

**The Effect of Secondary Market Liquidity on Primary Market Liquidity:  
A Natural Experiment in Peer-to-Peer Lending\***

Craig Holden, Indiana University  
[cholden@indiana.edu](mailto:cholden@indiana.edu)

Mingfeng Lin, Georgia Institute of Technology  
[mingfeng.lin@scheller.gatech.edu](mailto:mingfeng.lin@scheller.gatech.edu)

Kai Lu, University of Science and Technology of China  
[kailu666@ustc.edu.cn](mailto:kailu666@ustc.edu.cn)

Zaiyan Wei, Purdue University  
[zaiyan@purdue.edu](mailto:zaiyan@purdue.edu)

Jun Yang, Indiana University  
[jy4@indiana.edu](mailto:jy4@indiana.edu)

This Draft: May 27, 2019

---

\* We appreciate comments of seminar participants at Indiana University and University of Washington, and the comments from Daniel Carvalho, Ruslan Goyenko, Ryan Israelsen, Robert Jennings, Veronika Pool, Alessandro Previtero, Charles Trzcinka, Jarrad Harford, Phil Bond, Stephan Siegel, Yao Zeng and Jennifer Koski.

# The Effect of Secondary Market Liquidity on Primary Market Liquidity: A Natural Experiment in Peer-to-Peer Lending

## Abstract

We use the unexpected closure of Prosper.com's secondary market to study how secondary market liquidity affects primary market liquidity, as well as how the liquidity of one market affects that of a competing market. Our unique setting is free from the confounding effects of information asymmetry and moral hazard that are present in most other markets, allowing us to quantify the liquidity decrease in Prosper's primary market caused by the reduction in secondary market liquidity following the closure of its secondary market. We show that primary market liquidity decreases for both institutional and individual loans across all levels of credit quality. Specifically, funding time increases, and funding quantity fall substantially. Moreover, credit spreads increase by approximately 90 to 130 bps for the loans most actively traded in the secondary market before its closure. We further document a spillover effect of the negative liquidity shock from Prosper to Lending Club, a close competitor in peer-to-peer (P2P) lending market. Our research is the first to directly measure the effect of secondary market liquidity on primary market liquidity in all three dimensions: funding time, quantity, and cost.

**Keywords:** Liquidity Premium, Secondary Market, Primary Market, P2P

**JEL:** G12, G23

## 1. Introduction

In a seminal theoretical paper on liquidity, Brunnermeier and Pedersen (2009) show that market liquidity and funding liquidity affect each other via capital and margin requirements; under certain conditions, this leads to liquidity spirals. Quantifying the impact of secondary market liquidity on primary market liquidity empirically is, however, challenging because of the confounding effects of information asymmetry and moral hazard in most markets. The unexpected closure of an online peer-to-peer (P2P) lender's secondary market provides a natural experiment to examine how secondary market liquidity affects primary market liquidity in a clean setting. While a large body of research focuses on the funding cost dimension of liquidity,<sup>1</sup> to the best of our knowledge, we are the first to examine the effect of secondary market liquidity on primary market liquidity in all three dimensions: funding time, quantity, and cost (Holden, Jacobsen and Subrahmanyam, 2014).

P2P lending platforms facilitate the funding of unsecured consumer loans by matching borrowers with potential investors. Lending Club (LC) and Prosper are the two largest and best-known P2P lending platforms in the US, and they resemble each other closely in borrower, investor, and loan characteristics. Prior to October 27, 2016, both platforms offered a secondary market for their own investors, in which primary market investors had the option to sell their shares of loans before maturity (at a 1% fee). Low-credit-quality loans were considered attractive for their high yields and were actively traded in the secondary market. However, Prosper shut down its secondary market on October 27, 2016 because the trading volume was not sufficient to cover monthly payments to a third party that operated the secondary market trading platform. In contrast, LC's secondary market remains open as of time of writing. This natural experiment provides a unique opportunity to examine how secondary

---

<sup>1</sup> See Chordia, Roll, and Subrahmanyam (2000), Pastor and Stambargh (2003), and Acharya and Pedersen (2005) for studies on the equity market; and Krishnamurthy (2002), Chordia, Sarkar, and Subrahmanyam (2005), and Longstaff (2004, 2005) for studies on the bond market.

market liquidity affects primary market liquidity, as well as how the liquidity of one market affects the liquidity of a competing market.

We show that the closure of Prosper's secondary market is followed by a substantial reduction in the liquidity of its primary market in all three dimensions: funding time, quantity, and cost. After the closure event, liquidity in Prosper's primary market decreases for loans of all credit qualities, and for loans invested by institutional and loans invested by individual investors. Controlling for loan and borrower characteristics, the average funding time increases by 18.476 hours from two weeks before to two weeks after the closure event (from an average of 40 hours before the closure event). To ensure that the increased funding time in Prosper's primary market is not driven by changes in macroeconomic conditions or negative shocks to the consumer lending industry, we examine the loan funding time at LC around Prosper's closure event. First, we show that the funding time is comparable for Prosper and LC loans prior to the closure of Prosper's secondary market (an average of 40 vs. 39.7 hours). After the closure, while funding time increases substantially for Prosper loans, it decreases substantially for LC loans, perhaps due to the competition effect.

Regarding funding quantity, we show that the number of new issuances decreases by 92 per day (from an average of 514 listings before the closure event). This reduction in new issuances is significant for low-credit-quality loans, the set of loans that were most actively traded in the secondary market before its closure.

Regarding funding cost, we find that while the average interest rate for loans with the highest credit quality falls by approximately 40 bps after the closure event, it increases substantially for loans of the lowest credit qualities. As a result, the credit spreads between low- and high-credit-quality loans on Prosper widen by 90 to 130 bps after the secondary market closure. These increases in the credit spreads reflect the liquidity premiums required by investors to hold these loans to maturity and bear the credit risk.

We also document a spillover effect of the negative liquidity shock from Prosper to LC. After the closure of Prosper's secondary market, while the funding time falls substantially for LC loans (due to the competition effect), funding volume decreases by 98 loans per day (from an average of 362 loans before the closure event) and funding cost increases for loans of the lowest credit quality (the set of loans that are most popular in the secondary market) on both Prosper and LC, even though LC's secondary market remains fully operational. In addition, given the thin trading volume in Prosper's secondary market at closure, our results likely underestimate the effect of the secondary market liquidity on liquidity in the primary market.

Finally, we subjected our findings to a series of robustness tests and alternative explanations. For example, we show that borrower credit quality (Prosper Score) within each credit grade does not change after the closure event. Thus, we cannot attribute the increased funding cost to reduced credit quality. We further rule out an alternative hypothesis that the closure of Prosper's secondary market signals an increase in its default risk, and this increased default risk causes the reduction in Prosper's primary market liquidity.

Our research contributes to the literature on the impact of market liquidity on funding liquidity. Brunnermeier and Pedersen (2009) use a theoretical model to show that funding liquidity and market liquidity profoundly affect each other. On the one hand, tight funding liquidity lowers market liquidity because traders are reluctant to take on positions. On the other hand, under certain conditions, low market liquidity decreases funding liquidity because of the risk of financing a trade is increasing, thus increasing margin requirements.

