# Better Be Careful:
# The Replenishment of ABS backed by SME Loans *

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**Abstract**

We investigate the replenishment of 102 asset-backed securities (ABS) backed by more than 1.7 million small- and medium-sized enterprise loans. Using an extensive data set from 2012 to 2017 obtained from the only ABS loan-level repository in Europe, we reveal that loans added to securitized portfolios after the transactions' closing perform worse than loans being part of the initial portfolio. We additionally provide evidence that originators induce these performance differences by adding low-quality loans to securitized portfolios. This behavior is only partially captured by market prices, but mitigated by originators' reputation efforts, increasing transparency in the market, and most effectively their interaction.

**Keywords:** ABS, Agency Conflicts, Portfolio Replenishment, Securitization, SME
**JEL Classification:** G11, G21, G23

# I Introduction

The rise and fall of securitization markets before and during the latest financial crisis have clearly shown the relevance of asymmetric information in securitization. These asymmetric information can be attributed to the information advantage of originators over investors. Originators decide about their unobservable screening and monitoring efforts as well as about the loans selected for securitization and investors buy the corresponding asset-backed securities (ABS) (e.g., Gorton and Pennacchi, 1995; Holmstrom and Tirole, 1997; Petersen and Rajan, 2002; Vanasco, 2017). Since loan default risk is shifted to the ABS investors, originators have low incentives to build up and maintain high-quality securitized loan portfolios. In line, several studies confirm that the "originate to distribute" model, most prevalent in the U.S. mortgage market, led to low-quality securitized mortgage loan portfolios (e.g., Downing et al., 2009; Keys et al., 2010, 2012; An et al., 2011; Purnanandam, 2011). As a consequence, with the beginning of the financial crisis, investors lost their trust in ABS, and ultimately, securitization markets collapsed. This market collapse prevents the realization of benefits for financial stability and for lending to the real economy by selling illiquid loans as liquid assets on capital markets (e.g., Pennacchi, 1988; Brunnermeier, 2009; Loutskina and Strahan, 2009).

We reveal a novel and in the academic literature surprisingly not yet investigated channel – that is, portfolio replenishment – by which originators exploit their information advantage over investors.[1] Portfolio replenishment refers to originators' need to reinvest the released capital arising from the repayments of the borrowers and transfer further loans to the special-purpose entity (SPE) ex-post – that is, chronologically after the transaction's closing[2] – due to a much longer time to maturity of ABS than that of the corresponding underlying loans. Portfolio replenishment significantly differs from other channels by which originators may create or exploit their information advantage. This is due to the fact that lax screening and monitoring lead to a socially insufficient level of information production by banks, whereas portfolio replenishment

[1] Originators also possess information advantages over other actors in the securitization process, such as rating agencies and trustees. As agency conflicts and their consequences are most pronounced between originators and investors, our study focuses on this relationship.

[2] The closing of the transaction refers to the point when the originator sells the initial loan portfolio to the SPE, which subsequently issues ABS.

does not, but instead enables banks to deliberately select specific loans for securitization after the transaction's closing. During this period, originators have a particularly wide scope of action since investors have already made their investment decision and credit rating agencies (CRAs) have assigned their security ratings, resulting in less strict monitoring and a lower disciplining effect by those two groups.

To limit originators' possibilities to exploit the prevailing asymmetric information in securitization, portfolio replenishment is contractually limited by requirements in ABS prospectuses. These prospectuses set loan eligibility criteria with respect to observable characteristics, such as the absence of defaults or delinquencies, which can be evaluated by investors. However, despite contractual limitations defined in the ABS prospectuses, portfolio replenishment provides originators, also having private soft information, with some leeway, which may result in adverse effects on portfolio quality and performance over time. At the time of the transactions' closing, investors build their investment decision mainly on the risk assessment of the initial securitized loan portfolio, the initial security ratings by the CRAs, and the applicable rules for portfolio replenishment. Adding loans of lower quality to the portfolio ex post would adversely affect the ABS risk-return profile for investors, leaving them with no proper courses of action during the ABS term, which is on average 30 years in our sample. Notwithstanding investors' decisions to hold their ABS until maturity or sell them before maturity, they will likely suffer losses because of either increasing default rates in the securitized loan portfolio or decreasing market prices of the ABS. This demonstrates the particular importance of understanding originators' portfolio replenishment behavior.

The purpose of this paper is to reveal whether originators select loans of lower quality for portfolio replenishment than for initial securitization. In the context of portfolio replenishment, ABS backed by small- and medium-sized enterprise (SME) loans[3] are of particular interest because banks usually pursue a relationship banking approach with their customers, thus knowing them very well. This enables banks to manage credit risk over the long term as opposed to the

[3]Following the European Commission's official definition, SMEs employ fewer than 250 persons and exhibit a maximum annual turnover of EUR 50 million or an annual balance sheet not exceeding EUR 43 million (European Commission, 2003). In Europe, 25 million SMEs operate, representing over 99% of businesses, employing two-thirds of employees, generating three-fifth of the value-added and providing a remarkable share of roughly 16% of total lending (Kraemer-Eis et al., 2019; European Commission, 2023).

more automated lending decisions prevalent in the mortgage and consumer markets (Kraemer-Eis et al., 2013). Moreover, in contrast to larger corporates,[4] SMEs are usually not monitored by capital markets and thus are specifically affected by information asymmetries (e.g., Berger and Udell, 1995; Dietsch and Petey, 2002). SME securitizations make up an important part of the overall securitization market in Europe. In terms of total outstanding securitizations as of 2020, SME securitizations account for about EUR 78 billion, thus ranking third behind residential mortgage-backed securities (RMBS) and auto loan-backed securities (Association for Financial Markets in Europe, 2020).

The SME securitizations in our sample need to be clearly distinguished from the most important type of corporate loan securitizations in the U.S., namely Collateralized Loan Obligations (CLOs). While an actively trading asset manager with individual earnings-based incentives regularly evaluates and rebalances the portfolio composition in CLOs (Elkamhi and Nozawa, 2022; Griffin and Nickerson, 2022), the banks in our sample have no scope to take loans out of the portfolio at their own discretion or to actively manage the portfolio and thus, there is no typical asset manager assigned for this purpose. Furthermore, the underlying loans in our study differ in important aspects from those in CLOs as they are smaller in volume, mostly fixed-rate and unrated loans, no leveraged loans, and originated in an established bank-customer relationship without syndication (e.g., Benmelech and Dlugosz, 2009; Benmelech et al., 2012; Loumioti and Vasvari, 2019a; Kundu, 2022).

In our empirical analysis, we rely on a comprehensive and at the same time very granular data set, which is collected for the purpose of the ABS loan-level reporting initiative on behalf of the European Central Bank (ECB). This initiative establishes the first central repository for ABS loan-level information in Europe, which enables analyzing originators' replenishment behavior for the first time. Our sample covers the period from 2012 to 2017 and comprises 102 ABS backed by 1,775,776 SME loans from seven European countries. About 46% of the observations in our sample refer to loans added to the securitized loan portfolios after the transactions' closing.

[4]We understand the term "corporate" as a business, independent of the borrower size.

In a first step, we show that loans added to the ABS portfolio ex-post perform worse than loans that are part of the portfolio at the time of the transactions' closing. We find that loans added to securitized loan portfolios demonstrate, on average, a 0.42 percentage points (pp) higher probability of being a defaulted loan and a 1.04 pp higher probability of being a delinquent loan. Economically significant, this represents about 14% and 10% of our sample's mean default and delinquency variables. Importantly, using high-frequent tranche pricing information from S&P Global[5], we provide evidence that at issuance, investors are not aware of the potential negative impact of portfolio replenishment and demand lower instead of higher yield spreads if the respective portfolio is more prone to portfolio replenishment. During the ABS term, investors adjust their opinion and pay a lower price for those tranches whose underlying loan portfolio is replenished more strongly. In a second step, we reveal that originators induce the observed performance differences since they exploit their information advantage by deliberately adding low-quality loans, which indeed perform poorly after securitization. This adverse originator behavior is mitigated by originators' reputation efforts, by increasing transparency in the ABS market, and most effectively by their interaction. Whereas reputation refers to originators' intrinsic motivation to build up and maintain high-quality ABS, increasing transparency enhances external market discipline, as shown by originators' adoption of the requirements of the ECB's ABS loan-level initiative. As our evidence is derived from analyses controlling for ABS portfolio times reporting quarter fixed effects, the results take the average loan performance and quality within a loan portfolio and time period into account. This allows us to abstract from possible confounding factors that affect the quality and performance of all loans in the portfolio equally, such as macroeconomic distress, and thus to isolate the relative differences in our loan performance and quality measures.

From a general perspective, our results confirm empirically, based on a novel channel, that contractual agreements are not able to fully rule out the agency conflicts in securitization and thus, are only second-best solutions as indicated in economic theory. Intrinsic motivation through aligned incentives crystallizes as the first-best solution, which is shown in our mitigating factors analysis. This finding is of crucial importance for the design of regulatory requirements

[5]formerly IHS Markit.

in securitization markets in order to promote overall financial market stability and economic growth.

In more detail, our study contributes to the various strands of the broad literature on asymmetric information and agency conflicts in securitization. First, our results reveal an unexplored channel for originators to exploit their information advantage over investors and thus expand the literature on originators' loan selection for securitization (e.g., Downing et al., 2009; An et al., 2011). Second, we add to the differing results on agency conflicts in securitizations backed by corporate loans (e.g., Benmelech et al., 2012; Bord and Santos, 2015). Our study covers SME loan securitizations and indicates that the opacity of borrowers is a crucial determinant for agency conflicts in securitizations. Third, we enrich the relatively new field of empirical research on the valuable effects of increased transparency in securitization markets (Ertan et al., 2017; Klein et al., 2021; Neilson et al., 2022). Fourth, we contribute to the literature on the effects of a non-static composition of securitized loan portfolios over time for investors, which, up to now, is limited to loan trading in CLOs (e.g., Loumioti and Vasvari, 2019b; Peristiani and Santos, 2019; Fabozzi et al., 2021).

The remainder of this paper is organized as follows. Section II reviews the literature, provides details on the reasons for and limits of portfolio replenishment, and develops our hypotheses. In Section III, we present our data source and sample selection procedure. Section IV introduces our variables and provides summary statistics. In Section V, we discuss our results on the effect of portfolio replenishment on securitized loan performance. In Section VI, we focus on banks' intention to select low-quality loans for portfolio replenishment as well as on potential mitigating factors. In Section VII, we perform several robustness tests. Section VIII concludes.

# II Literature, contractual framework, hypotheses

## II.1 Literature on agency conflicts in securitization

Agency conflicts arise from asymmetric information between the more informed originator on the one hand and the less informed investors on the other hand. Initially, the originator grants loans

and thereby learns important information about the borrower. Subsequently, the originator decides on which loans to securitize, and finally, the investors buy the corresponding ABS. On average, European banks securitize loans amounting to about 20% of their total assets (Farruggio and Uhde, 2015). Information asymmetries generally induce uncertainty for investors regarding the quality of the loans which are selected by the originator for securitization as well as regarding originators' screening and monitoring efforts (e.g., Akerlof, 1970; Leland and Pyle, 1977; Diamond, 1984; Parlour and Plantin, 2008).[6] Based on these theoretical arguments and reinforced by the recent financial crisis, a large body of empirical research on agency conflicts in securitizations backed by mortgage loans emerged (e.g., Downing et al., 2009; Keys et al., 2010, 2012; An et al., 2011; Purnanandam, 2011).

In distinction to these studies, our paper relates to the literature on securitizations backed by corporate loans, which differ from those backed by mortgage loans. In the literature on agency conflicts in securitizations backed by corporate loans, mainly CLOs – that is, actively managed and regularly rebalanced securitizations backed by large as well as mostly syndicated and rated corporate loans - have been explored so far (e.g., Benmelech et al., 2012).[7] For instance, in the U.S. market, the average volume of a loan securitized in CLOs is USD 522 million (Benmelech et al., 2012). Such loans are expected to be screened thoroughly since multiple lenders fund them at origination, and even if the loan is securitized, originators usually retain a fraction of the loan on their balance sheet for the entire loan term, resulting in positive incentive effects by "skin in the game" (e.g., Benmelech and Dlugosz, 2009). In accordance with this line of argumentation, Benmelech et al. (2012) do not corroborate significant differences in loan performance between securitized and non-securitized loans originated by the same bank. Additionally, Kara et al. (2016) do not find any differences with respect to the pricing of securitized and non-securitized loans.

In contrast to these findings, studies concentrating on the boom period of CLOs from 2004 to 2008, when agency conflicts were especially prevalent, and also on CLOs with predominantly

[6] In some cases, an external service agent, instead of the originator, executes loan monitoring.

[7] We follow all previous studies and apply this narrow definition of CLOs. According to the broad definition, CLOs are securitizations backed by corporate loans (e.g., True Sale International GmbH, 2023). This broad definition is often applied by practitioners and includes both the narrow definition of CLOs and ABS backed by SME loans.

unrated underlying loans gain different results. Bord and Santos (2015) reveal laxer underwriting standards for loans meant to be securitized in CLOs than for those that are meant to be kept on the balance sheet. Building on that, they find that securitized loans perform worse than non-securitized ones. In accordance, Kara et al. (2019) provide evidence that after securitizing loans, originators' monitoring efforts decrease, and loan performance in CLOs deteriorates.

All the studies mentioned above examine the originators' decision of which loans to securitize and which to retain on their balance sheet. This decision has consequences for screening, even though screening takes place before the loan is granted, as well as for monitoring efforts and ultimately for loan performance in securitizations. Those issues accompanying the loan selection decision are common in all kinds of securitizations. In contrast, the studies presented below analyze the effects of loan trading on the quality and performance of CLOs. Loan trading – that is, actively buying and selling loans after the transactions' closing – is a unique characteristic of CLOs and includes both portfolio rebalancing to actively create an investment return as well as portfolio replenishment to reinvest released capital during the CLO term (e.g., Loumioti and Vasvari, 2019a; Fabozzi et al., 2021).

Empirical findings concerning the effects of loan trading in CLOs on the quality and performance of securitized loan portfolios are ambiguous. On the one hand, studies argue that originators intend to enhance portfolio quality after the transactions' closing. For instance, Fabozzi et al. (2021) provide evidence that portfolio default rates decrease with an increase in portfolio rebalancing activities since more active managers sell loans before they get downgraded as opposed to less active ones. In accordance, Peristiani and Santos (2019) reveal that managers affiliated with the originator more frequently exclude distressed loans before default because these managers both have access to private information and are incentivized to protect the originators' franchise value. On the other hand, Loumioti and Vasvari (2019b) highlight the importance of contractual arrangements for loan trading as CLO managers' aim to pass tests, such as overcollateralization (OC) tests, may negatively impact investors.[8] They find that managers sell well-performing loans from their portfolios since those are priced above par

[8]Simply put, passing OC tests requires exceeding a specific minimum ratio, calculated as the sum of total principal balances of performing loans, cash received from trading activities, and the fair value of defaulted loans by the principal balance of CLO notes.

and retain underperforming ones since those can only be sold below par. This indeed lowers the average loan performance in CLOs. In line, Loumioti and Vasvari (2019a) provide evidence that CLO managers with restrictive portfolio constraints are reluctant to sell loans of low quality to avoid realizing credit losses, which may lead to test violations.

Eventually, loan trading and portfolio replenishment as part thereof serve as controls in two studies. First, Franke et al. (2012) examine the impact of loan trading in both CLOs and collateralized bond obligations on the equity tranche size. They do not yield significant coefficients on a dummy variable, which is equal to one for portfolios that are actively rebalanced and zero otherwise. They argue that this is attributed to strict contractual requirements for loan trading. Second, Klein et al. (2021) control for the share of new loans added to already-securitized ABS portfolios on a quarter-to-quarter basis and reveal a significantly positive effect of this variable on ABS portfolio performance in the respective quarter. This result can most likely be attributed to the fact that replenishment rules[9] prohibit originators from adding already-delinquent or defaulted loans ex post, resulting in a better performance of portfolios with a higher share of new loans in the short run. However, the long-term effect of portfolio replenishment in ABS backed by SME loans remains unexplored.

Potentially adverse long-term effects for investors of originators exploiting their information advantage can be limited by several means. For instance, studies suggest that both originators' reputational concerns and bank regulation help mitigate agency conflicts (e.g., Gorton and Pennacchi, 1995). Additionally, originators usually provide overcollateralization to reduce ABS default risk and keep "skin in the game" to signal high screening and monitoring efforts as well as high loan quality (e.g., DeMarzo and Duffie, 1999; Guo and Wu, 2014). In the follow-up of the latest financial crisis, central banks, and supervisors, most prominently the ECB and the U.S. Securities and Exchange Commission, particularly recognized the negative effects of agency conflicts as well as investor mistrust toward securitizations arising from their opacity. Therefore, these authorities introduced loan-level reporting initiatives obliging originators to provide a large set of loan-, borrower-, and portfolio-characteristics to improve the transparency of the underlying loan portfolios (European Central Bank, 2014; U.S. Securities and Exchange

[9] We explain the replenishment rules applicable for the ABS portfolios in Section II.2.

Commission, 2014). As shown by several studies, this increase in transparency indeed mitigates agency conflicts since it facilitates investors' risk assessment and induces originators to improve loan and portfolio performance as well as diversification in their securitized loan portfolios (Ertan et al., 2017; Klein et al., 2021; Neilson et al., 2022).

## II.2 Contractual framework

To better understand portfolio replenishment in ABS backed by SME loans, we provide details on the reasons for and contractual limits of portfolio replenishment below.[10] We obtain this information from manually screening the prospectuses, presale reports, and investor reports of the ABS in our data set. We collect the prospectuses from the European DataWarehouse (ED)[11], the presale reports from originators' websites, and the investor reports from Bloomberg. The quotations presented below reflect commonly used wording that can be found in various documents.[12]

Portfolio replenishment can mainly be explained by the fact that the time to maturity of ABS is usually much longer than that of the underlying SME loans. Thus, during the term of the ABS, "the amount of repaid principal is typically reinvested in loans, until the end of the replenishing period, when the bonds are repaid as the portfolio amortises" (European DataWarehouse, 2019). In addition to maturing loans during the ABS term, the repaid principal can also be attributed to underlying loans, which, for example, are prepaid or canceled (European Central Bank, 2023). Importantly, unlike in the U.S., the option of loan prepayment does not play a significant role in our analysis because borrowers in Europe usually have to pay an early repayment fee to the bank if they repay their loans prematurely in times of declining interest rates.[13] This usually makes early repayments economically unviable (European Central Bank, 2018). From the accounting and regulatory perspectives, portfolio replenishment does not contradict the

[10] Details on the contractual limits of loan trading in CLOs are, for example, provided by Bord and Santos (2015), Loumioti and Vasvari (2019b), and Fabozzi et al. (2021).

[11] We provide more details on ED and its role in the European securitization market in Section III.

[12] For reasons of confidentiality, we do not reveal the originator or ISIN of the ABS.

[13] The amount of this early repayment fee is calculated as the bank's loss in alternative lending activities compared to the repaid loan. Consequently, this fee increases with a decreasing interest rate level during the loan term because the alternative lending options earn a lower yield.

legal concept of a true-sale securitization. As long as originators comply with the given legal and contractual requirements, the concept of a true-sale securitization states that investors do not have any financial claims against the originator or any termination rights after they have made their investment decision, even if the portfolio composition changes as a result of portfolio replenishment.

The receivables chosen for portfolio replenishment must meet specific requirements concerning the borrowers' creditworthiness and portfolio diversification. For instance, ABS prospectuses determine that "no receivable is a defaulted receivable," "no receivable is a delinquent receivable and no receivable has been a delinquent receivable at any time during the six months period immediately preceding the relevant cut-off date." Furthermore, the originator must ensure that the "purchase of the receivable does not result in a violation of any concentration limit." In addition to the requirements regarding the borrowers' creditworthiness and portfolio diversification, ABS prospectuses generally oblige originators to regularly disclose aggregated information on portfolio composition and performance, which enables frequent monitoring by investors. Although both the loan eligibility criteria and the possibility of regular monitoring limit discretionary leeway for originators in portfolio replenishment, some remaining leeway may still be exploited. For instance, originators can use their information advantage to add loans after the transactions' closing with particularly high probabilities of default, which do not exhibit any delinquencies at the point of securitization.

