Addressing credit risk for online lending platforms

Credit risk in consumer and SME portfolios originated by online lenders can differ from traditional bank loan portfolios in many ways. When evaluation online loan portfolios, a bottom-up qualitative type of credit assessment is called for.

The credit processes undertaken by online lenders typically involve innovative techniques; they are often fully automated or involve a high degree of automation, for example. Beyond that, the performance track-record of online originators is short and typically coupled with low but rapidly-growing origination volumes. And online lenders have yet to experience a stressed economic environment.

To rate transactions with this type of collateral, Scope applies its General SF Methodology, Consumer ABS methodology and SME Methodology. Considerations specific to this collateral address the analysis of 1) the originator's business model; 2) the asset production and selection process; and 3) the originator's regulatory framework. This can be complemented with originator-specific performance data such as dynamic delinquencies or static vintage data, which can be benchmarked against market rates.

Figure 1: Qualitative analytical framework

Source: Scope Ratings

Originators' line-by-line internal probabilities of default, loss-given default and any other loan-by-loan credit risk measures relevant to portfolios to be securitised are also accounted for. Those measures may originate from third party or internal rating or scoring models employed in the underwriting process; but they have the added benefit of providing insight into the originator's credit risk, business and market outlooks.

For both non-granular and granular portfolios with limited historical datasets against which to benchmark the securitisation portfolio, Scope would typically use its Monte Carlo simulation framework to derive originator-based probability distributions of portfolio defaults. We would then adjust this distribution following the bottom-up approach described below and summarised in Figure 1.

Scope will ultimately take a forward-looking view on the quality of a securitisation portfolio, considering our own economic outlook and the performance of available market benchmarks.

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Scope recognises that a qualitative approach may embed a high degree of uncertainty compared to strongly data-driven analysis, which allows for back testing of actual default rates. To address this limitation, portfolio default distributions should factor in stressed mean and volatility parameters.

1. Analysis of the originator's business model

Three pillars of the business model most relevant to credit risk: funding, risk appetite and competitive strategy

A lender's business model may largely determine its choice of a target market segment and thus asset performance risk. Three pillars of the business model are particularly relevant to the credit risk of origination production: the funding model of the lender, management´s risk appetite, and the competitive strategy.

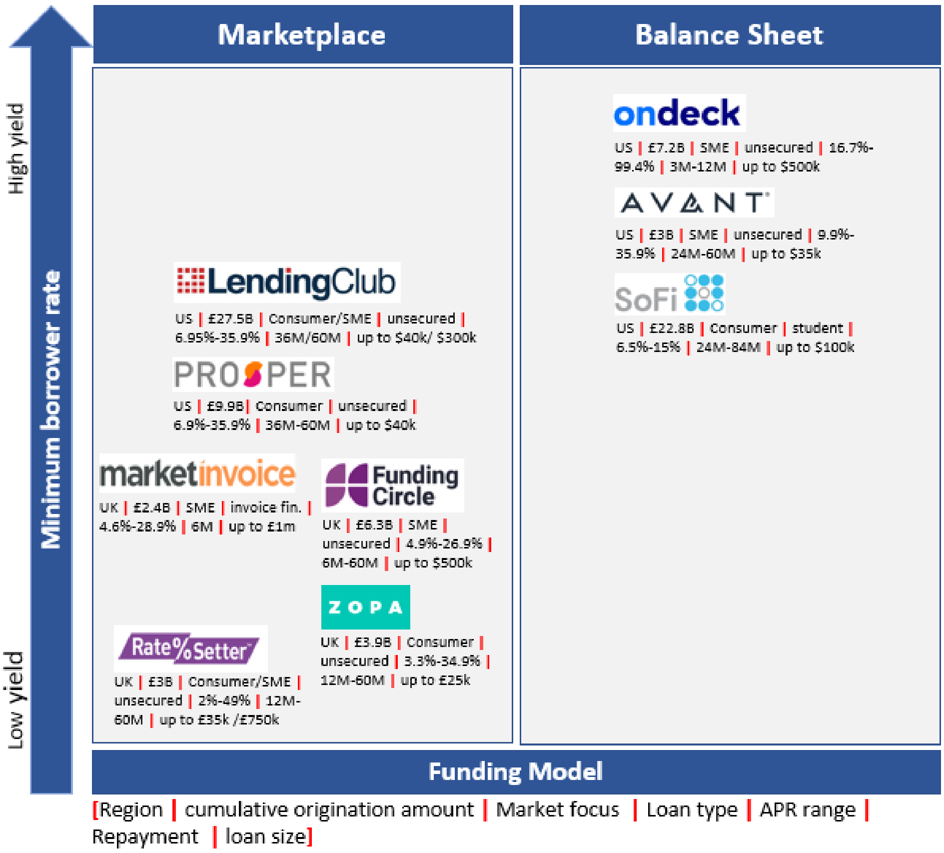
The analysis is not limited to these elements: for innovative businesses especially, we recognise that there may be other relevant dimensions affecting credit risk. During a rating process, we offer loan originators the opportunity to demonstrate how their business model is likely to impact asset performance.