Liquidity premiums are important for pricing financial assets (Gupta, Singh and Zebedee, 2008). Studies in the equity, bond, and syndicated loan markets show that less liquid assets trade at lower prices and require higher returns. In the equity market, Ellul and Pagano (2009) show that stocks with lower expected liquidity are offered at a discount of 80-120 basis points in IPOs by using data from

London stock exchanges. Butler, Grullon and Weston (2005) show that firms with more liquid stocks are associated with significantly lower investment bank fees for seasoned equity offerings. In the corporate bond market, Chen, Lesmond and Wei (2005) show that bonds that are more liquid have lower yields. In the syndicated loan market, Gupta, Singh and Zebedee (2008) show that interest rates are 80-120 bps higher for loans with low anticipated liquidity in the secondary market than for those with high anticipated liquidity.

All the studies above suffer from confounding effects. For both equity and syndicated loan markets, the effect of adverse selection confounds the effect of secondary market liquidity. In the syndicated loan market, the moral hazard of the loan originator further complicates the matter. In our setting, investors in the primary market do not monitor their loans. Thus, there is no reduced monitoring after loan sales. Moreover, buyers and sellers in the secondary market have access to the same information: loan payment history and the borrower's updated credit rating, as well as the original loan characteristics and borrower characteristics. Thus, information asymmetry does not exist between buyers and sellers in Prosper's secondary market. This unique setting helps us clearly measure the effect of liquidity in the secondary market on liquidity in the primary market.

Several studies examine how secondary market conditions affect primary market issuances. For example, Hanselaar, Stulz and Dijk (2017) show that lagged changes in aggregate local stock market liquidity positively affect changes in equity issuance in IPOs and SEOs. Kamstra, Roberts and Shao (2014) show that the secondary market for loans is clearly beneficial to the issuers of debt in the syndicated loan market.<sup>2</sup>

---

<sup>2</sup> Using loan-level data, Drucker and Puri (2009) find that when agency and information problems are more severe, sold loans contain additional covenants and more restrictive net worth covenants because these borrowers benefit from increased private debt availability.

The rest of the paper is organized as follows. Section 2 presents the institutional background of the P2P lending market. Section 3 presents the empirical analysis of our predictions; and Section 4 concludes.

## **2. Peer-to-Peer Lending and Prosper.com VS LendingClub.com**

Peer-to-peer lending platforms facilitate the funding of consumer loans by matching borrowers with potential investors. P2P lending is one of the fastest growing segments in FinTech-based markets. Morgan Stanley Research estimated that the global P2P market will reach \$290 billion in loan origination volume by 2020.<sup>3</sup> In the US, P2P platforms allow the funding of unsecured personal loans to borrowers in most states with credit scores above minimum requirements. The platforms assign interest rates based on their own credit grading systems that account for borrowers' risk of default (mainly based on borrowers' credit profiles and the loan term) and their repayment history on P2P platforms.<sup>4</sup> Once a loan listing receives sufficient funds from investors, it becomes a loan. Lending Club (LC) and Prosper are the two largest and best-known peer-to-peer lending platforms in the US. Most loans have a maturity of 36 or 60 months.

Before October 27, 2016, in addition to the primary markets in which investors lend to borrowers, both platforms also separately offered secondary markets for their own investors. Through the third-party trading platform FOLIOfn (later renamed Folio Investing), both Prosper and LC investors had the option to liquidate their holdings by selling “notes”—shares of loans that they invested in—on the trading platform. That way, they did not have to hold on to those notes until the loans matured. It should be noted that LC's and Prosper's trading platforms were separate, so that Prosper.com

---

<sup>3</sup> For more details see: <https://www.morganstanley.com/ideas/p2p-marketplace-lending>.

<sup>4</sup> The minimum credit score Prosper requires for new borrowers is 640 (FICO score). Lending Club allows borrowers with a minimum credit score of 600. Depending on the credit grading, Prosper assigns interest rates (APR) between 5.99–36% and charges 1.4–5% origination fees (deducted before transferring the fund to investors). Similarly, APRs on Lending Club are between 6.95–35.89% with a 1–6% origination fee. Lender yield will thus be based on the APR minus the origination fee.

investors could not sell notes to Lending Club investors and vice versa. In addition to benefiting from liquidity, P2P investors could potentially make profits by selling a note at a price above the outstanding principal plus any accrued interest. The trading platform collected a fee of 1% of the purchase price from the sellers but did not charge buyers any fees.

On September 29, 2016, Prosper unexpectedly announced that it would soon shut down its secondary market. In an email that was sent to all of its investors, Prosper noted, “We are writing to let you know that as of October 27, 2016, Prosper will no longer offer the Folio Investing Note Trading platform, the secondary market for Prosper Notes. Prosper has found over time that very few investors are using the secondary market and, as such, has made the decision to no longer offer this service.”<sup>5</sup> Prosper also noted in the same email that “The secondary market trading service will be available as normal until end of day (5:30 pm PST) October 19, 2016. After that time, any new orders to list Notes for sale will not have sufficient time to be completed and processed before the site becomes unavailable to users at the end of day (5:30 pm PST) on October 27, 2016.” Following the announcement, Prosper shut down its thinly traded platform on October 27, 2016. Lending Club, in contrast, is still offering its note trading platform via Folio Investing. This event provides an ideal opportunity to study the impact of secondary market liquidity on the primary market. In the next section, we outline our key hypotheses and our empirical strategy for testing them.

### **3. Timeline and Theoretical Framework**

Figure 1 uses a timeline to illustrate the institutional background of our empirical setting. On September 29<sup>th</sup>, 2016, Prosper announced that they will be closing down their secondary market on October 27<sup>th</sup>.<sup>6</sup> The reason Prosper provided for the decision to shut down the secondary market was

---

<sup>5</sup> The full text of the email can be found at: <https://www.lendacademy.com/prosper-closing-secondary-market-retail-investors/>.

<sup>6</sup> For more details see: <https://www.lendacademy.com/prosper-closing-secondary-market-retail-investors/>.



that over time they've found that very few investors are using the secondary market and it never gained much traction. The official word from Prosper is that while they are closing down the Folio secondary market, they are still looking for alternative secondary market. On October 14<sup>th</sup>, 2016, which is at the beginning of our 4-weeks sample period, Lending Club changed its pricing policy. As disclosed in the Form 8-K, Lending Club will increase interest rates for low grade loans (Grades F and G). Lending Club explained in the letter to investors the reason that it is making changes to interest rates is to adapt to competitive, macroeconomic and credit trends. On October 25<sup>th</sup>, 2016, just two days before the effective date when Prosper shut down its secondary market, Prosper changed its pricing policy. Specifically, Prosper lowered the interest rate for high grade loans (grades AA-C) and increased interest rate for lower grade loans (D-HR). Prosper also explained that "the changes are a direct result of the forward looking credit market, interest rate expectations, the US credit environment and the competitive environment in US consumer unsecured lending".<sup>7</sup> On October 27<sup>th</sup>, 2016, Prosper officially shut down its secondary market. From this date going forward, all Prosper investors are forced to hold their loans to maturity. Our sample period is a 4-week window centered on this effective date when the secondary market of Prosper was shut down starts from October 13<sup>th</sup>, 2016 and ends on November 9<sup>th</sup>, 2016.

[Insert Figure 1 about here.]