Usually, two parties, an originator and an external management company, are actively involved in portfolio replenishment in ABS. In most cases, the originator is a bank, which firstly grants loans and subsequently sells them to the SPE, which issues the ABS. The SPE is a company "over which effective control is exercised"[14] by the originator, which means that the SPE mainly carries out contractually fixed agreements and instructions by the originator and does not take on an independent and active role itself in portfolio replenishment. The management company is typically a fund management company, which is specialized in the management of securitization transactions and which is set up to "incorporate, administrate and legally represent the SPE." In the course of this activity, the management company establishes "systems

[14]This quote reflects commonly used wording in banks' annual financial statements.

or procedures for analyzing the historic returns on the assets acquired from the originator and that allow it to analyze and control the composition and yield of ... assets." Therefore, the management company is, among others, responsible for approving loans selected by the originator to add to the ABS portfolio. If no external management company is involved in the ABS transaction, the originator itself takes overall administrative and management tasks.[15]

## II.3 Hypotheses

Portfolio replenishment can induce material changes in the composition of securitized loan portfolios and thus has the potential to affect overall portfolio quality and performance, making it an especially important issue for investors. As described in Section II.2, the contractual framework for portfolio replenishment sets some limits but still provides originators with remaining leeway. Originators can particularly exploit this leeway since they have an information advantage regarding loan quality and since their behavior is, at least partly, not observable for investors. Building on the opacity of SMEs, we hypothesize that originators' greater scope of action after the transactions' closing puts them in the position to more extensively exploit their information advantage in case of portfolio replenishment as compared to the initial loan selection. In particular, first, we expect that loans added to ABS portfolios ex-post perform worse than loans that are already part of the initial ABS portfolio. Second, we suppose that originators induce these performance differences by selecting loans of lower quality for portfolio replenishment than for initial securitization. Third, we expect that originators select high-quality, instead of low-quality, loans for portfolio replenishment if they aim at building up or maintaining a reputation in the ABS market or if external monitoring is strengthened given an increase in transparency.

[15] As an additional analysis, we collect information on the involvement of a management company from manually screening ABS prospectuses, and building on that, we split our sample between ABS transactions with and those without a management company. However, as shown in Tables A.1 and A.2 in the internet appendix, management companies do not represent an effective mitigating factor for adverse effects by portfolio replenishment and are incapable of protecting investors from declining portfolio quality.

# III Data source and sample selection

We obtain our data from ED, the first and so far only central repository for ABS loan-level information in Europe. Established in 2012 in the wake of the ECB's ABS loan-level initiative, ED collects, validates, and distributes standardized loan, tranche, and portfolio information on more than 1,400 ABS transactions comprising about 90 million loans and referring to eight different asset classes (European DataWarehouse, 2021). Since data from ED contains highly granular information on the ABS portfolios throughout their term, we can track every single loan in the respective ABS portfolio over time. At the loan level, the reporting requirements for ABS backed by SME loans comprise 48 mandatory and 65 optional variables grouped into six categories: identifiers, obligor information, loan characteristics, interest rate details, financials, and performance measures. In our analysis, we only employ mandatory variables because, on average, 98% of the mandatory fields but only 32% of the optional fields are reported.

Our sample includes ABS backed by SME loans and covers the period from 2012 to 2017. We explain our sample selection procedure below and additionally summarize it in Table A.3 in the internet appendix. Initially, we start with 32,026,829 loan observations, corresponding to all available observations from ED. First, we consider that originators are obliged to report to ED at least quarterly but may voluntarily report on a monthly basis. To ensure that loans from monthly-reporting originators are not overweighed in our analysis, we focus, in the case of voluntary monthly reporting, on the last observation in a quarter and ignore previous observations in the same quarter. The last observation is employed because the majority of quarterly-reporting banks report shortly before the end of a quarter. Second, we drop those observations, for which variables used in our analysis are missing. Third, we also exclude implausible observations. For instance, these comprise observations for which the days in arrears exceed the loan period, where the loan maturity date is before the loan origination date, and where we observe a negative loan balance, interest rate, or loss given default (LGD). Fourth, following Ertan et al. (2017), we exclude ambiguous originators.[16]

[16] By excluding ambiguous originator names, we only retain originators that can be identified uniquely to ensure the validity of our sample.

Eventually, our sample includes 9,528,558 loan-quarter observations encompassing 1,775,776 SME loans to 1,117,783 borrowers, which are securitized in 102 ABS portfolios. The proportion of observations which we have to drop in our data preparation process is very similar compared to the other little available studies that use data from ED (e.g., Ertan et al., 2017; Gaudêncio et al., 2019; Hibbeln and Osterkamp, 2020; Klein et al., 2021). The securitized loans in our sample were originated in Belgium, France, Germany, Italy, the Netherlands, Portugal, and Spain, representing almost all Eurozone countries active in SME loan securitizations (Association for Financial Markets in Europe, 2014). In Table A.4 in the internet appendix, we illustrate our sample distribution by year and country.

# IV Variable construction and summary statistics

We define all variables below and in Table 1. The summary statistics for all variables are reported in Table 2. Table A.5 in the internet appendix shows the variables' pairwise correlations.[17] Following Ertan et al. (2017), we winsorize the values of all continuous variables at the 1% and 99% levels.

[Tables 1 and 2 about here.]

**Identification strategy for *Incoming Loans*:**

When analyzing whether originators select loans of lower quality for portfolio replenishment than for initial securitization, our variable of main interest is *Incoming Loan*. We define *Incoming Loan* as a loan that is not yet included in the ABS portfolio when the ABS transaction is closed. If the ABS transaction cannot be observed since its closing, we use the first reporting to ED instead.[18] Therefore, we determine *Incoming Loan* as an indicator variable by identifying the first reporting quarters of each ABS portfolio and each loan. If the first loan reporting quarter is chronologically after the corresponding first ABS reporting quarter, this loan is categorized

[17] We also test for multicollinearity using variance inflation factors (VIFs). In our sample, all VIFs are smaller than 1.80, which indicates that multicollinearity is not an issue in our empirical setting.

[18] We do not observe each ABS transaction since its closing because the ABS loan-level reporting requirement applies to existing as well as newly issued ABS. In subsample analyses, we restrict our sample to ABS transactions for which the closing is within our sample period and our findings do not change (see Sections V and VI).

as an *Incoming Loan*. About 46% of the observations in our sample refer to *Incoming Loans*. This seems high at first sight but reasonable when comparing the average ABS term, around 30 years, to the average loan term, around eight years, in our sample.

To get an impression of the extent of portfolio replenishment in ABS portfolios, we illustrate the total portfolio volume, the volume of *Incoming Loans*, the volume of the installments, and the volume of *Outgoing Loans* for two exemplary ABS portfolios from our sample in Figure 1. *Outgoing Loans* are loans that are no longer included in the portfolio from one quarter to another. The reasons for this can be that loans mature, default, are prepaid, canceled, or repurchased before the maturity of the respective ABS (European Central Bank, 2023). Figure 1 reveals that the volume of *Incoming Loans* is sufficiently high to potentially have a major impact on ABS portfolio composition. Furthermore, the volume of *Incoming Loans* is substantially higher than that of *Outgoing Loans* as we cannot observe active loan trading, particularly loan selling, which is a distinct characteristic of CLOs only (see Section II). Instead, the volume of *Incoming Loans* has to compensate for the installments of the loans included in the portfolio, which steadily reduces the total portfolio volume. Moreover, many *Outgoing Loans* refer to maturing loans that naturally exhibit lower loan balances as opposed to recently granted loans.

[Figure 1 about here.]

**Ex ante loan quality and ex post loan performance measures:**
We employ three different ex ante loan quality and five different ex post loan performance measures. Whereas the ex ante loan quality measures serve as a proxy for the loan risk assessment by the bank at the time of loan securitization, the ex post loan performance measures comprise realized loan risk after securitization.

To measure ex ante loan quality, we employ the $PD$ (1) and $LGD$ (2) as well as the product of both variables $PD\ x\ LGD$ (3). $PD$ represents the loan probability of default. In our PD estimation procedure, we apply a logit model with our loan default indicator explained below as the endogenous variable, control for several loan and borrower characteristics, and apply various fixed effects (FE).[19] We present the results of our PD estimation in Table A.6 in the internet

[19]For those loans, for which we observe the banks' internally estimated PD, we replace our own PD estimate and re-estimate our regressions. This does not alter our findings (see Section VI.1).

appendix. The mean *PD* is 3% in our sample. *LGD* refers to banks' internal LGD estimate, which is provided by ED and expected to take soft information into account. On average, we observe an *LGD* of 25%. Additionally, although we acknowledge the well-researched dependence of PD and LGD, we follow the requirements by the Basel Committee on Banking Supervision (BCBS) for calculating the expected loss (EL) in the internal ratings-based approach stating that "banks must calculate an EL as PD x LGD for corporate, sovereign, bank, and retail exposures ... not in default" (Basel Committee on Banking Supervision, 2019).[20] Thus, we compute *PD x LGD* as an additional risk measure to consider the joint determination of credit risk.

The ex-post loan performance measures include the following variables: *Default* (1), *Default Amount* (2), *Delinquency* (3), *Delinquent Amount* (4), and *Number of Days in Delinquency* (5). *Default* is defined as an indicator variable equal to one if the borrower has ever defaulted on the loan and zero otherwise.[21] Once a loan has defaulted, it is reported for one further quarter before being removed from the reporting in accordance with the reporting requirements. In our sample, the mean of *Default* is 3%. Our second ex post loan performance measure, *Default Amount*, refers to the maximum loan default amount during the loan term, which we logarithmize. The average *Default Amount* is 0.20, which corresponds to EUR 2,762. *Delinquency* represents an indicator variable and equals one if the borrower has ever been in arrears, with respect to either principal or interest payments, and zero otherwise. *Delinquency* is 10% on average. *Delinquent Amount* refers to the maximum loan delinquent amount during the loan term, which is calculated as the logarithmized sum of the principal and interest arrears. In our sample, *Delinquent Amount* is 0.79 on average, corresponding to EUR 1,270. *Number of Days in Delinquency* is the natural logarithm of the maximum number of days for which the

[20] According to the BCBS definition, the additional multiplication of the EL with the exposure at default results in the EL amount (Basel Committee on Banking Supervision, 2019).

[21] Most likely, Ertan et al. (2017) follow the same approach and assign each loan observation a default indicator equal to one if the borrower has ever defaulted on the loan and zero otherwise. We can deduce this from the fact that their mean default indicator variable is still greater than ours, although they apply the same data basis as we do. Moreover, this approach is consistent with our categorization of loans as either incoming or non-incoming for the entire loan term. We proceed with the same approach for our remaining loan performance measures and accordingly use the maximum amounts during the loan term.

borrower delays principal or interest payments during the loan term. The mean *Number of Days in Delinquency* is 0.31, representing around 1.65 days.

**Controls:**

To incorporate observable differences among our observations and to ensure that our findings are indeed driven by agency conflicts in portfolio replenishment, we control for loan and borrower characteristics, basically following the variable definitions by Ertan et al. (2017) and Klein et al. (2021).

First, *Interest Rate* refers to the loan interest rate at the respective reporting quarter and serves as a proxy for loan riskiness. In our sample, the mean *Interest Rate* is 3.53%. Additionally, we control for loan riskiness by using an indicator variable equal to one if a loan is collateralized and zero otherwise (*Collateralization*). In our sample, 73% of the observations are collateralized loan observations. Furthermore, we calculate *Years since Loan Origination* as the natural logarithm of the period, expressed in years, between the loan origination and the respective reporting date. Similarly, *Loan Years to Maturity* refers to the natural logarithm of the remaining years to maturity at the respective reporting date. On average, we observe that *Years since Loan Origination* is 1.35, reflecting around 3.70 years, and that *Loan Years to Maturity* amounts to 1.28, around 3.83 years.[22]

Moreover, we specify *Current Balance* as the natural logarithm of the loan balance at the respective reporting quarter.[23] On average, *Current Balance* is 9.98, representing EUR 98,380. In addition, *Securitized Loan Ratio* refers to the ratio of the outstanding loan balance at the point in time of securitization to the original loan amount. This variable serves as a proxy for the (inverse) time loan credit risk remains on the originators' balance sheet. This is of particular relevance as banks' screening incentives are expected to be weaker for loans that are securitized shortly after their origination (e.g., Gorton and Pennacchi, 1995).[24] In our sample, the mean

[22]Even if a high correlation between *Years since Loan Origination* and *Loan Years to Maturity* could be expected, this is not the case since the correlation is only 0.15 (see Table A.5 in the internet appendix).

[23]In case of loan default or delinquency, we observe that the originators in our sample reduce the current loan balance by the default or delinquent amount. We do not drop these observations but rather reverse this adjustment by adding the default or delinquent amount to the current loan balance.

[24]We use this proxy since we do not observe the exact time until securitization for non-incoming loans that are part of ABS portfolios for which the first reporting quarter to ED does not correspond to the transactions' closing quarter.

value of *Securitized Loan Ratio* amounts to 0.72, suggesting that the average loan observation in our sample corresponds to a loan that was securitized 5.6 quarters after its origination. We also control for *Pool Time* by computing the number of quarters when we observe a loan in an ABS portfolio during our sample period to consider the time span of possible default events.[25] The mean *Pool Time* is around 10 quarters.

We further employ *Lending Relationship* as a control variable since empirical evidence suggests a beneficial effect of an existing relationship between the borrower and the bank on banks' loan risk assessment by reducing information asymmetries (e.g., Kysucky and Norden, 2016). *Lending Relationship* is defined as an indicator variable equal to one if a borrower borrows at least twice from the same bank within our data set and zero otherwise. In our sample, 62% of the observations refer to borrowers that exhibit lending relationships with their banks. Furthermore, we control for *Loan Uniqueness* by estimating the natural logarithm of the number of loans that were originated in the same year and that can be assigned to the same one-digit NACE industry code as well as to the same two-digit postcode area. Observing a low number of comparable loans may result in difficulties in loan risk assessment for both originators and investors. On average, *Loan Uniqueness* is 6.12, which corresponds to 1,020 comparable loans reported in our sample.

# V Performance effects of portfolio replenishment

In our first empirical analysis, we analyze whether loans that originators select for portfolio replenishment perform worse than loans that originators select for the initial loan portfolio. Building on that, we turn to the portfolio perspective and reveal whether portfolio replenishment leads to a decline in average loan performance in the ABS portfolio.

[25] As the point in time when a loan is included in the ABS portfolio and thus the time span a loans is part of the ABS portfolio depends on banks' decision, whether a loan is part of the initial portfolio or an *Incoming Loan*, one might consider a mutual dependence of *Pool Time* and *Incoming Loan*. To provide further robustness, we re-estimate all regression analyses without using *Pool Time* as a control variable and our results are even tending to get stronger.

## V.1 Loan performance

**Empirical strategy:**

We first evaluate whether *Incoming Loans* perform worse than loans that are already part of the portfolio at transactions' closing. Thus, the endogenous variables in our regressions are our five ex post loan performance measures. As the exogenous variable of main interest, we use our indicator variable *Incoming Loan*. We expect that *Incoming Loans* perform worse than non-incoming ones, as derived in Section II.3. Given that higher values of our loan performance measures refer to worse loan performance, we anticipate the coefficient on *Incoming Loan* ($\beta$) to be significantly positive. We estimate the following regression model:

$$\begin{aligned} Loan\ Performance_{itp} = \alpha + \beta \cdot Incoming\ Loan_{it} + \gamma' \cdot Controls_{it} \\ + \zeta' \cdot Reporting\ Quarter_t \text{ x } ABS\ Portfolio_i \\ + \nu' \cdot Loan\ Origination\ Year_i + \rho' \cdot Industry_i \\ + \tau' \cdot Loan\ Type_i + \upsilon' \cdot Borrower\ Type_i + \epsilon_{itp}, \end{aligned} \tag{V.1}$$

where $i$ indexes loans, $t$ indexes reporting quarters, $p$ indexes one specific loan performance measure, and $\epsilon_{itp}$ is the error term. *Controls* include *Interest Rate*, *Collateralization*, *Years since Loan Origination*, *Loan Years to Maturity*, *Current Balance*, *Securitized Loan Ratio*, *Pool Time*, *Lending Relationship*, and *Loan Uniqueness*.

In addition, we incorporate the interaction between the reporting quarter and the ABS portfolio as FE as well as loan origination year FE, industry FE, loan type FE, and borrower type FE to control for unobserved dynamics over time as well as unobserved variations at the loan, borrower, and portfolio levels.[26] Especially, the interaction between the reporting quarter and the ABS portfolio applied as FE comprehensively absorbs bank behavior and ABS portfolio characteristics, both differing in the cross section and varying over time. As a result, we capture the average loan performance within a specific ABS portfolio in a given quarter, and thus we estimate the performance of *Incoming Loans* relative to the performance of non-incoming loans, isolating the effect of the *Incoming Loan* variable. Furthermore, we use robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS

[26] In Table A.7 in the internet appendix, we add our five different FE step by step and still yield the same results as in our baseline regression model. Thus, our results do not depend on single FE.

portfolio to account for correlations between the large number of underlying loans within a specific ABS portfolio in a given quarter.

As estimation procedure, we use an OLS estimator for all our five ex post loan performance measures. By also applying an OLS estimator instead of a binary choice model for the indicator variables *Default* and *Delinquency*, we follow Streitz (2016) and Imbierowicz et al. (2021). The reason for this approach is that the maximum likelihood estimator in nonlinear models in the presence of FE is generally inconsistent when the length of the panel is small and N is large, often referred to as the "incidental parameter problem" (e.g., Heckman, 1981; Lancaster, 2000; Greene, 2004).[27]

**Baseline regression results:**

Table 3 presents our baseline regression results and shows that *Incoming Loans* perform significantly worse than non-incoming ones. For instance, specifications (1) and (3) reveal that *Incoming Loans* demonstrate, on average, a 0.42 pp higher probability of being a defaulted loan and a 1.04 pp higher probability of being a delinquent loan compared to loans that are already part of the ABS portfolio at transactions' closing. This represents about 14% of our sample's mean *Default* and 10% of our sample's mean *Delinquency*. Consistent with specifications (1) and (3), *Default Amount* (2), *Delinquent Amount* (4), and *Number of Days in Delinquency* (5) are also significantly higher for *Incoming Loans*. These results are in line with our expectation.

[Table 3 about here.]

**Subsample analysis:**

A possible concern may be that our results are driven by the fact that we cannot observe all ABS portfolios already from the point in time of their closing. This is because ED was established only in 2012, but some ABS portfolios were closed previously. For those ABS, we use the first reporting quarter as a proxy (see Section IV). To show that our results do not depend on this approach, we create a subsample including only those ABS that we observe since their closing. Consequently, we maintain 3,311,128 observations, and the mean of *Incoming Loan* is 37.5%. We re-estimate our regressions based on this subsample and report our results in Table 4. Four

[27] This fact also applies to other alternative non-linear estimation methods, such as survival models.

out of five specifications validate our main results – that is, *Incoming Loans* perform significantly worse compared to non-incoming ones. While the statistical significances remain at the same levels, the economic effects rise as the values of the significant coefficients are higher than those in our baseline regressions. Importantly, these higher coefficients in this subsample analysis do not indicate that our results on the impact of portfolio replenishment is absent in the sample of all remaining loans, which are not part of this subsample. In unreported analyses, we also find significant results in the sample of the remaining loans, which supports our findings.

[Table 4 about here.]

**Loan term analysis:**

On average, at their securitization point in time, *Incoming Loans* may differ from non-incoming ones in terms of both their *Years since Loan Origination* and *Loan Years to Maturity*. For this reason, we show the distributions of both variables, separately for *Incoming Loans* and non-incoming ones, in Figure A.1 in the internet appendix. It turns out that, in our main sample, *Incoming Loans* are on average younger than non-incoming ones at the point when they are securitized. These differences shrink substantially in our subsample presented in the last paragraph.

Even though we control for *Years since Loan Origination* and *Loan Years to Maturity* in our regression analyses, we also provide a set of further analyses. First, we vary these controls and use the two non-logarithmized variables as well as the two corresponding squared variables as controls. Second, we additionally add many different fixed effects, such as years since loan origination FE and loan years to maturity FE, as well as the FE of the interactions between one of those variables and the loan origination year, and between the reporting year and the loan origination year. As presented in Table 5, we yield qualitatively the same findings as in our main analysis, further evidencing that our results are not driven by loan term differences between *Incoming Loans* and non-incoming ones.

[Table 5 about here.]

## V.2 Portfolio effect

**Empirical strategy:**

Building on our results in Section V.1, it is of particular relevance from an investor perspective whether portfolio replenishment also adversely affects average loan performance in ABS portfolios. Therefore, we compare *Incoming Loans* with *Outgoing Loans* based on a propensity score matching, originally proposed by Rosenbaum and Rubin (1983). The comparison between those two groups is motivated by the fact that the average loan performance in ABS portfolios declines if *Incoming Loans* perform significantly worse than *Outgoing Loans*. Importantly, this analysis does not automatically lead to the same results as in our baseline regressions since both *Incoming Loans* and *Outgoing Loans* may perform similarly but worse than the remaining ones. In this case, we would still yield significantly positive coefficients in our baseline regressions without observing a declining average loan performance in ABS portfolios.