1.1. Funding model

Funding model may determine target market segment

The online lending industry has developed numerous lending and funding models, which are rapidly evolving. Scope seeks to understand how the choice of these models affects the lender's target market segment and borrower profile (e.g. high yield vs low yield). For instance, one relevant distinction separates lending by marketplace lending platforms from that of balance-sheet lenders.

Figure 2: Funding models



Sources: lenders' websites, Orca, www.nerdwallet.com

Marketplace lenders have an incentive to focus on low to mid-yield borrower segments, which are more easily scalable

The marketplace lending model relies on a platform to connect borrowers with investors. Investors bear the credit risk of lending directly to borrowers through an agreement facilitated by the platform. Platforms typically offer borrowers credit assessments on behalf of investors and rely heavily on one-off origination fees to generate profit, particularly during their growth phase[1]. Business success for marketplace lenders depends critically on origination volumes and on the platform's capacity to scale up operations rapidly. For this reason, marketplace lenders have a strong incentive to focus on prime to near-prime segments, which are more easily scalable.

Balance-sheet lenders have a stronger incentive to focus on high-yield borrower segments, which may provide higher return potential

The balance-sheet model relies on a platform (i.e. the originator) funding the loans with its own balance sheet and retaining the credit risk. Online balance-sheet lenders have a stronger incentive to focus on high-yield and sub-prime borrower segments traditionally under-served by banks. This is because profit generation is not so reliant on origination volumes but rather on net interest income and funding costs, and because investors in these platforms tend to require a high rate of return.

The alignment of interest of the platform with investors in a possible securitisation is all the more critical since the initial model of balance-sheet lending relies on a strong understanding (and pricing) of credit risk in a high-risk part of the landscape.

1.2. Management's risk appetite

Scope focuses heavily on the alignment among the transaction parties

In addition to the funding model, other critical dimensions of management's risk appetite, in Scope's view, are a) the stability of the equity base, b) management's long-term incentives, c) competitive pressures, and the d) business-model revenue structure. During a rating process, Scope focuses heavily on the alignment of interest between the platform's stakeholders and the investors in a securitisation.

We view positively a stable equity base with management participation

Scope positively views platforms which demonstrate a stable and long-term committed equity base, because business discontinuity is a key risk element that we factor into our ratings. Similarly, long-term management incentive plans mitigate the risk of excessive risk undertaking. As a result, we positively view management investment in the company´s equity.

Marketplace lenders and lenders with a small market share tend to be heavily exposed to competitive pressures

We also seek to understand the exposure of the lender to the credit underwriting cycle. Competitive pressures may induce lenders to relax their underwriting standards, increase approval rates or move into riskier product segments. Generally, Scope believes that marketplace lenders and lenders with a small market share are more exposed to competitive pressures, because their survival relies more heavily on growing origination volumes. We believe that approval rates are a good indicator of risk appetite, but these may be difficult to obtain or compare with those of traditional lenders

Performance-based revenue structures are credit-positive

We regard performance-based revenue structures as positive. However, we do not believe that the marketplace originate-to-distribute business model necessarily conflicts with the interests of investors, because the platforms under this model rely heavily on investor confidence to generate funding and because they are typically subject to a high level of scrutiny from institutional investors. In addition, servicing fees subject to performance in many cases constitute an important source of revenues.