Table 1 illustrates the theoretical framework for the timeline above and the intuition of our empirical analysis. There are four players in our context: Prosper, Lending Club, borrowers and lenders. We treat Prosper and Lending Club as two competitors. We employ three measures: yield, funding time and number of issuances for both platforms. We examine the effect of liquidity, the competitor and the other two measures on each measure for high- and low-quality loans respectively for both platforms. The basic sequence and intuition of the underlying mechanism is the following:

---

<sup>7</sup> For more details see: <https://blog.prosper.com/2016/10/25/prosper-announces-pricing-change/>.

first, the platform sets/changes the pricing policy to attract lenders; second, lenders react to pricing change and closure of Prosper's secondary market. This move by lenders is reflected from change in funding time; third, borrowers learn about changes in funding time (in addition to the change in pricing) and decide on whether and where to list. This move by borrowers is reflected from change in number of issuances. For both platforms, nearly all listed loans receive full investor funding. Thus, the number of issuances represent borrower's decision.

[Insert Table 1 about here.]

The theoretical framework starts with Lending Club. The first measure is yield. Both liquidity of Lending Club itself and Prosper's pricing policy can impact Lending Club's decision on how and whether to change its pricing policy. Since Lending Club's secondary market continued its operation while Prosper shut down its secondary market, the liquidity of Lending Club's primary market loans increases relative to Prosper's. The increase in liquidity should push down the yield for both high- and low-quality loans. After Prosper announced the shut down of secondary market, Lending Club anticipated that Prosper will increase yields for both high- and low-quality loans. Thus, the anticipation that Prosper will change its pricing policy by increase yields for all grade loans should drive up Lending Club's yields for both high- and low-quality loans. Hence, the aggregate effect of liquidity and Prosper's pricing policy can either push down or drive up Lending Club's yields on both high- and low-quality loans depends on which effect is stronger. The second measure is funding time. Both liquidity and pricing policy of Lending Club can impact lender's funding decision. Higher liquidity of Lending Club relative to Prosper should decrease funding time for both high- and low-quality loans on Lending Club. Prosper decreased the yield for high quality loans while Lending Club did not change the yield for high quality loans. Meanwhile, Lending Club also increased the yield for low quality loans (and to a larger extent than the increase in yield of low-quality loans of Prosper). So the increase in yield for low quality loans and the relative increase in yield for high quality loans should further

decrease funding time of all loans on Lending Club. The aggregate effect of liquidity and yield should decrease funding time of all loans of Lending Club. The third measure is the number of issuances. Both the pricing policy of Lending Club and lender's funding time can impact borrower's decision on whether and where to list. The direction that the effect of yield has on number of issuances is similar to that of funding time. Higher yields of loans of Lending Club relative to Prosper should decrease number of issuances for both high- and low-quality loans because borrowers may move to Prosper for lower rate. On the other hand, the decrease in funding time has positive effect on borrower's listing decisions and will attract more borrowers to Lending Club. Hence, the aggregate effect of yield and funding time can either increase or decrease Lending Club's new issuances of both high- and low-quality loans depends on which effect is stronger.

The second part of the theoretical framework is for Prosper. The first measure is yield. Both liquidity of Prosper itself and Lending Club's pricing policy can impact Prosper's decision on whether and how to change its pricing policy. The liquidity of loans at the primary market of Prosper decreases after Prosper shut down the secondary market. The decrease in liquidity should drive up the yield for both high- and low-quality loans of Prosper in order to attract and compensate lenders. Lending Club only increased yield for low quality loans and keep yield for high quality loans relatively stable. Hence, the yield of high-quality loans of Prosper should be unaffected while the yield of low-quality loans should increase due to the upward pressure from Lending Club. The aggregate effect of liquidity and Lending Club's pricing policy should drive up Prosper's yields on both high- and low-quality loans. The second measure is funding time. Both liquidity and pricing policy of Prosper can impact lender's funding decision. Lower liquidity of Prosper's primary market loans relative to Lending Club's loans should increase funding time for both high- and low-quality loans on Prosper. Prosper decreased the yield for high-quality loans while Lending Club's high-quality loan's yield remains stable. Prosper increased the yield for low-quality loans but to a less extent than the increase in yields for low-quality

loans of Lending Club. Thus, the relative decrease in yields should increase funding time for both high- and low-quality loans because lenders will find Prosper's loans less attractive than Lending Club's loans. Hence, the aggregate effect of liquidity and yield should increase funding time for both high- and low-quality loans of Prosper. The third measure is the number of issuances. Both the pricing policy of Prosper and lender's funding time can impact borrower's decision on whether and where to list. The relative decrease in yields should increase number of new issuances for both high- and low-quality loans for Prosper. The increase in funding time has negative effect on borrower's listing decisions. Borrowers may move to Lending Club for faster funding. Hence, the aggregate effect of yield and funding time can either increase or decrease Prosper's new issuances of both high- and low-quality loans depends on which effect is stronger.

## **4. Empirical Analysis**

### **4.1. Data, Samples, and Summary Statistics**

We gathered data from two complementary sources. The first one is the loan-level data provided by Prosper.com and LendingClub.com, available on their respective websites. These data report loans that were funded on each site. This data source provides information about loans and their performance, but no information is available about their funding process. Therefore, in addition to this, we collected real-time data from Prosper.com and LendingClub.com surrounding the time of the Prosper.com secondary market closure. Specifically, once every ten minutes, we used automated agents to collect listings that were available to investors on both platforms, as well as their funding status (dollar amount raised, and number of bids received). We use this second dataset (which we call "high frequency" data) to back out the bid-level information about the loan funding process. We fortuitously had started this high frequency data collection process before Prosper.com's surprise announcement to close its secondary market.

Figures 2 through 4 report the summary statistics of key variables by credit grade for all Prosper listings in our sample period. Our sample includes 12,473 listings (see Figure 2), of which 10,889 are institutional listings (see Figure 3) and 1,584 are individual listings (see Figure 4). The figures show that grade C loans are the most common. Among institutional listings, HR loans are relatively rare; among individual listings, they are much more frequent. The top three graphs for Figures 2-4 report the summary statistics for key independent variables in our regressions. Average Prosper score decreases as credit grade becomes lower. Listings with a credit grade of C have a larger variation in Prosper rating and income range than other listings. Average listing amount ranges between \$10,000 and \$20,000 and is similar for all credit grades except for grade E; HR loans also have lower listing amounts on average than other loans. Loans with D and E grades have higher average listing terms than those with other grades, while all loans with a grade of HR have a term of 36 months.

The bottom two graphs in Figures 2-4 report the summary statistics for two dependent variables in our regressions. The average funding time for each credit grade ranges from 8.3 hours to 14.9 hours for the full sample. Funding time for loans assigned to retail investors is much longer, ranging from 13.4 hours to 89 hours by credit grade. On the other hand, institutional listings' funding time ranges from 1.5 hours to 6 hours by credit grade. The average interest rate increases as the credit grade decreases. The average interest rate is below 10% for credit grade AA listings and above 30% for grade HR listings.

[Insert Figure 2, 3, and 4 about here.]

Figure 5 reports the summary statistics of key variables by credit grade for all LC individual listings in our sample period. The top graph shows that grade B has the largest number of listings while grade F and G have the smallest number of listings. The top two graphs for Figure 4 report the summary statistics for key independent variables in our regressions. The highest FICO score range is 845-850 while the lowest FICO score range is 660-664. Credit grade B's listings have a larger variation of FICO

score range than other grades' listings. Average listing amount increases slightly as credit grade becomes higher and ranges between \$10,000 and \$20,000. Grades E, F and G have higher average listing terms than other grades. The bottom two graphs in Figure 5 report the summary statistics for two dependent variables in our regressions. The average funding time for each credit grade ranges from 8.9 to 59.2 hours. Not surprisingly, the average interest rate increases monotonically as the credit grade decreases. The average interest rate is below 10% for credit grade AA listings and around 30% for grade HR listings.