To match *Incoming Loans* and *Outgoing Loans* as accurately as possible, we create another subsample. For each loan in our sample, we only retain the point(s) in time when the loan is added to the ABS portfolio and/or when it leaves the not yet maturing ABS portfolio. Consequently, we observe each loan either at one point or at two points in time in our subsample. In total, this subsample still includes 1,059,323 observations, of which 52% refer to *Incoming Loans*. To implement the propensity score matching, we estimate the propensity scores based on the results of the following logit regression model reported in Table A.8 in the internet appendix:[28]

$$\begin{aligned} Incoming\ Loan_{it} = \alpha &+ \gamma' \cdot Controls_{it} + \zeta' \cdot Reporting\ Quarter_t \text{ x } ABS\ Portfolio_i \\ &+ \nu' \cdot Loan\ Origination\ Year_i + \rho' \cdot Industry_i \\ &+ \tau' \cdot Loan\ Type_i + \upsilon' \cdot Borrower\ Type_i + \epsilon_{it}, \end{aligned} \tag{V.2}$$

where $i$ indexes loans, $t$ indexes reporting quarters, and $\epsilon_{it}$ is the error term. We again use robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio. Controls include the same variables as in Equation V.1. Based

[28] To provide robustness, we also estimate a probit regression and report our results in Table A.8 in the internet appendix. If we use these probit estimation results for our propensity score matching, our findings mostly still hold (see Table A.9 in the internet appendix).

on the estimated propensity scores, we apply the most frequently used algorithm, the nearest-neighbor (N – N) matching, for matching *Incoming Loans* and *Outgoing Loans* (e.g., Stuart, 2010). This matching algorithm compares each *Incoming Loan* with the arithmetic average of $n$ *Outgoing Loans*, having the closest propensity scores. We assume $n = 1$, 5, 10, 20, and 50. In line with Section V.1, we expect that *Incoming Loans* perform worse than *Outgoing Loans*, resulting in the adverse effect of portfolio replenishment on average loan performance in ABS portfolios.

**Results:**

Table 6 presents the results of our portfolio effect analysis. Across all five matching procedures and with respect to all five ex post loan performance measures except for in one case, we find significantly positive coefficients. This reveals that *Incoming Loans* perform worse than *Outgoing Loans*. Thus, we provide evidence that originators decrease average loan performance in ABS portfolios by adding loans to the portfolio after the transactions' closing that perform worse than loans leaving the portfolio. This lowers the asset value of ABS portfolios and consequently the return on investment for investors.

[Table 6 about here.]

## V.3 Investor awareness

**Empirical strategy:**

Given our finding in the previous sections that the average loan performance in ABS portfolios decreases due to portfolio replenishment, we investigate whether investors are aware of portfolio replenishment and whether it is factored in market prices. Therefore, we focus on the tranche level and enrich our data set described in Section III with high-frequency pricing information and rating data from S&P Global, a leading data provider for ABS tranche prices.[29] The data set makes available the initial pricing demanded by the investors at issuance and traded market prices over the term for 78 tranches, belonging to 38 ABS portfolios on a daily basis. This

[29] We combine the daily price observation from S&P Global with the relevant variables from our sample, which are on a quarterly basis, using the respective reporting quarter. In all analyses at the tranche level, the mean of our loan control variables from Section V.1, the total portfolio volume as well as the tranche term serve as control variables.

information is particularly valuable because it provides insights into investors' risk assessment of ABS tranches over time.

First, we are interested in the question on whether ABS portfolios that are expected to be replenished to a higher degree, that is, portfolios with a larger maturity mismatch between the tranches and the underlying loans, are priced differently at their issuance as compared to other portfolios. For that purpose, we calculate the *Maturity Mismatch*, defined as the tranche term divided by the average term of the underlying loans at issuance, and determine the *Yield Spread*, which is a standard measure for the riskiness of a security in the literature (e.g., He et al., 2016). As the investors of riskier tranches are significantly more exposed to default risk, we also analyze whether the potential differences in the pricing are particularly evident for those tranches that have a lower rating.

Second, in addition to examining the tranche pricing information of ABS portfolios at issuance, we also exploit the high-frequency nature of our pricing data over time. In particular, we investigate whether investors perceive the impact of replenishment on the average loan performance and adjust their pricing accordingly. In more detail, we analyze, whether a higher portfolio share of replenished loans (*Replenished Loan Share*), defined as the replenished loan volume divided by the total loan volume of an ABS portfolio in the respective quarter, is associated with lower traded prices (*Traded Price*), higher bid-ask spreads (*Bid-Ask Spread*) and higher price movements. We calculate the latter in two different ways to capture it comprehensively. The *Daily Price Change* is the quarterly mean of the daily price movements $((|p_t - p_{t-1}|)/p_{t-1})$ and the *Price Volatility* is defined as the standard deviation of the daily price $p_t$ in the respective quarter.

To get a deeper understanding of investors' pricing reaction to portfolio replenishment, we conduct the analysis on observed market prices using (1) all observations, the observations referring to the period (3) less than one year after the point in time when the transaction is reported to ED for the first time and (4) more than one year after that. Dividing our observation period and concentrating on the time windows after the first reporting helps us to refine our identification strategy. Because originators regularly report loan-level data to ED, including

information on portfolio replenishment, investors are able to learn from these reportings over time. Consequently, investors might adjust their pricing in accordance to their expectation of the actual loan quality in the portfolio. Moreover, price movements may increase during the entire observation period as a changing portfolio composition raises uncertainty on the average loan performance.

**Results:**

Table 7, columns (1) and (2), reports our results on the impact of the degree of *Maturity Mismatch* between tranches and underlying loans on the *Yield Spread* at the issuance of the ABS transaction. We find significantly negative coefficients, indicating that ABS tranches with a higher maturity mismatch exhibit on average lower yield spreads at issuance. This suggests that investors expect a positive impact of portfolio replenishment on the average loan performance over time and thus interpret a higher maturity mismatch as a sign of lower risk inherent in their investment due to the inclusion of new loans. Consequently, in the context of our results in Sections V.1 and V.2, we reveal that investors seem not to be aware that the average loan performance in ABS portfolios decreases due to portfolio replenishment. The significantly negative coefficient of the interaction between *Maturity Mismatch* and *Rating* in column (3) underlines this interpretation of our findings as the negative impact of *Maturity Mismatch* on *Yield Spread* is particularly pronounced for tranches, which have a poor rating, typically implying that investors of those tranches receive payments with a lower priority and are therefore exposed to a higher default risk.[30]

[Table 7 about here.]

In Table 8, we present our results on the effect of *Replenished Loan Share* on *Traded Price*, *Bid-Ask Spread*, *Daily Price Change*, and *Price Volatility*. We now consider the complete observation period and not only the point in time of the tranche issuance. In column (1), we observe that ABS tranches whose underlying portfolios are replenished to a larger extent are on average priced with a discount. Thus, investors are only willing to pay a lower tranche price if a larger part of the respective loan portfolio is replenished. In contrast to our previous

[30]The isolated coefficient of *Rating* is absorbed by the rating fixed effects in the regression.

analysis, this provides evidence that investors seem to be aware of the potential negative impact of portfolio replenishment on the average loan performance.

Importantly, the regression results also reveal a significant and negative impact of the interaction of *Replenished Loan Share* and its mean PD (*PD (RLS)*) on *Traded Price* in column (2). This provides evidence that the investors observe and assess originators' replenishing activity and adjust their pricing in accordance with the riskiness of the loans included in the respective quarter as the negative impact of the replenishment activity on the price is absorbed by this interaction. Thus, the market prices seem to capture portfolio replenishment as an additional risk factor over time. However, columns (3) and (4) reveal that investors only become aware of the potential negative impact of portfolio replenishment in the long run. In detail, the positive coefficient in column (3) reveals that investors are willing to pay a higher price during the first year of the reporting to ED, which underlines investors' understanding that a higher degree of portfolio replenishment is linked to a risk reduction. This result is in line with investors' demand for a lower *Yield Spread* at issuance as shown above. In contrast, after the first year, investors reverse their risk assessment and the traded tranche prices are significantly lower for those tranches whose underlying portfolios are replenished to a larger extent. This can be inferred from the significantly negative coefficient on *Replenished Loan Share* in column (4), which is consistent with our findings in the previous analyses in Sections V.1 and V.2.

[Table 8 about here.]

Lastly, *Replenished Loan Share* affects not only the traded prices of ABS tranches, but also influences the price dispersion in the secondary market. Columns (5), (7), and (9) in Table 8 show a significantly positive impact of *Replenished Loan Share* on our market uncertainty measures, *Bid-Ask Spread*, *Daily Price Change*, and *Price Volatility*. Consequently, portfolio replenishment seems to exacerbate investors' difficulties in assessing the riskiness of a tranche and increases the variety of different risk-return perceptions. If we also consider the average *PD* of the added loans in columns (6), (8), and (10), our results show that the greater dispersion in pricing is not only driven driven by the *Replenished Loan Share* but also by the riskiness of the added loans and importantly, by the interaction of these two variables. Therefore, the

uncertainty in the market concerning the adequate pricing of those tranches whose underlying portfolios are replenished to a larger extent and also with riskier loans is especially prevalent.

# VI Bank intention and mitigating factors

In our second empirical analysis, we reveal whether originators induce the observed performance differences by exploiting their information advantage and deliberately adding low-quality loans to securitized loan portfolios after the transactions' closing. Building upon this, we examine two potential mitigating factors for originators exploiting their information advantage in portfolio replenishment, originators' reputation concerns, and an increase in transparency in the ABS market.

## VI.1 Bank intention

**Empirical strategy:**

Building on the results on the effect of portfolio replenishment on loan performance, we explore whether banks deliberately add low-quality loans to ABS portfolios after the transactions' closing. By identifying a link between the originators' decision of which loans to add to ABS portfolios ex-post and the subsequent performance of these selected loans, we aim at providing the channel through which our previous results on loan performance in Section V.1 are induced by originators.[31] Thus, in the following analysis, we focus on the loan quality measures – namely, the *PD*, the *LGD*, and the product of both variables, *PD x LGD* – as our exogenous variables of main interest since those are already known by originators at the time of securiti-

[31] This approach is roughly comparable to the analysis of Benmelech et al. (2012). They evaluate the determinants of loan securitization and loan performance subsequent to securitization. However, in contrast to our study, they focus on the comparison between securitized and non-securitized loans.

zation. We reveal whether low-quality loans are more likely to be added to ABS portfolios ex post as compared to high-quality ones based on the following OLS regression model:[32]

$$\begin{aligned} Incoming\ Loan_{it} = \alpha &+ \beta \cdot Loan\ Quality_{itq} + \gamma' \cdot Controls_{it} \\ &+ \zeta' \cdot Reporting\ Quarter_t \text{ x } ABS\ Portfolio_i \\ &+ \nu' \cdot Loan\ Origination\ Year_i + \rho' \cdot Industry_i \\ &+ \tau' \cdot Loan\ Type_i + \upsilon' \cdot Borrower\ Type_i + \epsilon_{itq}, \end{aligned} \tag{VI.1}$$

where $i$ indexes loans, $t$ indexes reporting quarters, $q$ indexes one specific loan quality measure, and $\epsilon_{itq}$ is the error term. Our controls include the same variables as in Equation V.1. We again use an OLS estimator as explained in Section V.1 and robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio. As derived in Section II.3, we expect the coefficients on our ex ante loan quality measures to be significantly positive, revealing that banks deliberately add low-quality loans after the transactions' closing.

**Baseline regression results:**

We report our regression results in Table 9 in specifications (1) to (3). We yield significantly positive coefficients on *PD*, *LGD*, and *PD x LGD*. This indicates that low-quality loans are more likely to be added to ABS portfolios after the transactions' closing than high-quality ones. Thus, originators seem to exploit their information advantage, which is possible due to the difficulty of assessing loan quality for investors at the point in time when originators add loans to ABS portfolios. Overall, our results agree with our expectation.

[Table 9 about here.]

**Interaction effects analysis:**

To strengthen the evidence for originators inducing the performance differences described in Section V.1 by deliberately adding low-quality loans, we connect our loan performance and loan quality analyses. Consequently, we explore whether loans exhibiting higher PDs at the time of securitization and poorer performance after being securitized are more likely to be added by the originator to the ABS portfolio after the transactions' closing. For this purpose, we interact the *PD* with our ex post loan performance measures in specifications (4) to (8) in Table 9.

[32] In Table A.10 in the internet appendix, we again add our five different FE step by step. Since our results from the baseline regression model do not qualitatively change, they do not depend on single FE.

The significantly positive coefficients reveal that loans with high probabilities of default at securitization and poor performance after securitization are indeed more likely to be *Incoming Loans*. Thus, our results demonstrate that originators deliberately add low-quality loans, which indeed become non-performing after securitization.

**Subsample analysis:**

We again address the potential concern that our results may be driven by the fact that we cannot observe all ABS portfolios since the transactions' closing. Thus, we re-estimate our regressions using only those ABS portfolios, which we observe since their closing. Table 10 shows exclusively positive coefficients that are significant in cases of our loan quality measures, *PD* and *LGD*, and our interaction effects of *PD* and the measures of ex-post loan performance. These results reinforce our finding that low-quality loans, moreover those that perform worse than other loans in the ABS portfolio, are more likely to be selected as *Incoming Loans*. Again, this result also holds for the remaining observations, which are not part of this subsample. This indicates that our findings do not depend on the split of our sample and will also apply in the further course of the ABS term.

[Table 10 about here.]

**Loan term analysis:**

We conduct further analyses to provide evidence that our findings are not driven by loan term differences between *Incoming Loans* and non-incoming ones. Thus, we vary our loan term measures and fixed effects as described in Section V.1 and present our findings in Table 11. It turns out that we still yield qualitatively the same results as in our main analysis.

[Table 11 about here.]

**Differing PD estimations:**

So far, our PD estimation procedure uses all loan observations to estimate the PD, although some information is not yet available for the originator at the respective quarter. To provide further robustness on our baseline regression results, we vary our PD estimation. Thus, we apply a sequential estimation procedure and recalculate our PDs on a quarterly basis, only

incorporating loan observations already available in the quarter, for which the PD is estimated. As reported in Table 12, we yield significantly positive coefficients as in our baseline regression model. Overall, our results demonstrate that originators exploit their information advantage by replenishing ABS portfolios with low-quality loans.

[Table 12 about here.]

Moreover, some banks voluntarily report their internal PD estimates for a part of their loans to ED. This is particularly interesting for our analysis since the banks' internally estimated PDs are expected to take private soft information into account. As this variable is categorized as an optional field, we only partially observe an internal PD estimate for the loans in our sample. Nevertheless, we use the estimates available to us in further analysis and replace our PD estimates with those of the banks in case of 5,018,501 observations. While keeping the pool composition constant with this approach, our results again reinforce our findings, as shown in Table 13.

[Table 13 about here.]

## VI.2 Mitigating factors

Building on the analysis in Section VI.1, we examine two possible factors, originators' reputation concerns as well as an increase in transparency in the ABS market, which may both incentivize originators to maintain high-quality securitized loan portfolios, and, consequently, mitigate agency conflicts in securitization.

**Reputation analysis:**

Originators regularly issuing ABS over time depend on their reputation in the securitization market to attract investors to buy their future ABS. Thus, reputation ensures originators' active role in the securitization market. In order to build up or maintain reputation, originators aim at making sure that investors receive their scheduled payments, which precludes or at least severely limits the exploitation of their information advantages (e.g., Gorton and Pennacchi, 1995). Following the reputation measure concept of Fang (2005), we define *Frequent Issuer* as

an indicator variable, which is equal to one if the respective originator issues at least two securitization transactions in our sample and zero otherwise. On average, 64% of our observations refer to originators regularly issuing ABS and thus, having reputation concerns. To evaluate the impact of *Frequent Issuer*, we re-estimate our regression model, defined in Equation VI.1, and add the interaction terms between *Frequent Issuer* and our loan quality measures. The isolated effect of *Frequent Issuer* is captured by our reporting quarter x ABS portfolio FE.

The results in Table 14 reveal that the interaction between *Frequent Issuer* and *PD* significantly and negatively affects the probability of being an *Incoming Loan*. Thus, originators' incentives arising from building up or maintaining good reputation in the securitization market may restrict them in deliberately adding low-quality loans after transactions' closing. This finding is in line with studies in related areas. For instance, Sufi (2007) provides evidence that banks' reputation mitigates information asymmetry problems between banks and borrowers in the syndicated loan market. However, we do not yield statistically significant coefficients in cases of the interaction between *Frequent Issuer* and *LGD* as well as between *Frequent Issuer* and *PD x LGD*.

[Table 14 about here.]

Our analyses in Table 15, where we additionally interact *Frequent Issuer* and *PD* with our ex post loan performance measures, confirm these mixed findings. On the one hand, we gain significantly positive coefficients on the interaction between *Frequent Issuer*, *PD*, and those loan performance measures, which assess loan defaults. On the other hand, we do not observe any statistical significance when applying the interactions between *Frequent Issuer*, *PD*, and our loan delinquency measures. Moreover, in line with the results described in Section VI.1, originators having less concerns about their reputation still deliberately add low-quality loans, which indeed become non-performing after securitization.

[Table 15 about here.]

To further underpin these findings, we refine our previous reputation measure to not only capture the pure number of ABS transactions, but also consider the importance of ABS transactions as a refinancing instrument in terms of volume. Therefore, we create an additional

indicator variable, *High-Volume Issuer*, equal to one if the respective originator issues at least two securitization transactions in our sample *and* strongly depends on securitization for refinancing purposes, and zero otherwise. We assume an originator to be dependent on securitization for refinancing purposes if its total ABS volume divided by its total liabilities in the respective quarter is larger than the mean of this ratio across all originators and time periods at least once during our sample period. We conduct the same regressions as with our previous reputation measure and report the results in Tables 16 and 17. Overall, our findings based on this refined measure for reputation are in line with our previous results.

[Tables 16 and 17 about here.]

**Transparency analysis:**

As indicated in Section II.1, transparency may be another mitigating factor for agency conflicts in securitization since originators regularly disclose comprehensive data on single loans and portfolio composition, potentially resulting in enhanced investors' risk assessments, stronger external monitoring, and market discipline. Thus, we examine the adoption of the ECB's ABS loan-level initiative inducing a substantial increase in transparency in the European ABS market, as described in Section III. To reveal whether transparency is an effective mitigating factor, we follow Ertan et al. (2017) and identify *Transparent Loans* in our sample. This represents an indicator variable equal to one for loans that are originated after the bank adopted the requirements of the ABS loan-level reporting initiative and zero otherwise. On average, 33% of our observations refer to *Transparent Loans*. We include *Transparent Loan* as a further control variable in the regression model, presented in Equation VI.1, and additionally incorporate its interaction with our loan quality measures as well as with the interactions between the *PD* and our ex post loan performance measures.

As reported in Tables 18 and 19, the interactions between our loan quality measures and *Transparent Loan* as well as the interactions among the *PD*, the ex-post loan performance measures, and *Transparent Loan* show significantly negative coefficients. Moreover, we still yield significantly positive coefficients on all our loan quality measures as well as all interactions between the *PD* and our ex-post loan performance measures. Since the coefficients on the

interactions with *Transparent Loan* are higher in amount than the ones on our loan quality measures as well as on the interactions between the *PD* and our ex-post loan performance measures, the overall effect is negative. For instance, according to specification (1) in Table 18, the overall effect is – 1.59. This means that under the novel transparency regime, originators seem to select high-quality instead of low-quality loans for portfolio replenishment, making transparency an effective mitigating factor for agency conflicts in securitization. This result is in line with our third hypothesis. Lastly, we find that across all specifications, *Transparent Loans* are significantly more likely to be added to ABS portfolios ex post. Although we incorporate origination year FE (see Equation VI.1), this result can be explained by the fact that *Transparent Loans* tend to be originated chronologically after non-transparent ones.

[Tables 18 and 19 about here.]

**Interaction effects analysis:**

As shown in the previous analyses, both reputation and transparency are potential stand-alone mitigating factors for agency conflicts in the securitization market. Building on that, the question arises whether originators having more pronounced reputation concerns may especially be forced to respond to stronger market discipline induced by increasing transparency. Therefore, we analyze the combined effects of reputation and transparency. We re-estimate the regression model, specified in Equation VI.1, and add the interaction term between one of our reputation measures, *Frequent Issuer* or *High-Volume Issuer*, *Transparent Loan*, and either our loan quality measures or the interactions between the *PD* and our ex post loan performance measures.