1.3. Competitive strategy

We examine the consistency of value proposition of the originator with its competitive strategy

Online lenders leverage new technology to streamline the origination process, improve the cost-efficiency of the underwriting and servicing procedures, and/or improve the quality of traditional credit models. Scope examines the value proposition of the originator and its consistency with its competitive strategy; for instance whether it consists of

[1] Payment processing and servicing fees on existing loans may also constitute an important source of revenues.

improving customer service, offering refinancing options at lower rates or targeting traditionally under-served sub-prime borrower segments.

Scope welcomes an originator's insight into its strategy to address increasing competition as the underwriting cycle moves forward, and ahead of a potential economic downturn. For instance, some platforms may rely on their capacity to identify and tap under-served or mis-priced borrower segments, while others may seek to rely more heavily on superior processes and underwriting capacities.

We also examine the durability of product specialisation and other strategies as competition intensifies

Product specialisation is another relevant dimension of the analysis. By contrast with traditional banks, online lenders tend to specialise in specific product segments, such as unsecured consumer loans, trade financing, small business lending, student loans, or specific loan maturities unavailable in the market etc.

During the rating process, Scope seeks to understand if segment focus represents a competitive advantage which may be reflected in superior credit models and/or pricing strategies. Scope also analyses the durability of a given strategy, focused for instance on a temporary market inefficiency for a particular niche segment of the lending market or a temporary opportunity related to the market credit cycle.

2. Asset production

In the next stage of the analysis, we assess the quality of the securitisation portfolio in light of the originator's loan underwriting techniques and the specific criteria applied to select the securitisation portfolio.

2.1. Quality of the underwriting and scoring models

Credit models are very diverse in nature, but all face substantial challenges

Different online lenders employ numerous credit risk models, from scoring and rating systems which rely to a certain degree on manual underwriting and traditional data sources (such as credit bureau scores, income data and other publicly available performance metrics), to models that are fully data-driven and apply innovative metrics (such as social media activity or other sources of behavioural information).

Market entrants typically lack access to borrower payment histories and other traditional behavioural metrics

Many online lenders may follow underwriting procedures of comparable quality to those of traditional banks. However, new market entrants may lack access to historical bank-payment history and other behavioural metrics relevant to calibrating credit models over time. Analysing the performance of online lender origination also brings with it the challenge that there has not been an adverse credit cycle since their establishment. In particular, many online lenders have emerged on the back of a decreasing interest-rate environment against a backdrop of bank deleveraging and economic recovery.

Non-traditional underwriting metrics may have not been tested across a full economic cycle

Non-traditional underwriting metrics may improve the obligor selection process of traditional credit models. However, in the absence of a long track-record, we would examine how non-traditional metrics or processes have been created and possibly back-tested from existing available data.

We consider that underwriting criteria without actual track-record are inherently riskier and would typically address such risks by stressing portfolio loss-rate distributions either with higher average loss rates or loss volatility. During a rating process, Scope aims to analyse any elements made available by the originator, under the format of its choice, to demonstrate the soundness and discriminatory power of its underwriting methods.

Scope typically builds its analysis of origination and credit by considering elements such as:

- Description of management's strategy highlighting its risk appetite
- Illustration of the originator's corporate culture, for instance financial vs technologically driven

- Target products and borrower segments
- Underwriting team's hiring process, qualifications and track record
- Degree of automation vs. expert manual underwriting
- Assessment of innovative vs traditional underwriting metrics or techniques
- Nature, number and fit of the variables applied in the credit-models
- Quality, reliability and timeliness of the variables applied in the credit models
- Time in use of the models and periodicity of recalibrations
- Evidence of the discriminatory power of the model and individual model variables
- Access to borrower credit history and payment patterns
- Robustness of risk-based pricing policies
- Fraud prevention tools and processes

2.2. Portfolio selection criteria and attribute stratifications

The previous steps of the analysis seek to determine the positioning of the originator's loan book along the credit-risk spectrum. This enables the assessment of the originator-based default distributions and their adjustment, if necessary, considering available market and peer-transaction performance benchmarks.