[Insert Figure 5 about here.]

Table 2 reports the summary statistics for market related control variables in our regressions. The variable definitions can be found in Table A1 in the appendix. During our 28-day sample period, all three market related controls remains relatively stable without much variation. We do not include prime rate in our regressions because it is constant during our sample period.

[Insert Table 2 about here.]

## **4.2. Empirical Methods**

### **4.2.1. Impact on Funding Time – Prosper vs. LC**

We first analyze the impact of the Prosper.com secondary market closure on the funding time, i.e., the time it takes for loans to get fully funded. This is an important metric for liquidity (Holden, Jacobsen and Subrahmanyam, 2014). To ensure that changes in Prosper's primary market condition is not driven by changes in macroeconomic conditions or negative shocks to the consumer lending industry, we employ difference-in-differences regression design using listing data from both Prosper.com (the treatment group) and LendingClub.com (the control group). LC is an ideal candidate for the control group, because it resembles Prosper in many dimensions including borrower, investor, and loan characteristics. It is commonly recognized by industry analysts and investors as the top two P2P lending platforms in the US, and there is no close third. The secondary market offered by

LendingClub.com is still operational (via the services of the same third party as used by Prosper.com) as of the time of writing.

We include data on all listings except for those withdrawn by borrowers.<sup>8</sup> We exclude listings that started before the implementation date and ended after the implementation date, though the results are similar if we include these listings. The identifying event is the closure of Prosper’s secondary market on October 27, 2016, and the sample period is a 28-day window centered on the implementation date of secondary market shut down on October 27, 2016. The regression model is as follows:

$$Y_i = \beta_0 + \beta_1 \times Prosper \times Post + \beta_2 \times Prosper + \beta_3 \times Post + \tau X_i + \delta_i + \varepsilon_i \quad (1)$$

In this regression model, the subscript  $i$  refers to individual listings in the high frequency dataset for both Prosper and LC. *Prosper* takes a value of one for Prosper’s listings and zero for LC’s listings. *Post* takes a value of one after the closure of the secondary market, and 0 otherwise.  $X_i$  is a vector of control variables. We include borrower state fixed effects. The regression also consists of three sets of control variables: listing characteristics, borrower characteristics and market conditions. For listing characteristics, we include the following variables: *Listing Amount* is the dollar amount the borrower tries to borrow. *Borrower Rate* is the interest rate of the listing. *Listing Term* is the term of the listing. For borrower characteristics, we use a variable that is available in both Prosper and LC dataset: *Income Range* is a category variable range from 2 to 6, higher value represents higher income range. Last but not least, to control for market conditions as well as both platform’s own funding time volatility, we include four variables: *Stock Market Return*, *Stock Market Volatility*, *Ted Spread* and *Funding Time Volatility*. *Stock Market Return* is measured using average of daily market return over the five trading days leading to each listing’s start date. *Stock Market Volatility* is measured using the standard deviation of daily

---

<sup>8</sup> The number of listings withdrawn by borrowers is less than 1% in our sample.

market returns for lagged 5-trading days as of each listing’s start date. *Ted Spread* is measured using average Ted rate for lagged 5-trading days as of each listing’s start date. *Funding Time Volatility* is measured using the standard deviation of funding time for all listings for lagged one week as of each listing’s start date.

To ensure the parallel trend assumption, we also use a graph to examine whether the average funding time is comparable for Prosper and LC loans prior to the closure of Prosper’s secondary market. The graph can also reveal whether there is a differential change of funding time between the two platforms after the closure event. Figure 1 plots the average funding time for new listed loans by date for both Prosper and LC. Our goal is to empirically investigate whether the closure of the secondary market for Prosper.com has any discernible impacts on the activities of Prosper.com’s primary market, even though it does not appear to be highly active.

#### 4.2.2. Impact on Funding Time

While results from the model described in the previous section is useful, it has one limitation. To use data from both platforms in the same regression model, we inevitably can only use data that exists in both platforms. To complement this, we conduct further analysis focusing on data from Prosper.com, which allows us to conduct much finer analysis. To examine the differential impact of the closure of Prosper’s secondary market on funding time of listings belong to different credit grade, we interact *Post* dummy with each credit grade dummies. The regression model is as follows:

$$Y_i = \beta_0 + \beta_1 \times CreditGradeX \times Post + \beta_2 \times CreditGrade + \tau X_i + \delta_i + \varepsilon_i \quad (2)$$

The subscript  $i$  refers to listings in the Prosper full sample. *CreditGradeX* is a category variable represents the seven credit grades: AA, A, B, C, D, E and HR. Credit Grade AA and *Post* dummy are omitted due to multicollinearity. All other specifications are the same as in regression model (1). *Funding Time* is the outcome variable.



In the next step, we employ a dynamic test to examine how funding time changes over time week by week within our sample period using the following regression model:

$$Y_i = \beta_0 + \beta_1 \times CreditGradeX \times Post(k) + \beta_2 \times CreditGrade + \tau X_i + \delta_i + \varepsilon_i \quad (3)$$

$Post(k)$ , where  $k$  ranges from -2 to +2, are a set of four dummy variables that represent the weeks relative to the event date. All other specifications are the same as in regression model (2).

We employ the same regression models to examine the effect of Prosper's closure of its secondary market on funding time, separately for institutional listings and individual listings.<sup>9</sup>

We repeat the above analysis of funding time for LC's individual loans to examine how LC's funding time changes across different credit grade around the time when Prosper shut down the secondary market.

#### 4.2.3. Impact on Funding Cost

While funding time is the most obvious outcome variable to study, another aspect that should not be ignored is the interest rate at which loans are funded, particularly the credit spread. In this subsection, we examine the closure of Prosper's secondary market on the credit spread between low- and high-credit grades. The regression model is as follows:

$$Y_i = \beta_0 + \beta_1 \times CreditGradeX \times Post + \beta_2 \times CreditGrade + \beta_3 \times Post + \tau X_i + \delta_i + \varepsilon_i \quad (4)$$

In this regression model, the outcome variable is *Interest Rate*, which is the interest rate of the listing. Credit grade AA is omitted as the baseline. All other specifications are the same as in regression model (2). When liquidity decreases, investors are less willing to invest in risky loans (i.e., loans of lower credit quality), demanding liquidity premiums for bearing the credit risk. Hence, we expect  $\beta_1$  to be negative for high credit grades and positive for low credit grades. We also employ the dynamic test for funding cost.

---

<sup>9</sup> Institutional listings are available for institutional investors only and individual listings are available for retail investors as well. For more details see: <https://forum.lendacademy.com/index.php?topic=942.0>.

Next, we employ the same regression model to examine how the closure of Prosper’s secondary market affects the credit spreads between low- and high-credit grade loans, separately for institutional listings and individual listings.

We repeat the above analysis of funding time for LC’s individual loans to examine how LC’s funding cost changes across different credit grade around the time when Prosper shut down the secondary market.