Tables 20 and 21 show significantly negative coefficients on the interaction terms between our loan quality measures, *Frequent Issuer*, and *Transparent Loan*, as well as the ex-post loan performance measures across all specifications. This holds true when we apply our refined reputation measure, *High-Volume Issuer*, as reported in Tables 22 and 23. These results are again in line with our third hypothesis. In addition, it reveals that increasing transparency in the securitization market works particularly well for originators, which rely on building up or maintaining their reputation. Originators having reputation concerns change their portfolio replenishment behavior to a larger extent compared to originators, which issue ABS only once. Consequently,

strong external market discipline coupled with intrinsic reputational incentives is most effective in preventing originators from exploiting their information advantage by deliberately adding low-quality loans to ABS portfolios after the transactions' closing and thus, decreasing agency conflicts in securitization.

[Tables 20, 21, 22, and 23 about here.]

# VII Robustness checks

Below, we provide a variety of robustness checks that all confirm our findings in the main analyses.

**Controlling for country-specific characteristics:**

First, we consider that 51% of our observations refer to loans securitized by Belgian banks. This seems high at first, but is not overly surprising because roughly 33% of the total outstanding European ABS backed by SME loans relate to Belgium (Association for Financial Markets in Europe, 2020). We add country FE to our baseline regression models in order to capture country-specific effects in our analysis. Table A.11 in the internet appendix illustrates the results of our first analysis, exploring whether *Incoming Loans* perform worse than other loans in ABS portfolios. Across all specifications and in line with our main analysis, we gain significantly positive coefficients on *Incoming Loan*. In Table A.12 in the internet appendix, we present the results of our second analysis. The significantly positive coefficients across all specifications confirm our finding that low-quality loans, moreover, those performing poorly after securitization, are more likely to be added to ABS portfolios after the transactions' closing in comparison to other loans.

**Controlling for bank monitoring:**

Second, to additionally ensure that our results are not driven by country-specific leeway in the banking sector, which we may not sufficiently control for by applying country FE, we incorporate *Private Monitoring* as an additional control variable. This variable is obtained from Barth et al. (2013) and measures whether private monitoring is possible in a specific country. For instance,

*Private Monitoring* captures whether off-balance sheet items are disclosed to the public. Higher values indicate more private monitoring. As reported in Tables A.13 and A.14 in the internet appendix, the coefficients on our exogenous variables of main interest are in line with our previous findings.

**Controlling for originator characteristics:**

Third, another possible concern may be that our results are driven by differences in originator characteristics, which we do not sufficiently capture by the interaction between the reporting quarter and the ABS portfolio as FE. Therefore, in addition to our loan and borrower controls, we incorporate originator characteristics, which we obtain from Fitch Connect. These further controls comprise banks' non-performing loan ratio, equity ratio, size, loan growth rate, cost-income ratio, return on equity, liquidity, and loan ratio. We present our findings in Tables A.15 and A.16 in the internet appendix and yield significantly positive coefficients across all specifications, which corresponds to our main analyses. Additionally, to incorporate originator characteristics more comprehensively, we add originator FE to our baseline regression models. As reported in Tables A.17 and A.18 in the internet appendix, the coefficients on our exogenous variables of main interest are again in line with our previous results.

**Drawing random samples:**

Fourth, we take into account that our sample contains an unequal number of non-defaulted and defaulted loans as well as of non-delinquent and delinquent loans. For instance, only 3% of our observations refer to defaulted loans, and only 10% of our observations include delinquent loans (see Table 2). To ensure that our results are not driven by the fact that we underweight defaulted and delinquent loan observations, we re-estimate our baseline regression models based on one hundred randomly drawn and more balanced samples. For this purpose and comparable to the approach by Gardner and Mills (1989) and Griffin et al. (2014), we create each sample by using either all our defaulted or all our delinquent loans from our sample and randomly draw from the remaining loans twice the number of defaulted or delinquent loans, respectively. We present our findings in Table A.19 in the internet appendix. The distributions of the coefficients and corresponding p-values strengthen the results in our main analyses.

# VIII Conclusions

In this paper, we empirically explore portfolio replenishment in securitization on a highly granular level. Our paper is, to the best of our knowledge, the first to study portfolio replenishment and contributes to the broad literature on agency conflicts in securitization by highlighting a not yet researched possibility for originators to exploit existing leeway. In particular, we analyze whether originators select loans of lower quality for portfolio replenishment than for initial securitization. We focus on ABS backed by SME loans, which need to be clearly distinguished from the other type of securitizations backed by corporate loans – that is, CLOs – due to significant differences in the extent of inherent agency conflicts.

We obtain our extensive securitization data set from ED, the first and so far only central repository under the ECB's ABS loan-level reporting initiative. Applying several regression models and propensity score matchings, a large set of control variables, several FE, and a variety of robustness tests, our results indicate that loans added to ABS portfolios after the transactions' closing perform worse than those of the initial portfolio. Importantly, at issuance, investors seem not to be aware of this potential negative impact of portfolio replenishment because it is not reflected in ABS tranche prices. Moreover, we reveal that originators induce the differences in loan performance since they exploit their information advantage by deliberately adding low-quality loans, which indeed perform poorly after securitization. Originators' reputation efforts, increasing transparency in the ABS market, and most effectively, their interaction are powerful in mitigating this adverse behavior and, thus, agency conflicts in securitization.

The implications of our study are threefold. First, from an academic perspective, our analysis of ABS backed by SME loans may induce further research on portfolio replenishment focusing on ABS backed by other types of underlying assets in the future. Particularly, in the case of ABS backed by credit card loans, portfolio replenishment seems to be indispensable as those assets are typically short-term and exhibit highly flexible loan balances. Second, we provide evidence that the novel securitization framework in the European Union, which requires, as of 2019, loans transferred to simple, transparent, and standardized (STS) securitizations after the transactions' closing to meet the same eligibility criteria as the initial underlying exposures,

may be important for revitalizing a trustworthy securitization market. Our results support this requirement because we indicate the need to strengthen investor protection, reduce originators' discretionary leeway in portfolio replenishment, and enforce regulatory oversight. Third, our finding that an increase in transparency in the ABS market is effective in mitigating the adverse effects of portfolio replenishment on investors underpins the recently established more extensive and granular disclosure requirements in securitization markets.

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# IX Appendix

Table 1: Definitions of our variables

| Variable | Description | Data source |
|---|---|---|
| *Replenishment measure* | | |
| Incoming Loan | Indicator variable equal to one for loans that are not yet included in the ABS portfolio at the time when the transaction is reported to ED for the first time and zero otherwise. | ED (AS1, AS2), own calculation |
| *Ex ante loan quality and ex post loan performance measures* | | |
| PD | Loan probability of default, estimated based on a logit regression reported in Table A.6 in the internet appendix. | ED (AS1, AS3, AS4, AS7, AS15, AS16, AS18, AS26, AS42, AS50, AS51, AS54, AS55, AS56, AS65, AS80, AS121, AS124, AS125, CS3, CS6), own calculation |
| LGD | Bank internal loss given default estimate. | ED (AS37) |
| Default | Indicator variable equal to one if the borrower has ever defaulted on the loan and zero otherwise. | ED (AS121, AS124, AS125), own calculation |
| Default Amount | Natural logarithm of the maximum loan default amount during the loan term. | ED (AS125), own calculation |
| Delinquency | Indicator variable equal to one if the borrower has ever been in arrears, either with respect to principal or interest payments and zero otherwise. | ED (AS115, AS117), own calculation |
| Delinquent Amount | Natural logarithm of the maximum sum of principal and interest arrears during the loan term. | ED (AS115, AS117), own calculation |
| Number of Days in Delinquency | Natural logarithm of the maximum number of days for which the borrower delays principal or interest payments during the loan term. | ED (AS116, AS118), own calculation |

Table 1: Definitions of our variables (continued)

| Variable | Description | Data source |
|---|---|---|
| *Controls* | | |
| Interest Rate | Loan interest rate (%). | ED (AS80) |
| Collateralization | Indicator variable equal to one if a loan is collateralized and zero otherwise. | ED (AS26, CS3, CS6), own calculation |
| Years since Loan Origination | Natural logarithm of the time period, expressed in years, between the loan origination and the respective reporting date. | ED (AS1, AS50), own calculation |
| Loan Years to Maturity | Natural logarithm of the remaining years to maturity at the time of the respective reporting date. | ED (AS1, AS51), own calculation |
| Current Balance | Natural logarithm of the current loan balance at the respective reporting quarter. | ED (AS55), own calculation |
| Securitized Loan Ratio | Ratio of the outstanding loan balance at the time of securitization to the original loan amount. | ED (AS54, AS56), own calculation |
| Pool Time | Number of quarters a loan is included in the ABS portfolio. | ED (AS1, AS3), own calculation |
| Lending Relationship | Indicator variable equal to one if a borrower borrows at least twice from the same bank and zero otherwise. | ED (AS3, AS4, AS7), own calculation |
| Loan Uniqueness | Natural logarithm of the number of loans that were originated in the same year and that can be assigned to the same one-digit NACE industry code as well as to the same two-digit postcode area. | ED (AS15, AS16, AS42, AS50), own calculation |

Table 1: Definitions of our variables (continued)

| Variable | Description | Data source |
|---|---|---|
| *Mitigating factors* | | |
| Frequent Issuer | Indicator variable equal to one if the respective originator issues at least two securitization transactions in our sample and zero otherwise. | ED (AS2, AS4), own calculation |
| High-Volume Issuer | Indicator variable equal to one if the respective originator issues at least two securitization transactions and if its total ABS volume in $t$ divided by its total liabilities in $t$ is larger than the mean of this ratio across all originators and time periods at least once during our sample period and zero otherwise. | ED (AS2, AS4), FitchConnect, own calculation |
| Transparent Loan | Indicator variable equal to one for loans that are originated after the bank adopted the requirements of the ABS loan-level reporting initiative and zero otherwise. | ED (AS1, AS50), own calculation |
| *Market pricing* | | |
| Yield Spread (%) | Tranche coupon payments above the reference interest rate at tranche origination if the coupon is floating. In case of a fixed interest, the *Yield spread* is calculated by the initially determined interest rate minus the risk-free rate with the most suitable maturity. The risk-free rate is defined by the ECB yield spread index of all sovereign bonds, which are "AAA" rated in the Euro area. | ECB, ED, FRED, S&P Global, Refinitiv Datastream, own calculation |
| Rating | The continuous average tranche credit rating assigned by the three CRAs Moodys, Fitch, and S&P. The variable is defined as 1 for the best average rating of "AAA", 2 for "AA" up to 10 for the worst possible rating "D". | S&P Global, own calculation |

Table 1: Definitions of our variables (continued)

| Variable | Description | Data source |
|---|---|---|
| Maturity Mismatch | Ratio of the tranche term to the average loan term when we observe the transaction for the first time. | ED (AS1, A50, AS51), S&P Global, own calculation |
| Replenished Loan Share | The volume of those loans, which are included in the portfolio in the respective quarter, divided by the total portfolio volume. | ED (AS1, AS2, AS55), own calculation |
| Traded Price | The mid price traded on the secondary market. | S&P Global |
| Bid-Ask Spread | Difference between bid and ask price divided by the bid price. | S&P Global, own calculation |
| Daily Price Change | The quarterly mean of the fraction in which the absolute value of the daily mid price change traded on the secondary market ($p_t$ - $p_{t-1}$) is divided by the mid price $p_{t-1}$. | S&P Global, own calculation |
| Price Volatility | Standard deviation of the mid price $p_t$ in the respective reporting quarter. | S&P Global, own calculation |
| Tranche Term | Logarithmized tranche term in years. | ED, S&P Global, own calculation |

This table presents the definitions of the variables used in our analysis. All variables with the exception of the market pricing variables refer to the loan level, the ones for market pricing refer to the tranche level. In the third column, the field numbers stated in brackets refer to the official SME reporting template by the ECB.

Table 2: Summary statistics

| Variable | N | Mean | SD | p10 | p50 | p90 |
|---|---|---|---|---|---|---|
| *Replenishment measure* | | | | | | |
| Incoming Loan | 9,528,558 | 0.46 | 0.50 | 0.00 | 0.00 | 1.00 |
| *Ex ante loan quality and and ex post loan performance measures* | | | | | | |
| PD | 9,528,535 | 0.03 | 0.08 | 0.00 | 0.01 | 0.05 |
| LGD | 8,771,945 | 0.25 | 0.20 | 0.04 | 0.19 | 0.54 |
| Default | 9,528,558 | 0.03 | 0.16 | 0.00 | 0.00 | 0.00 |
| Default Amount | 9,528,558 | 0.20 | 1.43 | 0.00 | 0.00 | 0.00 |
| Delinquency | 9,528,558 | 0.10 | 0.31 | 0.00 | 0.00 | 1.00 |
| Delinquent Amount | 9,528,558 | 0.79 | 2.36 | 0.00 | 0.00 | 5.25 |
| Number of Days in Del. | 9,528,558 | 0.31 | 1.03 | 0.00 | 0.00 | 0.69 |
| *Controls* | | | | | | |
| Interest Rate (%) | 9,528,558 | 3.53 | 1.70 | 1.48 | 3.33 | 5.75 |
| Collateralization | 9,528,558 | 0.73 | 0.44 | 0.00 | 1.00 | 1.00 |
| Years since Loan Origination | 9,528,558 | 1.35 | 0.63 | 0.49 | 1.34 | 2.22 |
| Loan Years to Maturity | 9,528,558 | 1.28 | 0.76 | 0.23 | 1.25 | 2.38 |
| Current Balance | 9,528,558 | 9.98 | 1.87 | 8.01 | 9.97 | 12.18 |
| Securitized Loan Ratio | 9,528,558 | 0.72 | 0.27 | 0.32 | 0.81 | 1.00 |
| Pool Time | 9,528,558 | 9.98 | 5.79 | 3.00 | 9.00 | 19.00 |
| Lending Relationship | 9,528,558 | 0.62 | 0.49 | 0.00 | 1.00 | 1.00 |
| Loan Uniqueness | 9,528,558 | 6.12 | 1.44 | 4.09 | 6.28 | 7.82 |
| *Mitigating factors* | | | | | | |
| Frequent Issuer | 9,528,558 | 0.64 | 0.48 | 0.00 | 1.00 | 1.00 |
| High-Frequent Issuer | 9,304,771 | 0.38 | 0.49 | 0.00 | 1.00 | 1.00 |
| Transparent Loan | 9,528,558 | 0.33 | 0.47 | 0.00 | 0.00 | 1.00 |

This table reports the descriptive statistics for the variables used in our analysis. Variables are described in Table 1. N refers to the number of observations. SD means standard deviation. p10, p50, and p90 represent the tenth, fiftieth, and the ninetieth percentile.

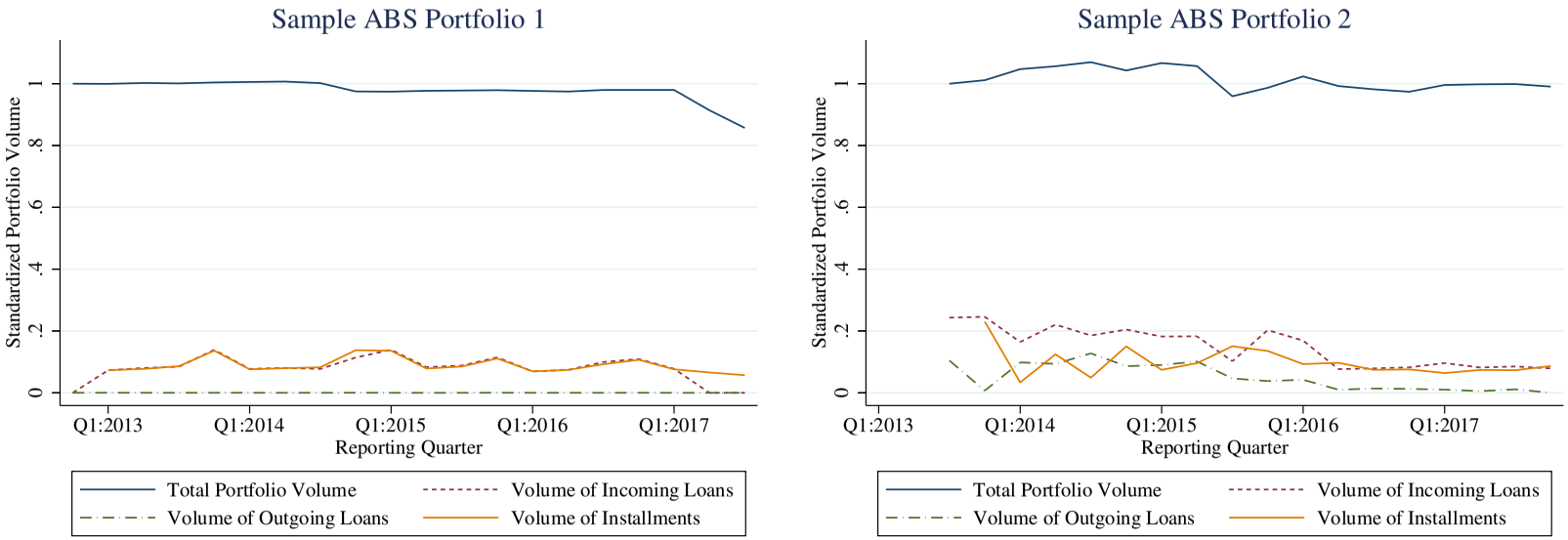


Figure 1: Development of standardized total portfolio volume, volume of *Incoming Loans*, volume of *Outgoing Loans*, and Volume of Installments for two exemplary ABS portfolios in our sample during our observation period

Table 3: Performance of *Incoming Loans* (Baseline regression)

| | Default | Default Amount | Delinquency | Delinquent Amount | Number of Days in Del. |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Incoming Loan | 0.00419*** | 0.0388*** | 0.0104*** | 0.0737*** | 0.0189** |
| | (0.0013) | (0.0130) | (0.0027) | (0.0219) | (0.0096) |
| Interest Rate | 0.00730*** | 0.0691*** | 0.0246*** | 0.176*** | 0.0854*** |
| | (0.0004) | (0.0038) | (0.0011) | (0.0076) | (0.0032) |
| Collateralization | 0.00495*** | 0.0645*** | 0.0273*** | 0.220*** | 0.0916*** |
| | (0.0011) | (0.0131) | (0.0031) | (0.0276) | (0.0094) |
| Years since Loan Origination | 0.0129*** | 0.145*** | 0.00693 | 0.0832 | 0.0225 |
| | (0.0028) | (0.0280) | (0.0074) | (0.0618) | (0.0232) |
| Loan Years to Maturity | -0.00920*** | -0.0940*** | 0.00293 | -0.0626*** | 0.00151 |
| | (0.0011) | (0.0111) | (0.0018) | (0.0142) | (0.0070) |
| Current Balance | 0.00620*** | 0.0790*** | 0.00839*** | 0.129*** | 0.0313*** |
| | (0.0005) | (0.0056) | (0.0008) | (0.0088) | (0.0030) |
| Securitized Loan Ratio | 0.0291*** | 0.302*** | 0.0378*** | 0.344*** | 0.180*** |
| | (0.0038) | (0.0404) | (0.0066) | (0.0542) | (0.0232) |
| Pool Time | -0.00120*** | -0.0137*** | 0.0000930 | -0.00273 | -0.00541*** |
| | (0.0002) | (0.0023) | (0.0004) | (0.0029) | (0.0011) |
| Lending Relationship | -0.00109 | -0.00578 | -0.0217*** | -0.147*** | -0.0694*** |
| | (0.0009) | (0.0092) | (0.0015) | (0.0111) | (0.0064) |
| Loan Uniqueness | -0.0000190 | -0.000188 | -0.000433 | -0.00465 | -0.000196 |
| | (0.0002) | (0.0020) | (0.0005) | (0.0035) | (0.0017) |
| Rep. quarter x ABS portfolio FE | Yes | Yes | Yes | Yes | Yes |
| Loan origination year FE | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes |
| Loan type FE | Yes | Yes | Yes | Yes | Yes |
| Borrower type FE | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,528,549 | 9,528,549 | 9,528,549 | 9,528,549 | 9,528,549 |
| Adj. $R^2$ | 0.28 | 0.06 | 0.17 | 0.17 | 0.12 |