Consistency of specific loan book attributes with originator's risk appetite are indicative of sound business model and tools

We would then seek to determine if the profile of the securitisation portfolio is consistent with our view regarding the positioning of the originator along the credit-risk spectrum. To determine this, we would seek to benchmark objective portfolio attributes, such as external credit bureau scores, borrower income distributions and loan terms (e.g. tenor, yield and amortisation profile) to the portfolio stratifications of comparable transactions.

Once again, the aim of the analysis is to re-evaluate the portfolio's default distribution derived in previous analytical steps. For instance, if the portfolio attributes are consistent with our view of the originator's risk appetite, this would be supportive of the robustness of the business model and tools, while a mis-alignment between them might be indicative of underlying weaknesses.

Eligibility criteria inform potential securitisation portfolio selection biases

If the securitisation portfolio has not been randomly selected or is not fully representative of the originator's loan book, at this stage of the analysis we would also factor in any negative or positive selection bias, based on portfolio eligibility criteria.

3. Jurisdictional framework

Finally, we factor in the likely impact of the legal framework and our economic outlook on borrower performance. While the legal framework is very relevant when considering behavioural aspects such as borrower willingness to pay, macro-economic performance is the paramount driver of a borrower's payment capacity.

3.1. Legal framework

The degree and nature of regulatory intervention on the lending business may have a significant impact on lender and borrower behaviour, and ultimately credit risk.

Lender-friendly frameworks tend to mitigate credit risk

We believe lender-friendly frameworks tend to mitigate credit risk. For instance, delinquent borrowers have stronger incentives to become current again in jurisdictions which foster timely and public records of borrower credit histories and which have efficient enforcement frameworks. In some jurisdictions, lenders even have the ability to deduct delinquent balances from borrower payrolls through pledges, which means that as long as the borrower remains employed, credit risk is virtually eliminated.

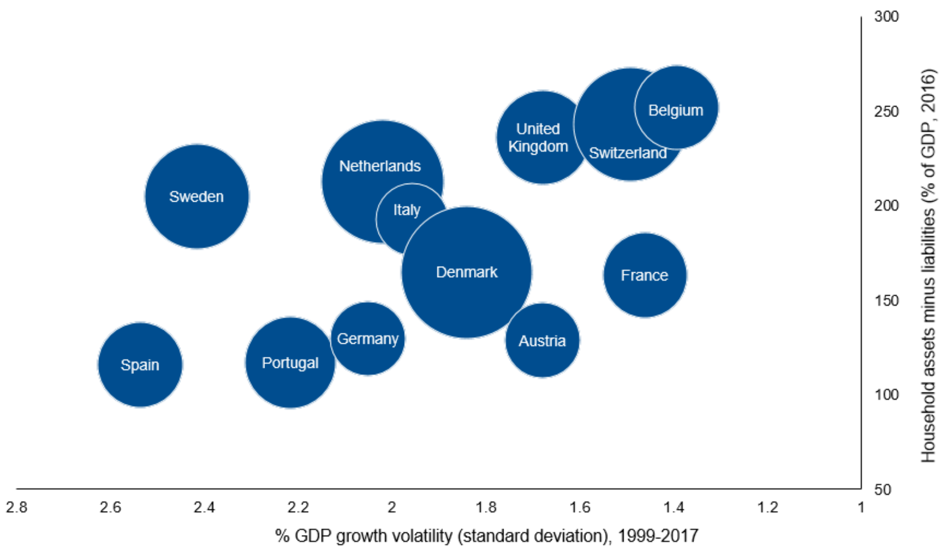
Credit risk is easier to predict in countries with stable economic growth and low levels of private debt

3.2. Economic outlook

Finally, we would factor into the analysis the historical evidence of borrower performance, the past and expected stability of the main macro-economic variables, the growth path and absolute levels of private and public net debt, and our view of the stage of the economic cycle.

Our ratings capture our forward-looking view on credit risk over the risk horizon of the securitisation portfolio. In general, we believe that credit risk is easier to predict in countries with a record of stable economic growth and low levels of private debt, particularly for portfolios with a short risk horizon and in early to mid-stages of the cycle.

Figure 3: Economic factors*



* Size of the bubbles represents the household debt with respect the gross disposable income as of 2017

Source: OECD, Eurostat and Scope

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