#### **4.2.4. Impact on Funding Quantity**

The decrease in liquidity of the primary market could affect the behavior of borrowers in terms of whether and where to list. In this subsection, we examine the closure of Prosper’s secondary market on the daily number of new issuances. We employ a time series univariate regression. More specifically, we count the total number of loans for each day during our 28-day period and then run a univariate test for the mean comparison before and after the closure event. The outcome variable is number of loans. We examine the closure of Prosper’s secondary market on the daily number of new loans by each credit grade. We also employ the dynamic test for funding quantity. The regression model is as follows and all other specifications are the same as in regression model (2):

$$Y_i = \beta_0 + \beta_1 \times Post + \varepsilon_i \quad (5)$$

We repeat the above analysis of funding time for LC’s individual loans to examine how LC’s funding quantity changes across different credit grade around the time when Prosper shut down the secondary market.

#### **4.2.5. Impact on Funding Term**

The decrease in liquidity of the primary market could affect the behavior of borrowers in terms of the choice of loan term.<sup>10</sup> In this subsection, we examine the closure of Prosper’s secondary market

---

<sup>10</sup> When borrowers apply for a loan from Prosper or LC, they can choose a loan term with corresponding rate. For more details see: <https://www.lendacademy.com/prosper-review/>.

on the loan term. We employ a series univariate regression for each grade. The outcome variable is loan term. The regression model and all other specifications are the same as in regression model (5).

We repeat the above analysis of funding time for LC's individual loans to examine how LC's funding term changes across different credit grade around the time when Prosper shut down the secondary market.

### 4.3. Empirical Results

We now report and discuss the findings based on the models described earlier.

#### 4.3.1. Impact on Funding Time – Prosper vs. LC

Table 3 reports the results of the regression model shown in Equation (1). Panel A presents the results for univariate test. After the closure of the secondary market of Prosper, funding time increases by 18.476 hours on average for Prosper listings and decreases by 19.368 hours for LC listings. Panel B presents the results for multivariate regressions. The coefficient for the dummy variable *Prosper* is positive and statistically significant. The coefficient of the interaction term *Prosper × Post* is also positive and statistically significant for all four columns with different specification of controls. These results confirm that (i) after the closure, funding time increases substantially for Prosper loans, and (ii) that funding time for Prosper listings increase by 32.580 hours more relative to the change in the LC listings between the two periods (after controlling for other determinants of funding time). These results confirm our prediction: after the closure of the secondary market of Prosper, funding time increases substantially for Prosper loans and decrease substantially for LC loans.

[Insert Table 3 about here.]

The differences-in-differences approach relies on the parallel trend assumption. From Figure 6, we can see that the average funding time is comparable for Prosper and LC loans prior to the closure of Prosper's secondary market. After the closure, average funding time increases substantially for Prosper loans. Most importantly, Figure 6 also confirms that the increase in funding time for Prosper

listings after the closure is not simply a continuation of the trend before the closure: funding time of Prosper's listings is not increasing before the closure.

[Insert Figure 6 about here.]

#### 4.3.2. Impact on Funding Time

Table 5, 6 and 7 report the results of funding time for Prosper. All Panel As in Table 5, 6 and 7 report univariate analysis results. All Panel Bs for these three tables report the results of the regression model shown in Equation (2). All Panel Cs for these three tables report the results of dynamic analysis. The coefficients in Table 5 Panel B for the interaction term  $CreditGradeX \times Post$  are all positive and significant except for credit grade HR. This suggests that funding time increases for loans of almost all credit grades. Table 6 Panel B and Table 7 Panel B report similar results for institutional listings and individual listings respectively. For institutional listings, the increase in funding time is most significant for credit grade AA, A, C and D. For individual listings, the increase in funding time is most significant for credit grade AA, C, D and E. These results of increasing in funding time for both high- and low-quality loans are consistent with our prediction of the aggregate effect of liquidity and yield on funding time of Prosper loans in Section 3.

The results of the dynamic analysis in Panel Cs show that most changes in funding time indeed occurred in week  $t+2$ , because both lenders and borrowers need time to adjust - to move across markets. Grade B has a shortened funding time in week  $t+1$  at Prosper. It might be due to lenders' switch from low quality to high quality loans within the same platform.

[Insert Table 5, 6, and 7 about here.]

Table 8 reports the funding time results for LC's individual loans. Panel A shows that funding time of loans in most grade decreases after Prosper shut down the secondary market. Different from Prosper loans, changes in funding time occurred in both week  $t+1$  and  $t+2$ . These results of decreasing

in funding time for both high- and low-quality loans are consistent with our prediction of the aggregate effect of liquidity and yield on funding time of LC loans in Section 3.

[Insert Table 8 about here.]

### 4.3.3. Impact on Funding Cost

Panel B in Table 9 reports the results of the regression model shown in Equation (4) for all Prosper loans in our sample period. The coefficients for the interaction term  $CreditGradeX \times Post$  are all negative(positive) and significant for credit grade A, B and C (D, E and HR). All these coefficients represent the change of interest rate of the corresponding credit grade relative to credit grade AA after the closure. This result confirms that the credit spread between low- and high-credit qualities loans widen (higher credit grade loans' interest rate become lower and lower credit grade loans' interest rate become higher after the event). The result of increasing in yield of low-quality loans is consistent with our prediction of the aggregate effect of liquidity and Lending Club's pricing effect on yield of Prosper low-quality loans in Section 3 while the decrease in yield for high-quality loans contrary to our prediction. It seems Prosper made a wrong move by decreasing yield for high-quality loans. Panel E of Table 9 reports similar results with respect to the credit spread change after the closure for institutional listings only. Panel H of Table 9 reports the results for credit spread change after the closure for individual listings only, we mainly observe the increase in interest rate relative to credit grade AA after the closure for credit grade E and HR.

Panel C, F and I of Table 9 report the dynamic analysis results for Prosper loans. Since Prosper increased interest rate for low grade loans two days before it shut down the secondary market. Thus, yield changes occurred are in weeks t+1 and t+2, and there is no difference between the two.

[Insert Table 9 about here.]

Table 10 reports the funding cost results for LC's individual loans. LC increased interest rates for low grade loans at the beginning of our sample period. Thus, yields of low-quality loans on LC

increased even in week t-1, and there is no difference between weeks t+1 and t+2. The result in Panel A of Table 9 shows that yield of Grade F and G increased in the post period. This result indicates that the aggregate effect of liquidity and Prosper's pricing policy cancels out for high-quality loans since there's no change before and after the event. This result also indicates that Prosper's pricing policy effect is stronger than liquidity effect of LC itself for low-quality loans.

[Insert Table 10 about here.]

#### **4.3.4. Impact on Funding Quantity**

Table 11 reports the results of the regression model shown in Equation (5) with respect to the change in the number of new issuances for Prosper. The first row of Panel A of Table 11 reports the results with the whole sample. The coefficient for *Post* is negative but insignificant. The remaining rows report the results by each credit grade. As we can see, the coefficients for *Post* are all negative but only significant for credit grade D and E. This suggests that after the closure, the average number of new issuances of Prosper reduces and the effect is concentrated among lower credit grade loans which were actively traded in the secondary market. This result indicates that the aggregate effect of funding time and Prosper's pricing policy cancels out for high-quality loans since there's no change before and after the event. This result also indicates that funding time effect is stronger than Prosper's pricing policy effect for low-quality loans.

Panel D of Table 11 shows that Prosper's individual loans attracted high-quality borrowers in the first week post event, before borrowers realized the longer funding time. In the second week post event, issuance of high-quality loans went back to the level of week t-2 while that for low-quality loans decreases.