This table reports the analysis on whether *Incoming Loans* exhibit lower loan performance than non-incoming loans. Variables are described in Table 1. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 4: Performance of *Incoming Loans* (Subsample analysis)

| | Default | Default Amount | Delinquency | Delinquent Amount | Number of Days in Del. |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Incoming Loan | 0.0109*** | 0.110*** | 0.0234*** | 0.146*** | 0.00390 |
| | (0.0024) | (0.0261) | (0.0064) | (0.0498) | (0.0183) |
| Interest Rate | 0.00512*** | 0.0466*** | 0.0223*** | 0.152*** | 0.0770*** |
| | (0.0004) | (0.0040) | (0.0014) | (0.0098) | (0.0038) |
| Collateralization | 0.00381*** | 0.0511*** | 0.0291*** | 0.258*** | 0.0958*** |
| | (0.0013) | (0.0156) | (0.0043) | (0.0407) | (0.0133) |
| Years since Loan Origination | -0.00239 | -0.0194 | 0.00645 | 0.0869 | 0.0297 |
| | (0.0034) | (0.0380) | (0.0145) | (0.1262) | (0.0523) |
| Loan Years to Maturity | -0.00756*** | -0.0665*** | 0.00407 | -0.0566** | 0.00913 |
| | (0.0012) | (0.0119) | (0.0030) | (0.0224) | (0.0098) |
| Current Balance | 0.00415*** | 0.0504*** | 0.00378*** | 0.0859*** | 0.0175*** |
| | (0.0006) | (0.0071) | (0.0007) | (0.0102) | (0.0034) |
| Securitized Loan Ratio | -0.000414 | -0.0197 | -0.00399 | 0.0124 | 0.0271 |
| | (0.0039) | (0.0432) | (0.0105) | (0.0883) | (0.0325) |
| Pool Time | 0.00267*** | 0.0270*** | 0.00533*** | 0.0371*** | 0.0126*** |
| | (0.0004) | (0.0049) | (0.0013) | (0.0099) | (0.0033) |
| Lending Relationship | -0.0000722 | -0.000817 | -0.0186*** | -0.142*** | -0.0523*** |
| | (0.0006) | (0.0063) | (0.0015) | (0.0112) | (0.0060) |
| Loan Uniqueness | 0.00128*** | 0.0126*** | -0.0000750 | 0.00357 | 0.00522** |
| | (0.0002) | (0.0023) | (0.0006) | (0.0049) | (0.0022) |
| Rep. quarter x ABS portfolio FE | Yes | Yes | Yes | Yes | Yes |
| Loan origination year FE | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes |
| Loan type FE | Yes | Yes | Yes | Yes | Yes |
| Borrower type FE | Yes | Yes | Yes | Yes | Yes |
| $N$ | 3,311,128 | 3,311,128 | 3,311,128 | 3,311,128 | 3,311,128 |
| Adj. $R^2$ | 0.04 | 0.04 | 0.20 | 0.19 | 0.09 |

This table reports the analysis on whether *Incoming Loans* exhibit lower loan performance than non-incoming loans, only using observations from ABS portfolios, for which the transactions' closing is within our observation period. Variables are described in Table 1. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 5: Performance of *Incoming Loans* (Loan term analysis)

| Dependent Variable | Default | Default Amount | Delinquency | Delinquent Amount | Number of Days in Del. | Default | Default Amount | Delinquency | Delinquent Amount | Number of Days in Del. |
|---|---|---|---|---|---|---|---|---|---|---|
| Incoming Loan | 0.00299** | 0.0269** | 0.0102*** | 0.0656*** | 0.0171* | 0.00482*** | 0.0448*** | 0.0114*** | 0.0816*** | 0.0230** |
| | (0.0013) | (0.0128) | (0.0026) | (0.0207) | (0.0090) | (0.0013) | (0.0128) | (0.0027) | (0.0221) | (0.0097) |
| Varying loan term measures | Yes | Yes | Yes | Yes | Yes | No | No | No | No | No |
| RQ x ABS p. FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| LOY FE | Yes | Yes | Yes | Yes | Yes | No | No | No | No | No |
| LOY x RY FE | No | No | No | No | No | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,528,536 | 9,528,536 | 9,528,536 | 9,528,536 | 9,528,536 | 9,528,536 | 9,528,536 | 9,528,536 | 9,528,536 | 9,528,536 |
| Adj. $R^2$ | 0.28 | 0.06 | 0.17 | 0.17 | 0.12 | 0.28 | 0.06 | 0.17 | 0.17 | 0.12 |
| Incoming Loan | 0.00546*** | 0.0522*** | 0.0121*** | 0.0905*** | 0.0256*** | 0.00527*** | 0.0480*** | 0.0106*** | 0.0790*** | 0.0197** |
| | (0.0013) | (0.0133) | (0.0027) | (0.0219) | (0.0096) | (0.0013) | (0.0134) | (0.0027) | (0.0218) | (0.0096) |
| RQ x ABS p. FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| LOY FE | Yes | Yes | Yes | Yes | Yes | No | No | No | No | No |
| YsLO FE | Yes | Yes | Yes | Yes | Yes | No | No | No | No | No |
| YtM FE | Yes | Yes | Yes | Yes | Yes | No | No | No | No | No |
| LOY x YsLO FE | No | No | No | No | No | Yes | Yes | Yes | Yes | Yes |
| LOY x YtM FE | No | No | No | No | No | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,528,536 | 9,528,536 | 9,528,536 | 9,528,536 | 9,528,536 | 9,528,536 | 9,528,536 | 9,528,536 | 9,528,536 | 9,528,536 |
| Adj. $R^2$ | 0.28 | 0.07 | 0.17 | 0.18 | 0.12 | 0.28 | 0.07 | 0.17 | 0.18 | 0.12 |

This table reports the analysis on whether *Incoming Loans* exhibit lower loan performance than non-incoming loans, additionally controlling for varying loan term measures and a number of additional FEs. When varying our loan term measures, we replace *Years since Loan Origination* and *Loan Years to Maturity* by the non-logarithmized and squared values of those variables. RQ is the abbreviation for reporting quarter, YtM for years to maturity, LOY for loan origination year, and YsLO for years since loan origination. Industry FE, loan type FE, and borrower type FE are included but not reported. Variables are described in Table 1. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 6: Performance of *Incoming Loans*: Portfolio effect

| Estimator | Default | Default Amount | Delinquency | Delinquent Amount | Number of Days in Delinquency |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Nearest neighbor ($n = 1$) | $0.0059^{***}$ | $0.0649^{***}$ | $0.0078^{**}$ | 0.0547 | $0.0309^{**}$ |
| | (0.0014) | (0.0182) | (0.0047) | (0.0364) | (0.0146) |
| Nearest neighbor ($n = 5$) | $0.0059^{***}$ | $0.0638^{***}$ | $0.0099^{***}$ | $0.0531^{*}$ | $0.0380^{***}$ |
| | (0.0014) | (0.0141) | (0.0036) | (0.0281) | (0.0115) |
| Nearest neighbor ($n = 10$) | $0.0059^{***}$ | $0.0643^{***}$ | $0.0089^{***}$ | $0.0457^{**}$ | $0.0334^{***}$ |
| | (0.0014) | (0.0131) | (0.0034) | (0.0261) | (0.0107) |
| Nearest neighbor ($n = 20$) | $0.0059^{***}$ | $0.0640^{***}$ | $0.0093^{***}$ | $0.0478^{**}$ | $0.0342^{***}$ |
| | (0.0015) | (0.0125) | (0.0033) | (0.0253) | (0.0105) |
| Nearest neighbor ($n = 50$) | $0.0059^{***}$ | $0.0653^{***}$ | $0.0081^{***}$ | $0.0379^{**}$ | $0.0334^{***}$ |
| | (0.0015) | (0.0122) | (0.0033) | (0.0251) | (0.0104) |
| N | | | | | 1,059,323 |
| Number of *Incoming Loans* | | | | | 552,884 |
| Number of *Outgoings Loans* | | | | | 506,439 |

This table provides estimates of the mean differences of our loan performance measures between *Incoming Loans* and *Outgoing Loans*, based on a propensity score matching. Propensity scores are estimated based on a logit regression, reported in Table A.8 in the internet appendix, where the endogenous variable is the dummy *Incoming Loan*. Based on these propensity scores, we apply the nearest-neighbor (N – N) matching for matching *Incoming Loans* and *Outgoing Loans* (e.g., Stuart, 2010). This matching algorithm compares each *Incoming Loan* with the arithmetic average of $n$ *Outgoing Loans*, having the closest propensity scores. We assume $n$ = 1, 5, 10, 20, and 50 (with returning). For each loan in our sample, we only retain the point(s) in time when the loan is added to the ABS portfolio and/or when it leaves the not yet maturing ABS portfolio. *Outgoing Loans* are defined as loans that are no longer included in the portfolio from one quarter to another. Variables are defined in Table 1. N refers to the number of observations. $^{*}$, $^{**}$, and $^{***}$ denote significance at the 10%, 5%, and 1% levels.

Table 7: Tranche-level analysis (Emission pricing data)

| | Yield spread | Yield spread | Yield spread |
|---|---|---|---|
| | (1) | (2) | (3) |
| Maturity Mismatch | -0.343*** | -0.725*** | -0.399 |
| | (0.0648) | (0.2232) | (0.2637) |
| Maturity Mismatch x Rating | | | -0.126*** |
| | | | (0.0329) |
| Controls | No | Yes | Yes |
| Emission year FE | Yes | Yes | Yes |
| Country FE | Yes | Yes | Yes |
| Rating FE | Yes | Yes | Yes |
| Reference Rate FE | Yes | Yes | Yes |
| $N$ | 72 | 72 | 72 |
| Adj. $R^2$ | 0.77 | 0.77 | 0.82 |

This table reports the analysis on whether the *Maturity Mismatch* affects investors demand for the ABS yield. Variables are described in Table 1. The control variables contain the portfolio volume, the average ABS term as well as the average values of the control variables defined at the loan-level, *Interest Rate*, *Collateralization*, *Securitized Loan Ratio*, *Current Balance*, *Lending Relationship*, and *Loan Uniqueness* observed at the point in time when the transaction is reported to ED for the first time. Robust standard errors that are clustered with respect to the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 8: Tranche-level analysis (Daily pricing data)

| | Traded Price | Traded Price | Traded Price | Traded Price | Bid-ask Spread | Bid-ask Spread | Daily Price Change | Daily Price Change | Price Volatility | Price Volatility |
|---|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| Replenished Loan Share | -15.91*** | 0.746 | 36.36*** | -43.54*** | 0.0140*** | 0.0119*** | 0.277*** | -0.148 | 3.024* | -5.073 |
| | (4.2098) | (5.4155) | (5.8808) | (13.6289) | (0.0038) | (0.0034) | (0.0728) | (0.1303) | (1.5418) | (3.7907) |
| PD (Replenished Loan Share) | | 1.415 | | | | 0.00434*** | | -0.0991* | | 0.619** |
| | | (1.4584) | | | | (0.0015) | | (0.0491) | | (0.2578) |
| Replenished Loan Volume x PD (RLS) | | -13.01*** | | | | 0.000618 | | 0.346*** | | 6.039* |
| | | (3.7260) | | | | (0.0029) | | (0.1020) | | (3.2591) |
| Controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Reporting Quarter x Country FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Rating FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Reference Rate FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| $N$ | 18,108 | 18,108 | 5,579 | 12,511 | 18,083 | 18,108 | 18,108 | 18,083 | 18,108 | 18,108 |
| Adj. $R^2$ | 0.85 | 0.85 | 0.79 | 0.90 | 0.60 | 0.60 | 0.01 | 0.01 | 0.49 | 0.50 |

This table reports the analysis on whether the replenished loan share affects the pricing of the respective ABS in the secondary market. RLS means the *Replenished Loan Share*. The main variables are described in Table 1. The control variables contain the portfolio volume, the average ABS term as well as the average values of the control variables defined at the loan-level, *Interest Rate*, *Collateralization*, *Securitized Loan Ratio*, *Current Balance*, *Pool Time*, *Lending Relationship*, and *Loan Uniqueness*. Robust standard errors that are clustered with respect to the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 9: Bank intention analysis (Baseline regression & interaction effects analysis)

| | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PD | 0.844*** | | | | | | | |
| | (0.1307) | | | | | | | |
| LGD | | 0.0202** | | | | | | |
| | | (0.0092) | | | | | | |
| PD x LGD | | | 1.413*** | | | | | |
| | | | (0.3022) | | | | | |
| PD x Default | | | | 0.409*** | | | | |
| | | | | (0.0668) | | | | |
| PD x Default Amount | | | | | 0.0362*** | | | |
| | | | | | (0.0064) | | | |
| PD x Delinquency | | | | | | 0.0709*** | | |
| | | | | | | (0.0195) | | |
| PD x Delinquent Amount | | | | | | | 0.0103*** | |
| | | | | | | | (0.0026) | |
| PD x Number of Days in Delinquency | | | | | | | | 0.0516*** |
| | | | | | | | | (0.0101) |
| Loan & borrower controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Rep. quarter x ABS portfolio FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan origination year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Borrower type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,528,526 | 8,771,945 | 8,771,925 | 9,528,526 | 9,528,526 | 9,528,526 | 9,528,526 | 9,528,526 |
| Adj. $R^2$ | 0.69 | 0.68 | 0.68 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |

This table reports the analysis on whether ex ante loan quality and the interactions between the *PD* and the ex post loan performance measures affect the probability of being added to securitized loan portfolios after the transactions' closing. Variables are described in Table 1. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 10: Bank intention analysis (Subsample analysis)

| | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PD | 0.482*** | | | | | | | |
| | (0.1388) | | | | | | | |
| LGD | | 0.0221* | | | | | | |
| | | (0.0120) | | | | | | |
| PD x LGD | | | 0.204 | | | | | |
| | | | (0.2662) | | | | | |
| PD x Default | | | | 0.431*** | | | | |
| | | | | (0.0734) | | | | |
| PD x Default Amount | | | | | 0.0365*** | | | |
| | | | | | (0.0061) | | | |
| PD x Delinquency | | | | | | 0.269*** | | |
| | | | | | | (0.0634) | | |
| PD x Delinquent Amount | | | | | | | 0.0276*** | |
| | | | | | | | (0.0067) | |
| PD x Number of Days in Delinquency | | | | | | | | 0.0406*** |
| | | | | | | | | (0.0145) |
| Loan & borrower controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Rep. quarter x ABS portfolio FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan origination year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Borrower type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| $N$ | 3,311,118 | 3,190,239 | 3,190,229 | 3,311,118 | 3,311,118 | 3,311,118 | 3,311,118 | 3,311,118 |
| Adj. $R^2$ | 0.78 | 0.79 | 0.79 | 0.78 | 0.78 | 0.78 | 0.78 | 0.78 |

This table reports the analysis on whether ex ante loan quality and the interactions between the *PD* and the ex post loan performance measures affect the probability of being added to securitized loan portfolios after the transactions' closing, only using observations from ABS portfolios, for which the transactions' closing is within our observation period. Variables are described in Table 1. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 11: Bank intention analysis (Loan term analysis)

| Dependent Variable | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|---|---|---|---|---|---|---|
| Loan Quality measure | PD | LGD | PD x LGD | PD x Def. | PD x Del. | PD | LGD | PD x LGD | PD x Def. | PD x Del. |
| Loan Quality & Interactions | 0.580*** (0.1291) | 0.0150 (0.0096) | 0.926*** (0.2853) | 0.330*** (0.0598) | 0.0571*** (0.0170) | 0.842*** (0.1231) | 0.0163** (0.0076) | 1.294*** (0.2684) | 0.422*** (0.0640) | 0.0771*** (0.0203) |
| Varying loan term measures | Yes | Yes | Yes | Yes | Yes | No | No | No | No | No |
| RQ x ABS p. FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| LOY FE | Yes | Yes | Yes | Yes | Yes | No | No | No | No | No |
| LOY x RY FE | No | No | No | No | No | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,528,526 | 8,771,945 | 8,771,945 | 9,528,526 | 9,528,526 | 9,528,513 | 8,771,930 | 8,771,910 | 9,528,513 | 9,528,513 |
| Adj. $R^2$ | 0.69 | 0.68 | 0.68 | 0.69 | 0.69 | 0.70 | 0.69 | 0.69 | 0.70 | 0.70 |
| Loan Quality & Interactions | 0.849*** (0.1308) | 0.0151* (0.0089) | 1.349*** (0.3006) | 0.458*** (0.0662) | 0.0780*** (0.0208) | 0.833*** (0.1302) | 0.012 (0.0073) | 1.277*** (0.2818) | 0.443*** (0.0711) | 0.0635*** (0.0201) |
| RQ x ABS p. FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| LOY FE | Yes | Yes | Yes | Yes | Yes | No | No | No | No | No |
| YsLO FE | Yes | Yes | Yes | Yes | Yes | No | No | No | No | No |
| YtM FE | Yes | Yes | Yes | Yes | Yes | No | No | No | No | No |
| LOY x YsLO FE | No | No | No | No | No | Yes | Yes | Yes | Yes | Yes |
| LOY x YtM FE | No | No | No | No | No | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,528,526 | 8,771,945 | 8,771,925 | 9,528,526 | 9,528,526 | 9,528,513 | 8,771,933 | 8,771,913 | 9,528,513 | 9,528,513 |
| Adj. $R^2$ | 0.70 | 0.69 | 0.69 | 0.70 | 0.70 | 0.71 | 0.70 | 0.70 | 0.71 | 0.71 |

This table reports the analysis on whether ex ante loan quality and the interactions between the *PD* and the ex post loan performance measures affect the probability of being added to securitized loan portfolios after the transactions' closing, additionally controlling for varying loan term measures and a number of additional FEs. When varying our loan term measures, we replace *Years since Loan Origination* and *Loan Years to Maturity* by the non-logarithmized and squared values of those variables. RQ is the abbreviation for reporting quarter, YtM for years to maturity, LOY for loan origination year, and YsLO for years since loan origination. Industry FE, loan type FE, and borrower type FE are included but not reported. Variables are described in Table 1. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 12: Bank intention analysis (Sequential PD estimation)

| | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Sequential PD | 0.442* | | | | | | | |
| | (0.2626) | | | | | | | |
| LGD | | 0.0202** | | | | | | |
| | | (0.0092) | | | | | | |
| Seq. PD x LGD | | | 1.006*** | | | | | |
| | | | (0.3462) | | | | | |
| Seq. PD x Default | | | | 0.624*** | | | | |
| | | | | (0.0929) | | | | |
| Seq. PD x Default Amount | | | | | 0.0666*** | | | |
| | | | | | (0.0092) | | | |
| Seq. PD x Delinquency | | | | | | 0.184*** | | |
| | | | | | | (0.0530) | | |
| Seq. PD x Delinquent Amount | | | | | | | 0.0251*** | |
| | | | | | | | (0.0066) | |
| Seq. PD x Number of Days in Delinquency | | | | | | | | 0.0783*** |
| | | | | | | | | (0.0176) |
| Loan & borrower controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Rep. quarter x ABS portfolio FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan origination year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Borrower type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,465,071 | 8,771,945 | 8,708,510 | 9,465,071 | 9,465,071 | 9,465,071 | 9,465,071 | 9,465,071 |
| Adj. $R^2$ | 0.69 | 0.68 | 0.68 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |

This table reports the analysis on whether ex ante loan quality and the interactions between the *PD* and the ex post loan performance measures affect the probability of being added to securitized loan portfolios after the transactions' closing, based on a sequential PD estimation. Variables are described in Table 1. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 13: Bank intention analysis (Bank internal PD analysis)

| | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| Bank internal PD | 0.00907*** | | | | | | | |
| | (0.0030) | | | | | | | |
| LGD | | 0.0202** | | | | | | |
| | | (0.0092) | | | | | | |
| Bank internal PD x LGD | | | 0.0691*** | | | | | |
| | | | (0.0122) | | | | | |
| Bank internal PD x Default | | | | 0.148*** | | | | |
| | | | | (0.0253) | | | | |
| Bank internal PD x Default Amount | | | | | 0.0129*** | | | |
| | | | | | (0.0023) | | | |
| Bank internal PD x Delinquency | | | | | | 0.0426*** | | |
| | | | | | | (0.0059) | | |
| Bank internal PD x Delinquent Amount | | | | | | | 0.00542*** | |
| | | | | | | | (0.0008) | |
| Bank internal PD x Number of Days in Delinquency | | | | | | | | 0.00985*** |
| | | | | | | | | (0.0022) |
| Loan & borrower controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Rep. quarter x ABS portfolio FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan origination year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Borrower type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,528,534 | 8,771,945 | 8,771,933 | 9,528,534 | 9,528,534 | 9,528,534 | 9,528,534 | 9,528,534 |
| Adj. $R^2$ | 0.69 | 0.68 | 0.68 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |

