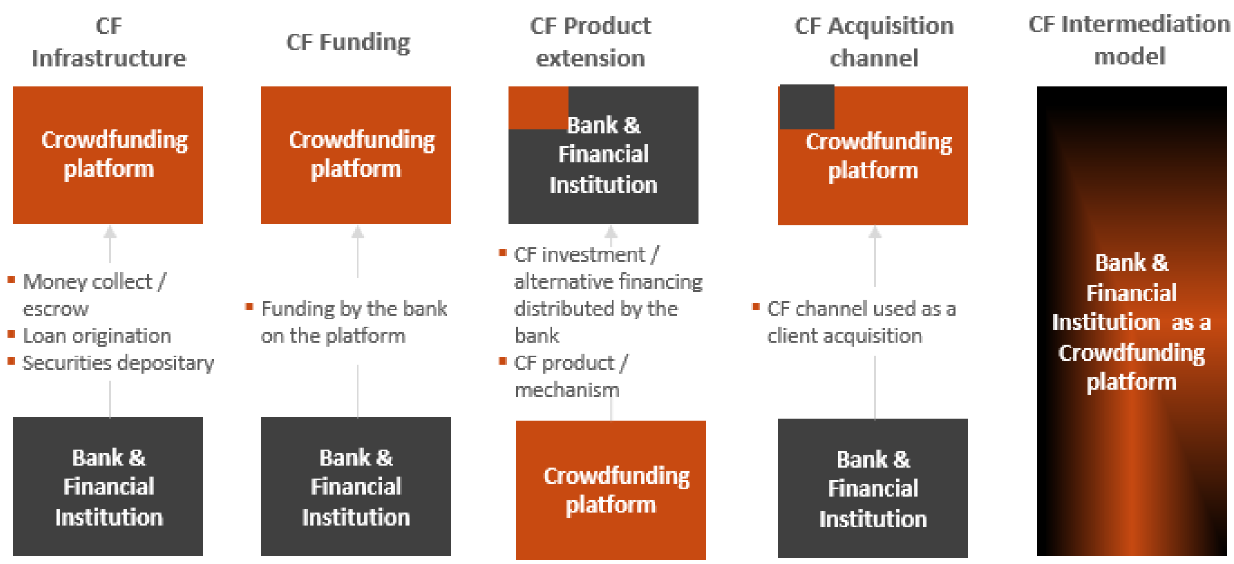
Five potential scenarios for the implementation of crowdlending by a bank are identified below:

1. **Bank as an infrastructure**
    - The bank provides infrastructure services to these crowdlending platforms such as collection, fund allocation, flow management (Payment Service Provider) or origination and loan management that are immediately reclaimed by the crowdlending platform (LendingClub model)
    - *Example: Web bank / LendingClub, BPCE (S-Money) / Credit.fr*
2. **Loan financing on a platform**
    - The bank invests its funds in loans on a crowdlending platform either in direct acquisition of selected loans (wholesale method à la LendingClub), or by spreading out its investments into fractions of the aggregated loans of the platform (e.g. Groupama on Unilend)
    - The bank can also integrate the investments made on this platform into its own investment fund distributed to its clients (based on a model illustrated by the investment fund of LendingClub)
    - *Examples include: Santander & Bank Alliance / LendingClub, Groupama / Unilend, Allianz / Smart Angels (equity fund), Aegon / Auxmoney, Credit Mutuel Arkea / Prêt d'Union*
3. **Crowdfunding as an extension of a product range**
    - The crowdfunding products operated by partner platforms are proposed to the bank's clients as extensions of the existing range of investment products, for investors and borrowers looking for alternative products
    - *Examples include: Allianz / Smart Angels (investment in equity), BNPP / Ulule, RBS / Funding circle, Banque Populaire + Seventure / FCPI Connect Innovation 2015 (mutual funds with crowdfunding mechanisms)*
4. **Crowdlending as an acquisition channel**

- Crowdlending platform are a channel for mass client acquisition with limited costs (automatic processes online, visibility and attractiveness of the product, low participation amount to test). It is also a channel favoring interaction with clients throughout the lifecycle of a project (new presented projects, reimbursement, reinvestments, etc.)
- Once the client relationship has been established with active investors and borrowers, the platform can propose complementary banking products (checking and saving accounts, interest-bearing savings accounts, etc.)
- *Examples include: Spear / Societe Generale, Proximea / Banque Populaire, Kengo / Credit Mutuel Arkea, Goldmann Sachs / Mosaic*

5. Bank as a platform of intermediation

- Instead of proposing investment products packaged and built on its own project financing operations based on a transformation model, the bank can utilize projects of its own financing operations to propose refinancing to its clients via investment products in crowdlending, based on an intermediary model
- *Examples include: Rabo & Co / Rabobank (prêts aux PME pour les « High Net Worth » clients)*



4. Conclusion

Crowdlending represents a radical innovation that is being deployed over many different dimensions (borrower, investor, process) and for which the potential for further development has been proven and will continue to grow in the future.

These developments are supported by societal evolutions (client empowerment, transparency, traceability, self-service, etc.) and technologies (complete online dematerialization of data and process, big data, blockchain, etc.) that can only accentuate in the future.

Crowdlending is currently a very heterogeneous sector, operated by a large number of actors with different sizes and solidity that are often limited. It is subject to a large variety of risk factors that can potentially expose itself to crisis and consolidations. Nevertheless, these factors do not call into question its long term potential.

Crowdlending represents high potential levers and hybridization possibilities for banking actors that can already be exploited today and that require to further assessment depending on the context and objective of each institution.