As we discussed previously in Section 3, the change of total number of loans mainly reflect borrower's choice change. The change in the number of either institutional or individual loans,

however, should mainly reflect institutional investors' choices because of this following sequence of whole loan program for both Prosper and LC:

1. Borrowers make initial loan requests.
2. For each batch of requests, the platform randomly reserve a subset for institutional investors.
3. Release the remainder to individual investors.
4. After x minutes/hours, release all remaining unpurchased institutional loans to the general pool of individual investors.

So the increase in high-quality loans for individual loans in the first week post the event is because institutional investors' reaction to the decrease in interest rate for high-quality loans, so there's increased number of unpurchased high grade loans in the institutional loans pool and then released to the individual loans pool for individual investors. This interpretation is under the assumption as our results for the total number of high-quality loans remain unchanged in the first week post event, so since the size of the whole pie is unchanged, the reduction in the number of high-quality loans for individual loans must due to institutional investors' choices changed.

In the second week post the event, low-quality borrowers learn about the decrease in funding time, so total number of low-quality loans decrease in the second week. Since the total size of the number of low-quality loans decrease, this should decrease both low quality institutional loans and individual loans.

[Insert Table 11 about here.]

Table 12 shows the results of funding quantity for LC's individual loans. We mainly observe decrease in issuances for low grade loans of E and F. This result indicates that LC's pricing policy effect is stronger than funding time effect for both high- and low-quality loans.

[Insert Table 12 about here.]

#### **4.3.5. Impact on Loan Terms**

Table 14 reports the results of the regression model shown in Equation (5) with respect to the change in loan terms of loans for Prosper within each grade. We find that loan term does not change much for Prosper, which means borrowers' choices of loan terms do not change much before and after the event.

[Insert Table 14 about here.]

Table 15 reports the results of the regression model shown in Equation (5) with respect to the change in loan terms of loans for LC within each grade. We find that loan term decreases for almost all grades at LC. Perhaps, loans are too pricey at Lending Club, and borrowers are trying to lower yields by choosing a shorter term. On the other hand, lenders at LC benefit from higher yield and higher liquidity.

[Insert Table 15 about here.]

#### **4.4. Robustness**

##### **4.4.1. Default risk of Prosper.com**

To test the robustness of the above empirical findings, we first rule out the alternative hypothesis of default risk of Prosper.com. Specifically, one may argue that the changes in the primary market is not due to investors' perceived reduction in liquidity, but rather, the secondary market closure reflects increased probability of Prosper.com going bankrupt, and that affects investors' behaviors in the primary market. Empirical evidence does not support this conjecture.

The first evidence is from credit spreads change. If indeed our evidence of the reduction in the liquidity of the primary market is due to the default risk of Prosper.com, we should observe that funding cost (interest rate) should increase for loans of all credit grades after the closure of the secondary market. However, based on the credit spreads results from Section 4.3.3, we can see that after the closure of the secondary market, higher credit grade loans' interest rate become lower and lower credit grade loans' interest rate become higher after the event.



The second evidence is the lack of announcement effect on LC, which is publicly traded. If indeed our evidence of the reduction in the liquidity of the primary market is due to the default risk of Prosper.com, we should find positive announcement effect on LC. However, as shown in Figure 6, we do not find such evidence. Figure 6 plots the daily abnormal stock returns for LC around Prosper’s closure of its secondary market. Graph *a* plots the daily abnormal stock returns for LC around the announcement day and Graph *b* around the implementation day. We use Fama-French three factor model as the baseline.<sup>11</sup> The daily abnormal returns are generated by the “Event Study” tool from WRDS.<sup>12</sup> We use 100 trading days as the estimation window and 50 days as the gap between estimation window and event window. Event window is a 7-day window with 3 days before and 3 days after the event date. Overall, we do not find significant positive average abnormal return for LC around announcement day when Prosper shuts down the secondary market.

[Insert Figure 7 about here.]

The third evidence is from Google search trends.<sup>13</sup> As we can see from Figure 8: Google trend, there’s no surge in Google search on “Prosper.com” and “LendingClub” around the time when Prosper.com shut down the secondary market. For robustness, we also searched under “Prosper”, “Prosper & Finance” and “Prosper & Default” and find similar results.

[Insert Figure 8 about here.]

Finally, investors should not be concerned about Prosper.com going bankrupt.<sup>14</sup> “Unlike LC, Prosper has set up a separate entity for the issuance and servicing of loans, known as Prosper Funding LLC versus the lending platform itself, which is owned by Prosper Marketplace, Inc. The platform

---

<sup>11</sup> Our results are very similar if we use the market model.

<sup>12</sup> For more details see: [https://dss.princeton.edu/online\\_help/stats\\_packages/stata/eventstudy.html](https://dss.princeton.edu/online_help/stats_packages/stata/eventstudy.html).

<sup>13</sup> Google trends is a search trends feature that shows how frequently a given search term is entered into Google’s search engine relative to the site’s total search volume over a given period of time. For more details see: <https://trends.google.com/trends/>.

<sup>14</sup> For more details see: <https://p2plendingexpert.com/if-prosper-goes-bankrupt-are-you-protected-yes/>.

going bankrupt would mean a bankruptcy filing by Prosper Marketplace (PMI) and Prosper Funding would be unaffected as a separate entity.”

#### **4.4.2. Overall trend of increasing in funding time for Prosper.com**

A second alternative explanation to our findings is that there could be an overall trend of increase in the funding time of Prosper.com loans, independent of the secondary market closure. To test whether this is a valid concern, we employ a placebo test to repeat the analysis of the effect of Prosper’s shut down of secondary market on listing’s funding time on 1,000 unique days before Oct 27th, 2016. As we can see from Figure 9: Placebo test, the average change in funding time around the 1000 unique days is 0.054 hours and is not statistically different from zero. This placebo test ensures that Prosper.com does not have an overall increasing trend of funding time for loans, which further supports our findings.

[Insert Figure 9 about here.]

#### **4.4.3. Overall negative shock to P2P lending industry and macro-economic conditions**

Another alternative explanation for our findings is that there is an overall negative shock to the P2P lending industry in general. As we have discussed in Section 4.3.1, to ensure that the deterioration of Prosper’s primary market condition is not driven by changes in macroeconomic conditions or negative shocks to the consumer lending industry, we examine listing funding time by LC. LC resembles Prosper in many dimensions, and we show that the funding time is comparable for Prosper and LC loans prior to the closure of Prosper’s secondary market. After the closure, funding time increases substantially for Prosper loans, even in a relative sense.

#### **4.4.4. Reduced credit quality after the closure event**

The last alternative explanation for our findings is that the increased funding cost is due to reduced credit quality after the closure event. Panel A of Table 13 reports the results of the regression model shown in Equation (5) with respect to the change in the loan/borrower quality for Prosper. The first

row reports the results with the whole sample. The coefficient for *Post* is very small and insignificant. The remaining rows report the results by each credit grade. As we can see, the coefficients for *Post* are all very small and insignificant except for credit grade B is negatively significant but the absolute change is also very small. This supports our results since borrower credit quality (Prosper Score) within each credit grade is comparable before and after the closure event.

[Insert Table 13 about here.]