This table reports the analysis on whether ex ante loan quality and the interactions between the *PD* and the ex post loan performance measures affect the probability of being added to securitized loan portfolios after the transactions' closing. The values of *PD* are replaced by the bank estimated probability of default for 5,018,501 observations. Variables are described in Table 1. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 14: Mitigating factors analysis: Reputation analysis (Loan quality measures)

| | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|
| | (1) | (2) | (3) |
| PD | 1.053*** | | |
| | (0.1813) | | |
| PD x Frequent Issuer | -0.452* | | |
| | (0.2536) | | |
| LGD | | 0.0235 | |
| | | (0.0284) | |
| LGD x Frequent Issuer | | -0.00405 | |
| | | (0.0306) | |
| PD x LGD | | | 0.949** |
| | | | (0.4320) |
| PD x LGD x Frequent Issuer | | | 0.806 |
| | | | (0.4952) |
| Loan & borrower controls | Yes | Yes | Yes |
| FE | Yes | Yes | Yes |
| $N$ | 9,528,526 | 8,771,945 | 8,771,925 |
| Adj. $R^2$ | 0.69 | 0.68 | 0.68 |

This table reports the analysis on whether ex ante loan quality affects the probability of being added to securitized loan portfolios after the transactions' closing, additionally controlling for *Frequent Issuer* and the interaction between the ex ante loan quality measure and *Frequent Issuer*. *Frequent Issuer* is an indicator variable equal to one if the respective originator issues more than one securitization transaction, and zero otherwise. The isolated effect of *Frequent Issuer* is included in the reporting quarter x ABS portfolio FE. Variables are described in Table 1. FE include reporting quarter x ABS portfolio FE, loan origination year FE, industry FE, loan type FE, and borrower type FE. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 15: Mitigating factors analysis: Reputation analysis (Interaction effects analysis)

| | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| PD x Default | 0.494*** | | | | |
| | (0.1006) | | | | |
| PD x Default x Frequent Issuer | -0.251** | | | | |
| | (0.1182) | | | | |
| PD x Default Amount | | 0.0462*** | | | |
| | | (0.0110) | | | |
| PD x Default Amount x Frequent Issuer | | -0.0248** | | | |
| | | (0.0122) | | | |
| PD x Delinquency | | | 0.0671*** | | |
| | | | (0.0203) | | |
| PD x Delinquency x Frequent Issuer | | | 0.0334 | | |
| | | | (0.0639) | | |
| PD x Delinquent Amount | | | | 0.00968*** | |
| | | | | (0.0028) | |
| PD x Delinquent Amount x Frequent Issuer | | | | 0.00459 | |
| | | | | (0.0068) | |
| PD x Number of Days in Delinquency | | | | | 0.0578*** |
| | | | | | (0.0138) |
| PD x Number of Days in Delinquency x Frequent Issuer | | | | | -0.0210 |
| | | | | | (0.0201) |
| Loan & borrower controls | Yes | Yes | Yes | Yes | Yes |
| FE | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,528,526 | 9,528,526 | 9,528,526 | 9,528,526 | 9,528,526 |
| Adj. $R^2$ | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |

This table reports the analysis on whether the interactions between the *PD* and the ex post loan performance measures affect the probability of being added to securitized loan portfolios after the transactions' closing, additionally controlling for *Frequent Issuer* and the interaction among the *PD*, the ex post loan performance measure, and *Frequent Issuer*. *Frequent Issuer* is an indicator variable equal to one if the respective originator issues more than one securitization transaction, and zero otherwise. The isolated effect of *Frequent Issuer* is included in the reporting quarter x ABS portfolio FE. Variables are described in Table 1. FE include reporting quarter x ABS portfolio FE, loan origination year FE, industry FE, loan type FE, and borrower type FE. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 16: Mitigating factors analysis: Reputation analysis II (Loan quality measures)

| | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|
| | (1) | (2) | (3) |
| PD | 1.132*** | | |
| | (0.1719) | | |
| PD x High-Volume Issuer | -0.873*** | | |
| | (0.3172) | | |
| LGD | | 0.006 | |
| | | (0.0123) | |
| LGD x High-Volume Issuer | | 0.043* | |
| | | (0.0228) | |
| PD x LGD | | | 1.498*** |
| | | | (0.3953) |
| PD x LGD x High-Volume Issuer | | | 0.0804 |
| | | | (0.6332) |
| Loan & borrower controls | Yes | Yes | Yes |
| FE | Yes | Yes | Yes |
| $N$ | 9,304,771 | 8,588,596 | 8,588,576 |
| Adj. $R^2$ | 0.69 | 0.68 | 0.68 |

This table reports the analysis on whether ex ante loan quality affects the probability of being added to securitized loan portfolios after the transactions' closing, additionally controlling for *High-Volume Issuer* and the interaction between the ex ante loan quality measure and *High-Volume Issuer*. *High-Volume Issuer* is an indicator variable equal to one if the respective originator issues more than one securitization transaction and simultaneously refinances more than 50 % of its liabilities by issuing securitizations, and zero otherwise. The isolated effect of *High-Volume Issuer* is included in the reporting quarter x ABS portfolio FE. Variables are described in Table 1. FE include reporting quarter x ABS portfolio FE, loan origination year FE, industry FE, loan type FE, and borrower type FE. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 17: Mitigating factors analysis: Reputation analysis II (Interaction effects analysis)

| | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| PD x Default | 0.457*** | | | | |
| | (0.0867) | | | | |
| PD x Default x High-Volume Issuer | -0.221* | | | | |
| | (0.1142) | | | | |
| PD x Default Amount | | 0.041*** | | | |
| | | (0.0088) | | | |
| PD x Default Amount x High-Volume Issuer | | -0.021* | | | |
| | | (0.0109) | | | |
| PD x Delinquency | | | 0.0673*** | | |
| | | | (0.0205) | | |
| PD x Delinquency x High-Volume Issuer | | | 0.0391 | | |
| | | | (0.0712) | | |
| PD x Delinquent Amount | | | | 0.010*** | |
| | | | | (0.0029) | |
| PD x Delinquent Amount x High-Volume Issuer | | | | 0.006 | |
| | | | | (0.0077) | |
| PD x Number of Days in Delinquency | | | | | 0.061*** |
| | | | | | (0.0136) |
| PD x Number of Days in Delinquency x High-Volume Issuer | | | | | -0.0224 |
| | | | | | (0.0217) ) |
| Loan & borrower controls | Yes | Yes | Yes | Yes | Yes |
| FE | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,304,771 | 9,304,771 | 9,304,771 | 9,304,771 | 9,304,771 |
| Adj. $R^2$ | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |

This table reports the analysis on whether the interactions between the *PD* and the ex post loan performance measures affect the probability of being added to securitized loan portfolios after the transactions' closing, additionally controlling for *High-Volume Issuer* and the interaction among the *PD*, the ex post loan performance measure, and *High-Volume Issuer*. *High-Volume Issuer* is an indicator variable equal to one if the respective originator issues more than one securitization transaction and simultaneously refinances more than 50 % of its liabilities by issuing securitizations, and zero otherwise. The isolated effect of *High-Volume Issuer* is included in the reporting quarter x ABS portfolio FE. Variables are described in Table 1. FE include reporting quarter x ABS portfolio FE, loan origination year FE, industry FE, loan type FE, and borrower type FE. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 18: Mitigating factors analysis: Transparency analysis (Loan quality measures)

| | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|
| | (1) | (2) | (3) |
| PD | 0.949*** | | |
| | (0.1387) | | |
| PD x Transparent Loan | -2.539*** | | |
| | (0.2613) | | |
| LGD | | 0.0740*** | |
| | | (0.0122) | |
| LGD x Transparent Loan | | -0.157*** | |
| | | (0.0288) | |
| PD x LGD | | | 2.176*** |
| | | | (0.3136) |
| PD x LGD x Transparent Loan | | | -7.930*** |
| | | | (0.9039) |
| Transparent Loan | 0.286*** | 0.296*** | 0.287*** |
| | (0.0252) | (0.0268) | (0.0253) |
| Loan & borrower controls | Yes | Yes | Yes |
| FE | Yes | Yes | Yes |
| $N$ | 9,528,526 | 8,771,945 | 8,771,925 |
| Adj. $R^2$ | 0.71 | 0.70 | 0.70 |

This table reports the analysis on whether ex ante loan quality affects the probability of being added to securitized loan portfolios after the transactions' closing, additionally controlling for *Transparent Loan* and the interaction between the ex ante loan quality measure and *Transparent Loan*. *Transparent Loan* is an indicator variable equal to one for loans that are originated after the bank adopted the requirements of the ECB's ABS loan-level reporting initiative, and zero otherwise (Ertan et al., 2017). Variables are described in Table 1. FE include reporting quarter x ABS portfolio FE, loan origination year FE, industry FE, loan type FE, and borrower type FE. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 19: Mitigating factors analysis: Transparency analysis (Interaction effects analysis)

| | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| PD x Default | 0.480*** | | | | |
| | (0.0723) | | | | |
| PD x Default x Transparent Loan | -1.010*** | | | | |
| | (0.1442) | | | | |
| PD x Default Amount | | 0.0438*** | | | |
| | | (0.0070) | | | |
| PD x Default Amount x Transparent Loan | | -0.0988*** | | | |
| | | (0.0133) | | | |
| PD x Delinquency | | | 0.104*** | | |
| | | | (0.0262) | | |
| PD x Delinquency x Transparent Loan | | | -1.424*** | | |
| | | | (0.1850) | | |
| PD x Delinquent Amount | | | | 0.0145*** | |
| | | | | (0.0034) | |
| PD x Delinquent Amount x Transparent Loan | | | | -0.160*** | |
| | | | | (0.0216) | |
| PD x Number of Days in Delinquency | | | | | 0.0715*** |
| | | | | | (0.0116) |
| PD x Number of Days in Delinquency x Transparent Loan | | | | | -0.326*** |
| | | | | | (0.0403) |
| Transparent Loan | 0.253*** | 0.253*** | 0.256*** | 0.255*** | 0.255*** |
| | (0.0260) | (0.0260) | (0.0261) | (0.0261) | (0.0260) |
| Loan & borrower controls | Yes | Yes | Yes | Yes | Yes |
| FE | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,528,526 | 9,528,526 | 9,528,526 | 9,528,526 | 9,528,526 |
| Adj. $R^2$ | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |

This table reports the analysis on whether the interactions between the *PD* and the ex post loan performance measures affect the probability of being added to securitized loan portfolios after the transactions' closing, additionally controlling for *Transparent Loan* and the interaction among the *PD*, the ex post loan performance measure, and *Transparent Loan*. *Transparent Loan* is an indicator variable equal to one for loans that are originated after the bank adopted the requirements of the ECB's ABS loan-level reporting initiative, and zero otherwise (Ertan et al., 2017). Variables are described in Table 1. FE include reporting quarter x ABS portfolio FE, loan origination year FE, industry FE, loan type FE, and borrower type FE. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 20: Mitigating factors analysis: Combined reputation and transparency analysis (Loan quality measures)

| | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|
| | (1) | (2) | (3) |
| PD | 0.881*** | | |
| | (0.1357) | | |
| PD x Frequent Issuer x Transparent Loan | -3.187*** | | |
| | (0.4290) | | |
| LGD | | 0.0802*** | |
| | | (0.0138) | |
| LGD x Frequent Issuer x Transparent Loan | | -0.203*** | |
| | | (0.0436) | |
| PD x LGD | | | 2.037*** |
| | | | (0.3012) |
| PD x LGD x Frequent Issuer x Transparent Loan | | | -9.631*** |
| | | | (1.1554) |
| Transparent Loan | 0.284*** | 0.290*** | 0.286*** |
| | (0.0257) | (0.0278) | (0.0256) |
| Loan & borrower controls | Yes | Yes | Yes |
| FE | Yes | Yes | Yes |
| *N* | 9,528,526 | 8,771,945 | 8,771,925 |
| Adj. $R^2$ | 0.71 | 0.70 | 0.70 |

This table reports the analysis on whether ex ante loan quality affects the probability of being added to securitized loan portfolios after the transactions' closing, additionally controlling for the interaction between the ex ante loan quality measure, *Frequent Issuer*, and *Transparent Loan*. *Frequent Issuer* is an indicator variable equal to one if the respective originator issues more than one securitization transaction, and zero otherwise. *Transparent Loan* is an indicator variable equal to one for loans that are originated after the bank adopted the requirements of the ECB's ABS loan-level reporting initiative, and zero otherwise (Ertan et al., 2017). The isolated effect of *Frequent Issuer* is included in the reported fixed effects. Variables are described in Table 1. FE include reporting quarter x ABS portfolio FE, loan origination year FE, industry FE, loan type FE, and borrower type FE. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 21: Mitigating factors analysis: Combined reputation and transparency analysis (Interaction effects analysis)

| | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| PD x Default | 0.462*** | | | | |
| | (0.0690) | | | | |
| PD x Default x Frequent Issuer x Transparent Loan | -1.413*** | | | | |
| | (0.2460) | | | | |
| PD x Default Amount | | 0.0420*** | | | |
| | | (0.0067) | | | |
| PD x Default Amount x Frequent Issuer x Transparent Loan | | -0.144*** | | | |
| | | (0.0231) | | | |
| PD x Delinquency | | | 0.0999*** | | |
| | | | (0.0249) | | |
| PD x Delinquency x Frequent Issuer x Transparent Loan | | | -1.662*** | | |
| | | | (0.2136) | | |
| PD x Delinquent Amount | | | | 0.0138*** | |
| | | | | (0.0032) | |
| PD x Delinquent Amount x Frequent Issuer x Transparent Loan | | | | -0.210*** | |
| | | | | (0.0258) | |
| PD x Number of Days in Delinquency | | | | | 0.0685*** |
| | | | | | (0.0108) |
| PD x Number of Days in Delinquency x Frequent Issuer x Transparent Loan | | | | | -0.423*** |
| | | | | | (0.0518) |
| Transparent Loan | 0.252*** | 0.252*** | 0.256*** | 0.255*** | 0.254*** |
| | (0.0260) | (0.0260) | (0.0261) | (0.0261) | (0.0260) |
| Loan & borrower controls | Yes | Yes | Yes | Yes | Yes |
| FE | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,528,526 | 9,528,526 | 9,528,526 | 9,528,526 | 9,528,526 |
| Adj. $R^2$ | 0.71 | 0.71 | 0.71 | 0.71 | 0.71 |

This table reports the analysis on whether the interactions between the *PD* and the ex post loan performance measures affect the probability of being added to securitized loan portfolios after the transactions' closing, additionally controlling for the interaction between the ex ante loan quality measure, the ex post loan performance measures, *Frequent Issuer*, and *Transparent Loan*. *Frequent Issuer* is an indicator variable equal to one if the respective originator issues more than one securitization transaction, and zero otherwise. *Transparent Loan* is an indicator variable equal to one for loans that are originated after the bank adopted the requirements of the ECB's ABS loan-level reporting initiative, and zero otherwise (Ertan et al., 2017). The isolated effect of *Frequent Issuer* is included in the reported fixed effects. Variables are described in Table 1. FE include reporting quarter x ABS portfolio FE, loan origination year FE, industry FE, loan type FE, and borrower type FE. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 22: Mitigating factors analysis: Combined reputation II and transparency analysis (Loan quality measures)

| | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|
| | (1) | (2) | (3) |
| PD | 0.882*** | | |
| | (0.1407) | | |
| PD x High-Volume Issuer x Transparent Loan | -2.110*** | | |
| | (0.5590) | | |
| LGD | | 0.0518*** | |
| | | (0.0106) | |
| LGD x High-Volume Issuer x Transparent Loan | | -0.140*** | |
| | | (0.0513) | |
| PD x LGD | | | 1.845*** |
| | | | (0.3141) |
| PD x LGD x High-Volume Issuer x Transparent Loan | | | -8.074*** |
| | | | (1.4133) |
| Transparent Loan | 0.262*** | 0.268*** | 0.270*** |
| | (0.0257) | (0.0271) | (0.0257) |
| Loan & borrower controls | Yes | Yes | Yes |
| FE | Yes | Yes | Yes |
| $N$ | 9,304,771 | 8,588,596 | 8,588,576 |
| Adj. $R^2$ | 0.70 | 0.69 | 0.69 |

This table reports the analysis on whether ex ante loan quality affects the probability of being added to securitized loan portfolios after the transactions' closing, additionally controlling for the interaction between the ex ante loan quality measure, *High-Volume Issuer*, and *Transparent Loan*. *High-Volume Issuer* is an indicator variable equal to one if the respective originator issues more than one securitization transaction and simultaneously refinances more than 50 % of its liabilities by issuing securitizations, and zero otherwise. *Transparent Loan* is an indicator variable equal to one for loans that are originated after the bank adopted the requirements of the ECB's ABS loan-level reporting initiative, and zero otherwise (Ertan et al., 2017). The isolated effect of *High-Volume Issuer* is included in the reported fixed effects. Variables are described in Table 1. FE include reporting quarter x ABS portfolio FE, loan origination year FE, industry FE, loan type FE, and borrower type FE. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table 23: Mitigating factors analysis: Combined reputation II and transparency analysis (Interaction effects analysis)

| | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| PD x Default | 0.436*** | | | | |
| | (0.0688) | | | | |
| PD x Default x High-Volume Issuer x Transparent Loan | -0.811*** | | | | |
| | (0.2755) | | | | |
| PD x Default Amount | | 0.0393*** | | | |
| | | (0.007) | | | |
| PD x Default Amount x High-Volume Issuer x Transparent Loan | | -0.0863*** | | | |
| | | (0.0269) | | | |
| PD x Delinquency | | | 0.0898*** | | |
| | | | (0.0236) | | |
| PD x Delinquency x High-Volume Issuer x Transparent Loan | | | -1.445*** | | |
| | | | (0.2759) | | |
| PD x Delinquent Amount | | | | 0.0128*** | |
| | | | | (0.0031 | |
| PD x Delinquent Amount x High-Volume Issuer x Transparent Loan | | | | -0.183*** | |
| | | | | (0.0332) | |
| PD x Number of Days in Delinquency | | | | | 0.0665*** |
| | | | | | (0.0111) |
| PD x Number of Days in Delinquency x High-Volume Issuer x Transparent Loan | | | | | -0.347*** |
| | | | | | (0.0671) |
| Transparent Loan | 0.248*** | 0.248*** | 0.250*** | 0.250*** | 0.249*** |
| | (0.0243) | (0.0243) | (0.0244) | (0.0243) | (0.0243) |
| Loan & borrower controls | Yes | Yes | Yes | Yes | Yes |
| FE | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,304,771 | 9,304,771 | 9,304,771 | 9,304,771 | 9,304,771 |
| Adj. $R^2$ | 0.70 | 0.70 | 0.70 | 0.70 | 0.70 |

This table reports the analysis on whether the interactions between the *PD* and the ex post loan performance measures affect the probability of being added to securitized loan portfolios after the transactions' closing, additionally controlling for the interaction between the ex ante loan quality measure, the ex post loan performance measures, *High-Volume Issuer*, and *Transparent Loan*. *High-Volume Issuer* is an indicator variable equal to one if the respective originator issues more than one securitization transaction and simultaneously refinances more than 50 % of its liabilities by issuing securitizations, and zero otherwise. *Transparent Loan* is an indicator variable equal to one for loans that are originated after the bank adopted the requirements of the ECB's ABS loan-level reporting initiative, and zero otherwise (Ertan et al., 2017). The isolated effect of *High-Volume Issuer* is included in the reported fixed effects. Variables are described in Table 1. FE include reporting quarter x ABS portfolio FE, loan origination year FE, industry FE, loan type FE, and borrower type FE. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

# A Internet Appendix

## Better Be Careful: The Replenishment of ABS backed by SME Loans

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## Guide to the internet appendix:

This internet appendix provides additional analyses for "Better Be Careful: The Replenishment of ABS backed by SME Loans". It is divided into the following five categories:

**Additional mitigating factor analysis:**
First, in Tables A.1 and A.2, we analyze whether the involvement of a management company may also be effective in mitigating agency conflicts in securitization by strengthening external monitoring.

**Sample description:**
Second, the internet appendix describes our sample in more detail. Table A.3 presents our sample selection procedure, and Table A.4 presents our sample distribution for each year and country. In Table A.5, we show the variables' pairwise correlations.

**PD and propensity scores estimation:**
Third, in Table A.6, we report the logit model to estimate the PD for each single loan observation in our sample. Additionally, in Table A.8, we show the results of our logit and probit models to estimate propensity scores used in our portfolio effect analysis.

**Loan term analysis:**
Fourth, we show the distributions of *Years since Loan Origination* and *Loan Years to Maturity*, separately for *Incoming Loans* and non-incoming ones and both for our main sample and subsample, in Figure A.1.