## 5. Concluding Remarks

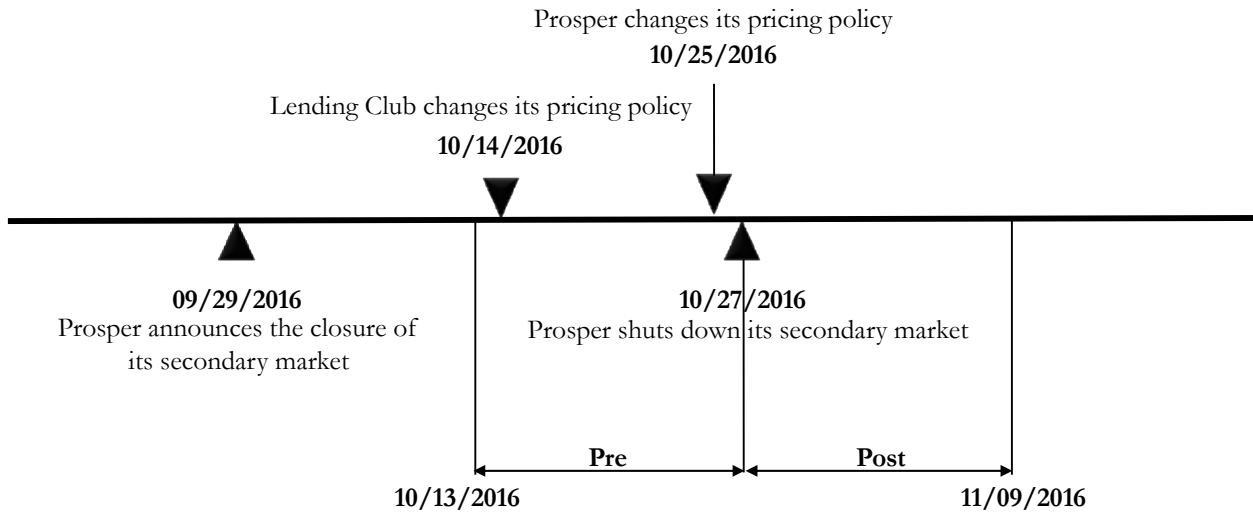
In this paper, we have analyzed the effect of secondary market liquidity on primary market liquidity and cost in the associated primary market. In an online P2P lending market, even a thinly traded secondary market provided exit options and liquidity to the primary market. The closure of this secondary market is followed by a substantial reduction in the liquidity of the primary market, suggesting that it is perhaps the *perceived* liquidity, rather than actual liquidity, that affects investor behavior. The natural experiment enables us to measure the impact of secondary market liquidity on primary market liquidity in all three liquidity dimensions of cost, quantity, and time.

In addition, we find that funding liquidity decreases for both institutional loans and individual loans of all credit grades in the wake of the market closure; the reduction in new issuances is most significant for low-credit-grade loans. Moreover, the credit spread between low- and high-credit-quality loans grows wider. We also provide evidence that the loan quality within each credit grade is comparable before and after the closure of the secondary market. We also show the impact of Prosper's liquidity on Lending Club's liquidity.

Our research contributes to the literature on the impact of secondary market liquidity on primary market liquidity. For both the IPO and syndicated loan markets, the effect of adverse selection confounds the effect of secondary market liquidity. In the syndicated loan market, the moral hazard

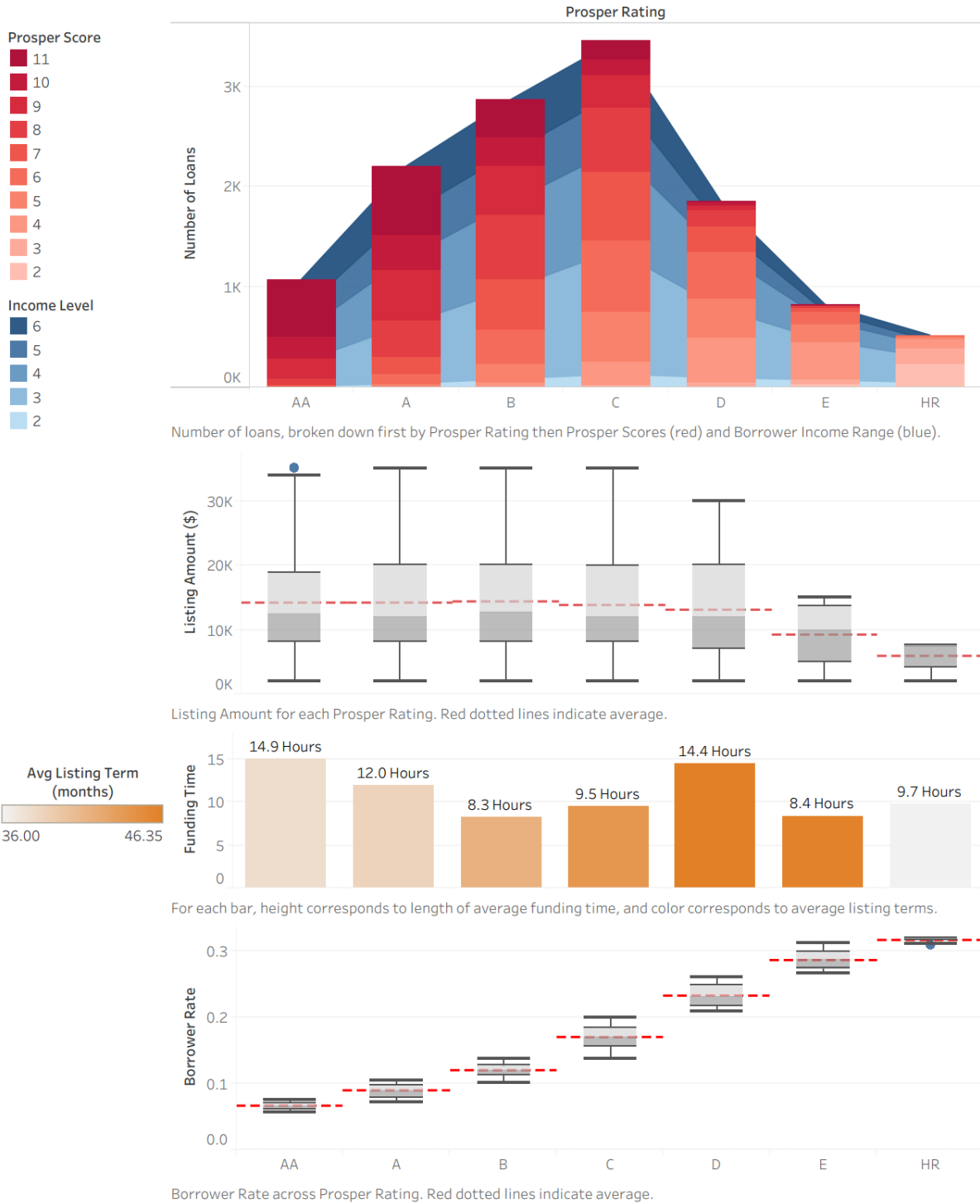
of the loan originator further complicates the matter. Our setting helps quantify the effect of secondary market liquidity on funding liquidity and cost in the primary market, because in our context: (1) No reduced monitoring after loan sales because investors in the primary market do not monitor their loans; (2) Buyers and sellers of loans in the secondary market have access to the same information: loan payment history and the borrower's updated credit rating, as well as original loan characteristics and borrower characteristics; (3) Exit options provide value to P2P investors via liquidity provision.