**Robustness checks:**
Fifth, we perform several robustness checks. In Tables A.7 and A.10, we add our five different FE step by step. In Table A.9, we provide the results on the effect of portfolio replenishment on average ABS loan performance based on propensity scores, which are estimated using a probit regression. In Tables A.11 and A.12, we add country FE. In Tables A.13 and A.14, we additionally control for country-specific private monitoring. Tables A.15 and A.16 show our results when we consider bank characteristics as additional control variables. In Tables A.17 and A.18, we additionally incorporate originator FE. In Table A.19, we randomly draw samples to address the underweighting of defaulted and delinquent loan observations.

Table A.1: Additional mitigating factor analysis: Transactions with a management company

| | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PD | 0.615*** | | | | | | | |
| | (0.1484) | | | | | | | |
| LGD | | -0.0749*** | | | | | | |
| | | (0.0172) | | | | | | |
| PD x LGD | | | 0.00753 | | | | | |
| | | | (0.3190) | | | | | |
| PD x Default | | | | 0.236** | | | | |
| | | | | (0.0947) | | | | |
| PD x Default Amount | | | | | 0.0180** | | | |
| | | | | | (0.0088) | | | |
| PD x Delinquency | | | | | | 0.0121 | | |
| | | | | | | (0.0076) | | |
| PD x Delinquent Amount | | | | | | | 0.00136 | |
| | | | | | | | (0.0011) | |
| PD x Number of Days in Delinquency | | | | | | | | 0.00849 |
| | | | | | | | | (0.0079) |
| Loan & borrower controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Rep. quarter x ABS portfolio FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan origination year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Borrower type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| $N$ | 2,476,010 | 2,199,760 | 2,199,760 | 2,476,010 | 2,476,010 | 2,476,010 | 2,476,010 | 2,476,010 |
| Adj. $R^2$ | 0.68 | 0.66 | 0.66 | 0.68 | 0.68 | 0.68 | 0.68 | 0.68 |

This table reports the analysis on whether ex ante loan quality and the interactions between the *PD* and the ex post loan performance measures affect the probability of being added to securitized loan portfolios after the transactions' closing, only using observations from ABS transactions, in which a management company is involved. Variables are described in Table 1. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table A.2: Additional mitigating factor analysis: Transactions without a management company

| | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PD | 0.853*** | | | | | | | |
| | (0.1654) | | | | | | | |
| LGD | | 0.0239** | | | | | | |
| | | (0.0103) | | | | | | |
| PD x LGD | | | 1.871*** | | | | | |
| | | | (0.3761) | | | | | |
| PD x Default | | | | 0.540*** | | | | |
| | | | | (0.0887) | | | | |
| PD x Default Amount | | | | | 0.0435*** | | | |
| | | | | | (0.0074) | | | |
| PD x Delinquency | | | | | | 0.303*** | | |
| | | | | | | (0.0642) | | |
| PD x Delinquent Amount | | | | | | | 0.0349*** | |
| | | | | | | | (0.0066) | |
| PD x Number of Days in Delinquency | | | | | | | | 0.0893*** |
| | | | | | | | | (0.0168) |
| Loan & borrower controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Rep. quarter x ABS portfolio FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan origination year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Borrower type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| $N$ | 6,685,346 | 6,247,618 | 6,247,598 | 6,685,346 | 6,685,346 | 6,685,346 | 6,685,346 | 6,685,346 |
| Adj. $R^2$ | 0.72 | 0.71 | 0.71 | 0.72 | 0.72 | 0.72 | 0.72 | 0.72 |

This table reports the analysis on whether ex ante loan quality and the interactions between the *PD* and the ex post loan performance measures affect the probability of being added to securitized loan portfolios after the transactions' closing, only using observations from ABS transactions, in which no management company is involved. Variables are described in Table 1. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table A.3: Overview of our sample selection procedure

| | Loans | Borrowers | ABS portfolios | Observations at the loan level |
|---|---|---|---|---|
| **Data reported to ED from 2012-2017** | **6,612,261** | **2,517,548** | **172** | **32,026,829** |
| **Less** | | | | |
| Voluntary monthly reporting | 0 | 0 | 0 | 7,757,147 |
| Relevant variables are missing | 3,643,354 | 869,433 | 15 | 11,540,252 |
| Relevant variables are implausible (e.g., days in arrears exceed the loan period, negative interest loan balance or interest rate) | 756,842 | 147,852 | 4 | 1,132,347 |
| Ambiguous originators | 436,289 | 382,480 | 51 | 2,068,525 |
| **Final Sample** | **1,775,776** | **1,117,783** | **102** | **9,528,558** |

This table reports our sample selection procedure.

Table A.4: Number of loans and SMEs by year and country

| | 2012 | | 2013 | | 2014 | | 2015 | | 2016 | | 2017 | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Country | Loans | SMEs | Loans | SMEs | Loans | SMEs | Loans | SMEs | Loans | SMEs | Loans | SMEs |
| BE | 125,178 | 69,691 | 296,161 | 153,046 | 280,996 | 146,974 | 272,571 | 140,054 | 258,460 | 131,029 | 277,485 | 142,085 |
| DE | 0 | 0 | 0 | 0 | 0 | 0 | 24,500 | 18,509 | 28,006 | 20,785 | 210,750 | 199,051 |
| ES | 1,895 | 1,723 | 25,574 | 26,594 | 8,697 | 8,082 | 70,213 | 62,867 | 89,295 | 80,070 | 89,902 | 82,111 |
| FR | 0 | 0 | 21,542 | 7,877 | 17,549 | 4,715 | 103,388 | 57,723 | 169,232 | 83,431 | 243,441 | 106,367 |
| IT | 84,475 | 73,395 | 86,786 | 75,905 | 77,387 | 58,013 | 117,400 | 102,045 | 145,439 | 125,837 | 139,469 | 122,273 |
| NL | 24,944 | 18,591 | 0 | 0 | 11,663 | 6,680 | 9,839 | 5,723 | 7,942 | 4,718 | 5,963 | 3,603 |
| PT | 0 | 0 | 29,838 | 20,232 | 38,032 | 24,842 | 62,642 | 40,780 | 61,796 | 43,199 | 51,060 | 36,277 |
| Total | 236,492 | 163,400 | 460,921 | 281,984 | 434,324 | 259,383 | 660,553 | 427,701 | 760,170 | 489,069 | 1,018,070 | 691,767 |

This table reports the number of loans and SMEs for each year and country. Our sample consists of seven different countries: Belgium (BE), Germany (DE), Spain (ES), France (FR), Italy (IT), the Netherlands (NL), and Portugal (PT).

Table A.5: Correlations

| | | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) | (12) | (13) | (14) | (15) | (16) | (17) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) | Incoming Loan | 1.00 | | | | | | | | | | | | | | | | |
| (2) | PD | -0.10 | 1.00 | | | | | | | | | | | | | | | |
| (3) | LGD | 0.00 | 0.09 | 1.00 | | | | | | | | | | | | | | |
| (4) | Default | -0.06 | 0.49 | 0.04 | 1.00 | | | | | | | | | | | | | |
| (5) | Default Amount | -0.03 | 0.07 | 0.03 | 0.85 | 1.00 | | | | | | | | | | | | |
| (6) | Delinquency | -0.02 | 0.13 | -0.00 | 0.30 | 0.32 | 1.00 | | | | | | | | | | | |
| (7) | Delinquent Amount | -0.02 | 0.14 | -0.00 | 0.36 | 0.38 | 0.97 | 1.00 | | | | | | | | | | |
| (8) | Number of Days in Del. | -0.03 | 0.08 | 0.03 | 0.42 | 0.46 | 0.80 | 0.82 | 1.00 | | | | | | | | | |
| (9) | Interest Rate (%) | -0.21 | 0.18 | 0.22 | 0.09 | 0.06 | 0.14 | 0.12 | 0.14 | 1.00 | | | | | | | | |
| (10) | Collateralization | 0.05 | 0.00 | -0.27 | -0.00 | -0.02 | -0.03 | -0.02 | -0.04 | -0.21 | 1.00 | | | | | | | |
| (11) | Years since Loan O. | -0.36 | 0.15 | -0.04 | 0.07 | 0.04 | 0.11 | 0.11 | 0.10 | 0.17 | 0.05 | 1.00 | | | | | | |
| (12) | Loan Years to Maturity | -0.03 | 0.02 | -0.18 | 0.01 | 0.03 | 0.07 | 0.08 | 0.06 | -0.12 | 0.22 | 0.15 | 1.00 | | | | | |
| (13) | Current Balance | 0.03 | 0.10 | -0.13 | 0.05 | 0.07 | 0.07 | 0.10 | 0.05 | -0.17 | 0.19 | 0.08 | 0.64 | 1.00 | | | | |
| (14) | Securitized Loan Ratio | 0.23 | 0.07 | 0.01 | 0.04 | 0.04 | 0.08 | 0.08 | 0.06 | 0.02 | 0.00 | -0.23 | 0.21 | 0.22 | 1.00 | | | |
| (15) | Pool Time | -0.14 | 0.07 | -0.01 | 0.04 | 0.04 | 0.09 | 0.09 | 0.08 | 0.13 | 0.08 | 0.42 | 0.30 | 0.24 | 0.30 | 1.00 | | |
| (16) | Lending Relationship | 0.10 | 0.01 | -0.14 | -0.00 | -0.03 | -0.12 | -0.11 | -0.11 | -0.16 | 0.27 | -0.05 | 0.02 | 0.03 | 0.03 | 0.15 | 1.00 | |
| (17) | Loan Uniqueness | 0.05 | -0.07 | -0.04 | -0.03 | -0.01 | -0.01 | -0.02 | -0.01 | -0.05 | -0.07 | -0.26 | -0.10 | -0.12 | 0.09 | 0.03 | 0.07 | 1.00 |

This table reports the variables' pairwise correlations. Variables are described in Table 1 in the main body of the paper.

Table A.6: Logit regression to estimate the *PD*

| | Default |
|---|---|
| Interest Rate | 0.00518*** |
| | (0.000444) |
| Collateralization | 0.00296 |
| | (0.00235) |
| Years since Loan Origination | 0.0155*** |
| | (0.00150) |
| Loan Years to Maturity | -0.00954*** |
| | (0.00110) |
| Current Balance | 0.00567*** |
| | (0.000600) |
| Seucritized Loan Ratio | 0.0279*** |
| | (0.00497) |
| Pool Time | -0.000153 |
| | (0.000288) |
| Lending Relationship | 0.00346 |
| | (0.00327) |
| Loan Uniqueness | 0.00253*** |
| | (0.000321) |
| Reporting quarter FE | Yes |
| Country FE | Yes |
| Loan origination year FE | Yes |
| Industry FE | Yes |
| Loan type FE | Yes |
| Borrower type FE | Yes |
| $N$ | 9,770,258 |
| Pseudo $R^2$ | 0.29 |

This table reports the logit model to estimate a PD for every single loan observation in our sample. Variables are described in Table 1 in the main body of the paper. Marginal effects are reported and robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

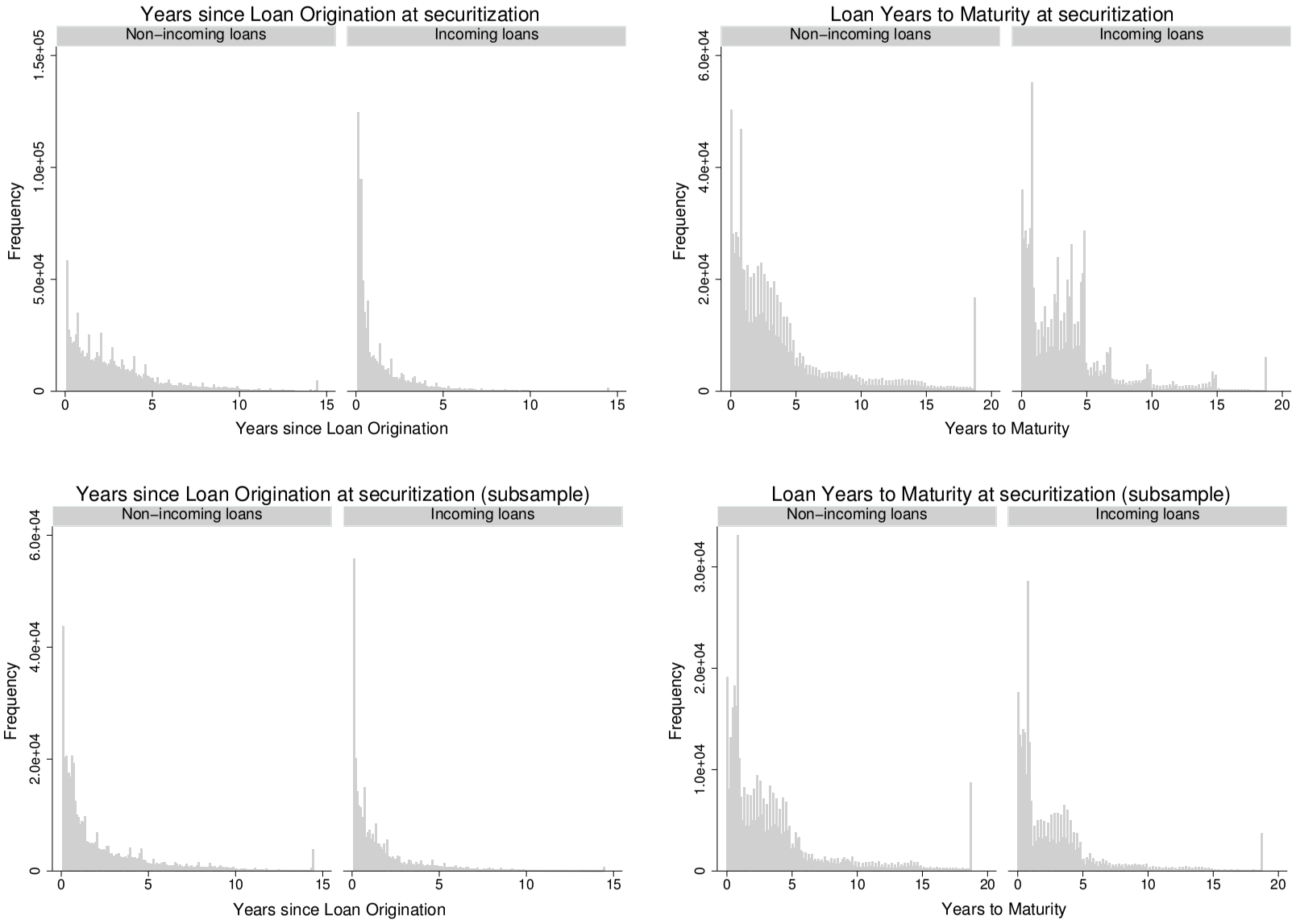


Figure A.1: Years since loan origination and loan years to maturity at securitization grouped by *Incoming Loan*

Table A.7: Performance of *Incoming Loans* (Robustness: Adding FE step by step)

| | Default | Default | Default | Default | Default | Default |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Incoming Loan | 0.00316*** | 0.00193 | 0.00382*** | 0.00392*** | 0.00417*** | 0.00419*** |
| | (0.0012) | (0.0013) | (0.0013) | (0.0013) | (0.0013) | (0.0013) |
| Interest Rate | 0.00701*** | 0.00734*** | 0.00740*** | 0.00736*** | 0.00721*** | 0.00730*** |
| | (0.0004) | (0.0004) | (0.0004) | (0.0004) | (0.0004) | (0.0004) |
| Collateralization | 0.00453*** | 0.00520*** | 0.00538*** | 0.00452*** | 0.00534*** | 0.00495*** |
| | (0.0014) | (0.0014) | (0.0014) | (0.0014) | (0.0011) | (0.0011) |
| Years since | 0.00655*** | 0.00617*** | 0.00879*** | 0.00846*** | 0.0131*** | 0.0129*** |
| Loan Origination | (0.0012) | (0.0012) | (0.0018) | (0.0018) | (0.0028) | (0.0028) |
| Loan Years to | -0.0107*** | -0.0105*** | -0.0103*** | -0.0102*** | -0.00941*** | -0.00920*** |
| Maturity | (0.0010) | (0.0011) | (0.0011) | (0.0011) | (0.0010) | (0.0011) |
| Current Balance | 0.00603*** | 0.00622*** | 0.00636*** | 0.00655*** | 0.00632*** | 0.00620*** |
| | (0.0005) | (0.0005) | (0.0005) | (0.0005) | (0.0005) | (0.0005) |
| Securitized | 0.0239*** | 0.0274*** | 0.0251*** | 0.0249*** | 0.0288*** | 0.0291*** |
| Loan Ratio | (0.0027) | (0.0031) | (0.0031) | (0.0031) | (0.0038) | (0.0038) |
| Pool Time | -0.000708*** | -0.00104*** | -0.00104*** | -0.00102*** | -0.00120*** | -0.00120*** |
| | (0.0002) | (0.0002) | (0.0002) | (0.0002) | (0.0002) | (0.0002) |
| Lending | -0.000354 | -0.000479 | -0.000248 | -0.000594 | -0.000665 | -0.00109 |
| Relationship | (0.0009) | (0.0009) | (0.0009) | (0.0009) | (0.0009) | (0.0009) |
| Loan | 0.00166*** | 0.00149*** | 0.000866*** | 0.0000990 | 0.0000374 | -0.0000190 |
| Uniqueness | (0.0002) | (0.0001) | (0.0001) | (0.0002) | (0.0002) | (0.0002) |
| Reporting quarter FE | Yes | No | No | No | No | No |
| ABS portfolio FE | Yes | No | No | No | No | No |
| Rep. q. x ABS p. FE | No | Yes | Yes | Yes | Yes | Yes |
| Loan o. year FE | No | No | Yes | Yes | Yes | Yes |
| Industry FE | No | No | No | Yes | Yes | Yes |
| Loan type FE | No | No | No | No | Yes | Yes |
| Borrower type FE | No | No | No | No | No | Yes |
| $N$ | 9,528,555 | 9,528,549 | 9,528,549 | 9,528,549 | 9,528,549 | 9,528,549 |
| Adj. $R^2$ | 0.27 | 0.27 | 0.27 | 0.28 | 0.28 | 0.28 |

This table reports the analysis on whether *Incoming Loans* exhibit lower loan performance than non-incoming loans, adding our five different FE step by step and exemplarily utilizing *Default* as endogenous variable. Variables are described in Table 1 in the main body of the paper. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table A.8: Logit and probit regressions to estimate propensity scores

| | Incoming Loan | Incoming Loan |
|---|---|---|
| | (1) | (2) |
| Interest Rate | 0.000661 | 0.000237 |
| | (0.00190) | (0.00194) |
| Collateralization | 0.00707* | 0.00694 |
| | (0.00420) | (0.00447) |
| Years since Loan Origination | -0.366*** | -0.382*** |
| | (0.0395) | (0.0389) |
| Loan Years to Maturity | 0.102*** | 0.104*** |
| | (0.00744) | (0.00738) |
| Current Balance | 0.0167*** | 0.0176*** |
| | (0.00206) | (0.00220) |
| Securitized Loan Ratio | -0.217*** | -0.209*** |
| | (0.0439) | (0.0443) |
| Pool Time | 0.0105*** | 0.0104*** |
| | (0.00233) | (0.00235) |
| Lending Relationship | -0.00607 | -0.00496 |
| | (0.00397) | (0.00407) |
| Loan Uniqueness | -0.0113*** | -0.0129*** |
| | (0.00190) | (0.00182) |
| Reporting quarter x ABS portfolio FE | Yes | Yes |
| Loan origination year FE | Yes | Yes |
| Industry FE | Yes | Yes |
| Loan type FE | Yes | Yes |
| Borrower type FE | Yes | Yes |
| $N$ | 1,059,323 | 1,059,323 |
| Adj. $R^2$ | 0.70 | 0.70 |
| Estimation method | Logit | Probit |

This table reports the logit and probit models to estimate propensity scores. Variables are described in Table 1 in the main body of the paper. Marginal effects are reported and robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table A.9: Performance of *Incoming Loans*: Portfolio effect (Robustness: Probit estimation)

| Estimator | Default | Default Amount | Delinquency | Delinquent Amount | Number of Days in Delinquency |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Nearest neighbor ($n = 1$) | 0.0056*** | 0.0639*** | 0.0081** | 0.0367 | 0.0337** |
| | (0.0018) | (0.0192) | (0.005) | (0.0373) | (0.0151) |
| Nearest neighbor ($n = 5$) | 0.0054*** | 0.0605*** | 0.0082** | 0.0372* | 0.0286*** |
| | (0.0015) | (0.0150) | (0.0038) | (0.0297) | (0.0121) |
| Nearest neighbor ($n = 10$) | 0.0056*** | 0.0626*** | 0.0085*** | 0 .0393* | 0.0298*** |
| | (0.0014) | (0.0141) | (0.0037) | (0.0281) | (0.0115) |
| Nearest neighbor ($n = 20$) | 0.0058*** | 0 .0631*** | 0.0063*** | 0.0234 | 0.0275*** |
| | (0.0014) | (0.0136) | (0.0036) | (0.0275) | (0.0113) |
| Nearest neighbor ($n = 50$) | 0.0053*** | 0.0576*** | 0.0065* | 0.0227 | 0.0294*** |
| | (0.0015) | (0.0036) | (0.0033) | (0.0272) | (0.0112) |
| N | | | | | 1,059,323 |
| Number of *Incoming Loans* | | | | | 552,884 |
| Number of *Outgoings Loans* | | | | | 506,439 |

This table provides estimates of the mean differences of our loan performance measures between *Incoming Loans* and *Outgoing Loans*, based on a propensity score matching. For each loan in our sample, we only retain the point(s) in time when the loan is added to the ABS portfolio and/or when it leaves the not yet maturing ABS portfolio. *Outgoing Loans* are defined as loans, which are no longer included in the portfolio from one quarter to another. Propensity scores are estimated based on a probit regression, reported in Table A.8 in the internet appendix, where the endogenous variable is the dummy *Incoming Loan*. Variables are defined in Table 1 in the main body of the paper. N refers to the number of observations. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table A.10: Bank intention analysis (Robustness: Adding FE step by step)

| | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) |
| PD | 0.795*** | 0.563*** | 0.490*** | 0.528*** | 0.825*** | 0.844*** |
| | (0.0862) | (0.0630) | (0.0585) | (0.0625) | (0.1259) | (0.1307) |
| Interest Rate | -0.0302*** | -0.0247*** | -0.0268*** | -0.0270*** | -0.0285*** | -0.0285*** |
| | (0.0023) | (0.0018) | (0.0018) | (0.0018) | (0.0021) | (0.0021) |
| Collateralization | -0.0292 | 0.00973* | 0.00230 | 0.00374 | 0.000474 | 0.000608 |
| | (0.0179) | (0.0056) | (0.0049) | (0.0049) | (0.0051) | (0.0050) |
| Years since | -0.291*** | -0.324*** | -0.251*** | -0.251*** | -0.265*** | -0.265*** |
| Loan Origination | (0.0263) | (0.0280) | (0.0511) | (0.0512) | (0.0519) | (0.0519) |
| Loan Years to | 0.108*** | 0.115*** | 0.121*** | 0.122*** | 0.122*** | 0.123*** |
| Maturity | (0.0103) | (0.0111) | (0.0099) | (0.0100) | (0.0096) | (0.0096) |
| Current Balance | -0.00601*** | -0.00227* | -0.00114 | -0.00116 | -0.00199 | -0.00265** |
| | (0.0018) | (0.0014) | (0.0011) | (0.0011) | (0.0013) | (0.0013) |
| Securitized | -0.234*** | -0.336*** | -0.299*** | -0.300*** | -0.317*** | -0.317*** |
| Loan Ratio | (0.0649) | (0.0759) | (0.0696) | (0.0695) | (0.0704) | (0.0702) |
| Pool Time | -0.0202*** | -0.0210*** | -0.0235*** | -0.0235*** | -0.0230*** | -0.0230*** |
| | (0.0024) | (0.0024) | (0.0021) | (0.0021) | (0.0022) | (0.0022) |
| Lending | -0.00398 | -0.00556** | -0.00813*** | -0.00745*** | -0.00844*** | -0.00966*** |
| Relationship | (0.0034) | (0.0025) | (0.0022) | (0.0020) | (0.0021) | (0.0023) |
| Loan | -0.00122 | -0.00365 | -0.00239 | -0.000746 | -0.00151 | -0.00186 |
| Uniqueness | (0.0036) | (0.0034) | (0.0019) | (0.0026) | (0.0027) | (0.0027) |
| Reporting quarter FE | Yes | No | No | No | No | No |
| ABS portfolio FE | Yes | No | No | No | No | No |
| Rep. q. x ABS p. FE | No | Yes | Yes | Yes | Yes | Yes |
| Loan o. year FE | No | No | Yes | Yes | Yes | Yes |
| Industry FE | No | No | No | Yes | Yes | Yes |
| Loan type FE | No | No | No | No | Yes | Yes |
| Borrower type FE | No | No | No | No | No | Yes |
| $N$ | 9,528,532 | 9,528,526 | 9,528,526 | 9,528,526 | 9,528,526 | 9,528,526 |
| Adj. $R^2$ | 0.57 | 0.66 | 0.69 | 0.69 | 0.69 | 0.69 |

This table reports the analysis on whether low-quality loans are more likely to be *Incoming Loans*, adding our five different FE step by step and exemplarily utilizing *PD* as exogenous variable of main interest. Variables are described in Table 1 in the main body of the paper. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table A.11: Performance of *Incoming Loans* (Robustness: Applying country FE)

| | Default | Default Amount | Delinquency | Delinquent Amount | Number of Days in Del. |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Incoming Loan | 0.00419*** | 0.0388*** | 0.0104*** | 0.0738*** | 0.0189** |
| | (0.0013) | (0.0130) | (0.0027) | (0.0219) | (0.0096) |
| Loan and borrower controls | Yes | Yes | Yes | Yes | Yes |
| Rep. quarter x ABS portfolio FE | Yes | Yes | Yes | Yes | Yes |
| Loan origination year FE | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes |
| Loan type FE | Yes | Yes | Yes | Yes | Yes |
| Borrower type FE | Yes | Yes | Yes | Yes | Yes |
| Country FE | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,528,549 | 9,528,549 | 9,528,549 | 9,528,549 | 9,528,549 |
| Adj. $R^2$ | 0.28 | 0.06 | 0.17 | 0.17 | 0.12 |

This table reports the analysis on whether *Incoming Loans* exhibit lower loan performance than non-incoming loans, additionally applying country FE. Variables are described in Table 1 in the main body of the paper. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. $^{*}$, $^{**}$ and $^{***}$ denote significance at the 10 %, 5 %, and 1 % levels.

Table A.12: Bank intention analysis (Robustness: Applying country FE)

| | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PD | 0.844*** | | | | | | | |
| | (0.1307) | | | | | | | |
| LGD | | 0.0202** | | | | | | |
| | | (0.0092) | | | | | | |
| PD x LGD | | | 1.413*** | | | | | |
| | | | (0.3022) | | | | | |
| PD x Default | | | | 0.409*** | | | | |
| | | | | (0.0667) | | | | |
| PD x Default Amount | | | | | 0.0362*** | | | |
| | | | | | (0.0064) | | | |
| PD x Delinquency | | | | | | 0.0709*** | | |
| | | | | | | (0.0195) | | |
| PD x Delinquent Amount | | | | | | | 0.0103*** | |
| | | | | | | | (0.0026) | |
| PD x Number of Days in Delinquency | | | | | | | | 0.0516*** |
| | | | | | | | | (0.0101) |
| Loan & borrower controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Rep. quarter x ABS portfolio FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan origination year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Borrower type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Country FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,528,526 | 8,771,945 | 8,771,925 | 9,528,526 | 9,528,526 | 9,528,526 | 9,528,526 | 9,528,526 |
| Adj. $R^2$ | 0.69 | 0.68 | 0.68 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |

This table reports the analysis on whether ex ante loan quality and the interactions between the *PD* and the ex post loan performance measures affect the probability of being added to securitized loan portfolios after the transactions' closing, additionally applying country FE. Variables are described in Table 1 in the main body of the paper. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table A.13: Performance of *Incoming Loans* (Robustness: Controlling for bank monitoring)

| | Default | Default Amount | Delinquency | Delinquent Amount | Number of Days in Del. |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Incoming Loan | 0.00419*** | 0.0388*** | 0.0104*** | 0.0737*** | 0.0189** |
| | (0.0013) | (0.0130) | (0.0027) | (0.0219) | (0.0096) |
| Private Monitoring | -0.00936*** | -0.109*** | -0.00498 | -0.0922** | 0.0231 |
| | (0.0020) | (0.0174) | (0.0058) | (0.0384) | (0.0189) |
| Loan and borrower controls | Yes | Yes | Yes | Yes | Yes |
| Rep. quarter x ABS portfolio FE | Yes | Yes | Yes | Yes | Yes |
| Loan origination year FE | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes |
| Loan type FE | Yes | Yes | Yes | Yes | Yes |
| Borrower type FE | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,528,549 | 9,528,549 | 9,528,549 | 9,528,549 | 9,528,549 |
| Adj. $R^2$ | 0.28 | 0.06 | 0.17 | 0.17 | 0.12 |

This table reports the analysis on whether *Incoming Loans* exhibit lower loan performance than non-incoming loans, additionally controlling for *Private Monitoring* obtained from Barth et al. (2013). *Private Monitoring* measures whether private monitoring is possible in a specific country with higher values indicating more private monitoring. Variables are described in Table 1 in the main body of the paper. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table A.14: Bank intention analysis (Robustness: Controlling for bank monitoring)

| | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PD | 0.844*** | | | | | | | |
| | (0.1307) | | | | | | | |
| LGD | | 0.0202** | | | | | | |
| | | (0.0092) | | | | | | |
| PD x LGD | | | 1.412*** | | | | | |
| | | | (0.3022) | | | | | |
| PD x Default | | | | 0.409*** | | | | |
| | | | | (0.0667) | | | | |
| PD x Default Amount | | | | | 0.0362*** | | | |
| | | | | | (0.0064) | | | |
| PD x Delinquency | | | | | | 0.0709*** | | |
| | | | | | | (0.0194) | | |
| PD x Delinquent Amount | | | | | | | 0.0103*** | |
| | | | | | | | (0.0026) | |
| PD x Number of Days in Delinquency | | | | | | | | 0.0516*** |
| | | | | | | | | (0.0101) |
| Private Monitoring | -0.0555*** | -0.0569*** | -0.0693*** | -0.0551*** | -0.0551*** | -0.0555*** | -0.0554*** | -0.0553*** |
| | (0.0068) | (0.0124) | (0.0139) | (0.0066) | (0.0066) | (0.0065) | (0.0065) | (0.0066) |
| Loan & borrower controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Rep. quarter x ABS portfolio FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan origination year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Borrower type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,528,526 | 8,771,945 | 8,771,925 | 9,528,526 | 9,528,526 | 9,528,526 | 9,528,526 | 9,528,526 |
| Adj. $R^2$ | 0.69 | 0.68 | 0.68 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |

This table reports the analysis on whether ex ante loan quality and the interactions between the *PD* and the ex post loan performance measures affect the probability of being added to securitized loan portfolios after the transactions' closing, additionally controlling for *Private Monitoring* obtained from Barth et al. (2013). *Private Monitoring* measures whether private monitoring is possible in a specific country with higher values indicating more private monitoring. Variables are described in Table 1 in the main body of the paper. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table A.15: Performance of *Incoming Loans* (Robustness: Controlling for originator characteristics)

| | Default | Default Amount | Delinquency | Delinquent Amount | Number of Days in Del. |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Incoming Loan | 0.00468*** | 0.0446*** | 0.0108*** | 0.0799*** | 0.0217* |
| | (0.0013) | (0.0131) | (0.0032) | (0.0257) | (0.0114) |
| Loan & borrower controls | Yes | Yes | Yes | Yes | Yes |
| Originator controls | Yes | Yes | Yes | Yes | Yes |
| Rep. quarter x ABS portfolio FE | Yes | Yes | Yes | Yes | Yes |
| Loan origination year FE | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes |
| Loan type FE | Yes | Yes | Yes | Yes | Yes |
| Borrower type FE | Yes | Yes | Yes | Yes | Yes |
| $N$ | 8,132,560 | 8,132,560 | 8,132,560 | 8,132,560 | 8,132,560 |
| Adj. $R^2$ | 0.30 | 0.04 | 0.13 | 0.14 | 0.08 |

This table reports the analysis on whether *Incoming Loans* exhibit lower loan performance than non-incoming loans, additionally controlling for originator characteristics. Variables are described in Table 1 in the main body of the paper. *NPL Ratio* is the ratio of non-performing loans volume to gross loans volume, *Equity Ratio* is the ratio of equity to total assets, *Bank Size* is the natural logarithm of total assets, *Loan Growth* is the loan growth compared to the previous year, *CIR* is the cost-income ratio, *RoE* is the return on equity, *Liquidity* is the ratio of liquid assets to deposits and short-term funding, and *Loan Ratio* is the sum of net loans divided by total assets. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table A.16: Bank intention analysis (Robustness: Controlling for originator characteristics)

| | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PD | 0.895*** | | | | | | | |
| | (0.1407) | | | | | | | |
| LGD | | 0.0330*** | | | | | | |
| | | (0.0090) | | | | | | |
| PD x LGD | | | 1.712*** | | | | | |
| | | | (0.3266) | | | | | |
| PD x Default | | | | 0.487*** | | | | |
| | | | | (0.0664) | | | | |
| PD x Default Amount | | | | | 0.0471*** | | | |
| | | | | | (0.0064) | | | |
| PD x Delinquency | | | | | | 0.0649*** | | |
| | | | | | | (0.0186) | | |
| PD x Delinquent Amount | | | | | | | 0.00984*** | |
| | | | | | | | (0.0026) | |
| PD x Number of Days in Delinquency | | | | | | | | 0.0585*** |
| | | | | | | | | (0.0109) |
| Loan & borrower & originator controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Rep. quarter x ABS portfolio FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan origination year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Borrower type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| $N$ | 8,132,537 | 7,408,382 | 7,408,362 | 8,132,537 | 8,132,537 | 8,132,537 | 8,132,537 | 8,132,537 |
| Adj. $R^2$ | 0.72 | 0.71 | 0.71 | 0.72 | 0.72 | 0.72 | 0.7237 | 0.72 |

This table reports the analysis on whether ex ante loan quality and the interactions between the *PD* and the ex post loan performance measures affect the probability of being added to securitized loan portfolios after the transactions' closing, additionally controlling for originator characteristics. Variables are described in Table 1 in the main body of the paper. *NPL Ratio* is the ratio of non-performing loans volume to gross loans volume, *Equity Ratio* is the ratio of equity to total assets, *Bank Size* is the natural logarithm of total assets, *Loan Growth* is the loan growth compared to the previous year, *CIR* is the cost-income ratio, *RoE* is the return on equity, *Liquidity* is the ratio of liquid assets to deposits and short-term funding, and *Loan Ratio* is the sum of net loans divided by total assets. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table A.17: Performance of *Incoming Loans* (Robustness: Applying originator FE)

| | Default | Default Amount | Delinquency | Delinquent Amount | Number of Days in Del. |
|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) |
| Incoming Loan | 0.00419*** | 0.0388*** | 0.0104*** | 0.0737*** | 0.0189** |
| | (0.0013) | (0.0130) | (0.0027) | (0.0219) | (0.0096) |
| Loan and borrower controls | Yes | Yes | Yes | Yes | Yes |
| Rep. quarter x ABS portfolio FE | Yes | Yes | Yes | Yes | Yes |
| Loan origination year FE | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes |
| Loan type FE | Yes | Yes | Yes | Yes | Yes |
| Borrower type FE | Yes | Yes | Yes | Yes | Yes |
| Originator FE | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,528,547 | 9,528,547 | 9,528,547 | 9,528,547 | 9,528,547 |
| Adj. $R^2$ | 0.28 | 0.06 | 0.17 | 0.17 | 0.12 |

This table reports the analysis on whether *Incoming Loans* exhibit lower loan performance than non-incoming loans, additionally applying originator FE. Variables are described in Table 1 in the main body of the paper. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, ** and *** denote significance at the 10 %, 5 %, and 1 % levels.

Table A.18: Bank intention analysis (Robustness: Applying originator FE)

| | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan | Inc. Loan |
|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) |
| PD | 0.844*** | | | | | | | |
| | (0.1307) | | | | | | | |
| LGD | | 0.0202** | | | | | | |
| | | (0.0092) | | | | | | |
| PD x LGD | | | 1.413*** | | | | | |
| | | | (0.3022) | | | | | |
| PD x Default | | | | 0.409*** | | | | |
| | | | | (0.0668) | | | | |
| PD x Default Amount | | | | | 0.0362*** | | | |
| | | | | | (0.0064) | | | |
| PD x Delinquency | | | | | | 0.0709*** | | |
| | | | | | | (0.0195) | | |
| PD x Delinquent Amount | | | | | | | 0.0103*** | |
| | | | | | | | (0.0026) | |
| PD x Number of Days in Delinquency | | | | | | | | 0.0516*** |
| | | | | | | | | (0.0101) |
| Loan & borrower controls | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Rep. quarter x ABS portfolio FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan origination year FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Industry FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Loan type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Borrower type FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Originator FE | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| $N$ | 9,528,526 | 8,771,945 | 8,771,925 | 9,528,526 | 9,528,526 | 9,528,526 | 9,528,526 | 9,528,526 |
| Adj. $R^2$ | 0.69 | 0.68 | 0.68 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |

This table reports the analysis on whether ex ante loan quality and the interactions between the *PD* and the ex post loan performance measures affect the probability of being added to securitized loan portfolios after the transactions' closing, additionally applying originator FE. Variables are described in Table 1 in the main body of the paper. Robust standard errors that are clustered with respect to the interaction between the reporting quarter and the ABS portfolio are in parentheses. *, **, and *** denote significance at the 10%, 5%, and 1% levels.

Table A.19: Performance of *Incoming Loans* and bank intention analysis (Robustness: Drawing random samples)

| | Mean coefficient | p10 coefficient | p50 coefficient | p90 coefficient | Mean p-value | p10 p-value | p50 p-value | p90 p-value | Skewness p-value | Kurtosis p-value |
|---|---|---|---|---|---|---|---|---|---|---|
| *Loan performance analysis: Endogenous variables* | | | | | | | | | | |
| (1) Default | 0.017 | 0.016 | 0.017 | 0.018 | 0.035 | 0.024 | 0.032 | 0.052 | 1.836 | 8.420 |
| (2) Default Amount | 0.128 | 0.114 | 0.129 | 0.139 | 0.119 | 0.086 | 0.112 | 0.164 | 1.564 | 7.151 |
| (3) Delinquency | 0.025 | 0.025 | 0.025 | 0.026 | 0.000 | 0.000 | 0.000 | 0.000 | 1.304 | 5.798 |
| (4) Delinquent Amount | 0.166 | 0.162 | 0.166 | 0.170 | 0.000 | 0.000 | 0.000 | 0.000 | 0.800 | 3.913 |
| (5) Number of Days in Delinquency | 0.060 | 0.059 | 0.060 | 0.062 | 0.003 | 0.002 | 0.003 | 0.004 | 0.858 | 4.058 |
| *Bank awareness analysis: Exogenous variables* | | | | | | | | | | |
| (1) PD | 0.668 | 0.659 | 0.667 | 0.677 | 0.000 | 0.000 | 0.000 | 0.000 | 1.286 | 4.445 |
| (2) LGD | 0.015 | 0.013 | 1.015 | 0.017 | 0.101 | 0.051 | 0.088 | 0.159 | 1.390 | 5.492 |
| (3) PD x LGD | 1.003 | 0.973 | 1.004 | 0.017 | 0.000 | 0.000 | 0.000 | 0.000 | 1.484 | 5.122 |
| (4) PD x Default | 0.437 | 0.430 | 0.437 | 0.444 | 0.000 | 0.000 | 0.000 | 0.000 | 1.682 | 6.225 |
| (5) PD x Default Amount | 0.034 | 0.034 | 0.034 | 0.035 | 0.000 | 0.000 | 0.000 | 0.000 | 1.099 | 3.690 |
| (6) PD x Delinquency | 0.106 | 0.105 | 0.107 | 0.108 | 0.000 | 0.000 | 0.000 | 0.000 | 0.012 | 2.856 |
| (7) PD x Delinquency Amount | 0.014 | 0.014 | 0.014 | 0.015 | 0.000 | 0.000 | 0.000 | 0.000 | 0.099 | 2.793 |
| (8) PD x Number of Days in Delinquency | 0.057 | 0.056 | 0.057 | 0.057 | 0.000 | 0.000 | 0.000 | 0.000 | 0.280 | 2.427 |

This table reports the results for our loan performance analysis and bank awareness analysis, based on random samples. We re-estimate our two main regression models based on one hundred randomly drawn and more balanced samples. For this purpose and comparable to the approach by Gardner and Mills (1989), we create each sample by using either all our defaulted or all our delinquent loans from our sample and randomly draw from the remaining loans twice the number of defaulted or delinquent loans, respectively. p10, p50, and p90 represent the tenth, fiftieth, and the ninetieth percentile.