**Figure 1. Timeline of the Key Events**



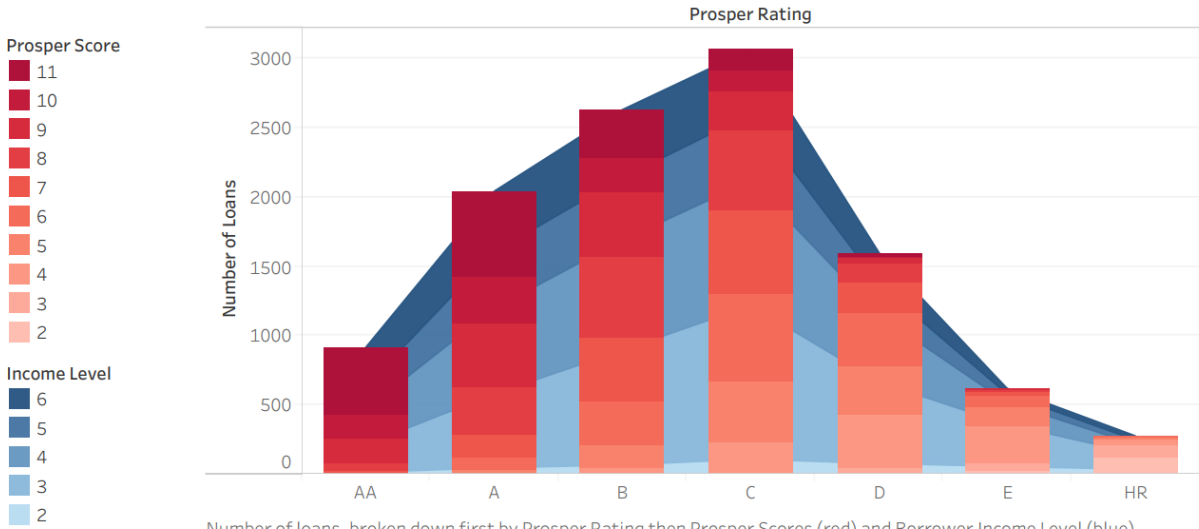
**Figure 2. Summary Statistics of Key Variables by Credit Grade—Prosper, Full Sample**

From AA (left-most column) to HR (right-most column)

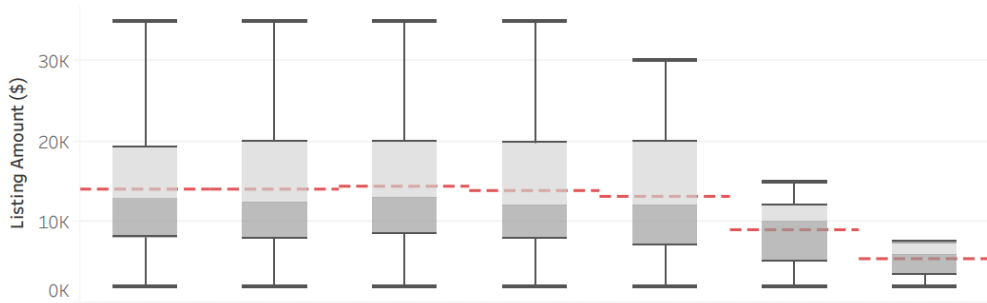


**Figure 3. Summary Statistics of Key Variables by Credit Grade—Prosper, Institutional Loans**

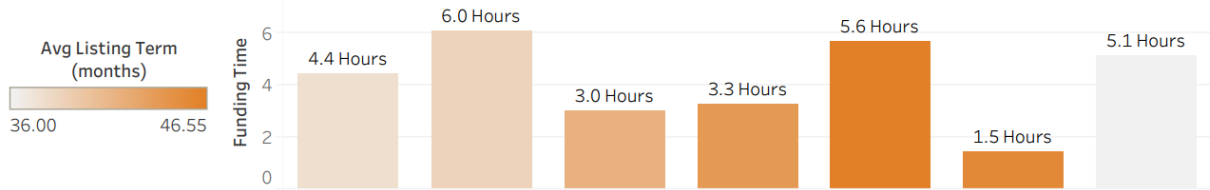
From AA (left-most column) to HR (right-most column)



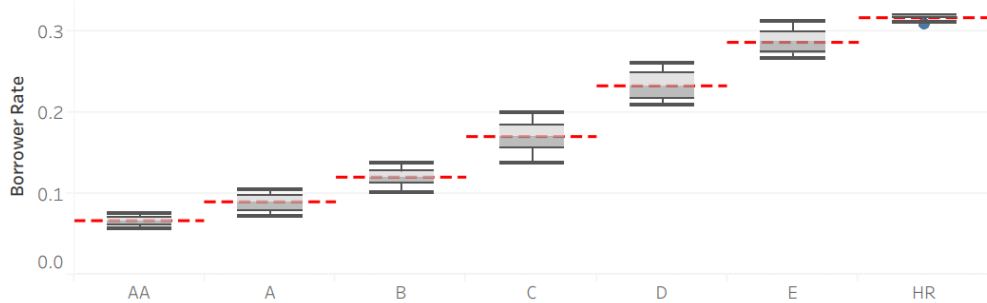
Number of loans, broken down first by Prosper Rating then Prosper Scores (red) and Borrower Income Level (blue).



Listing Amount for each Prosper Rating. Red dotted lines indicate average.



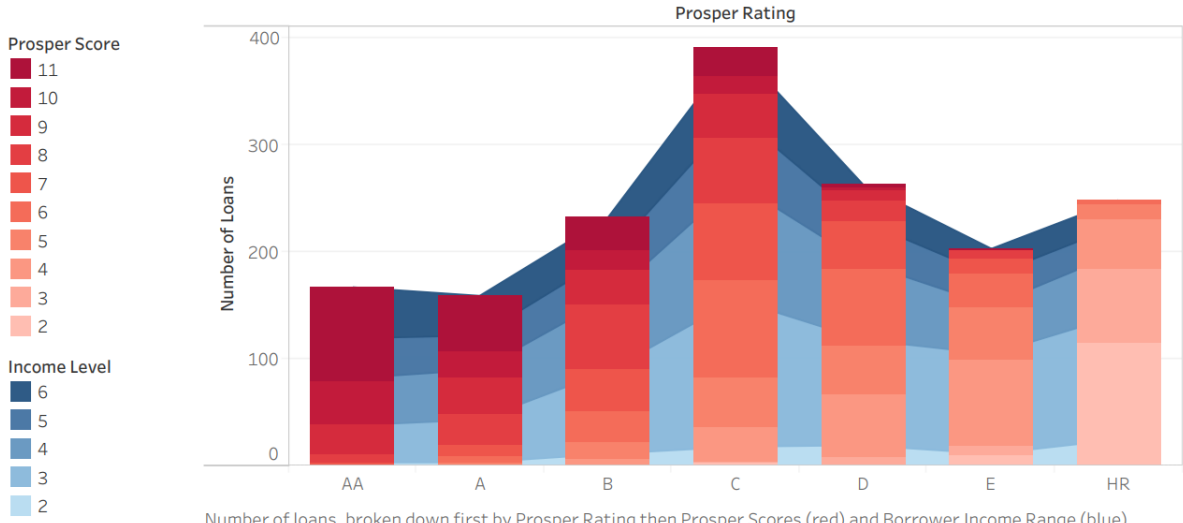
For each bar, height corresponds to length of average funding time, and color corresponds to average listing terms.



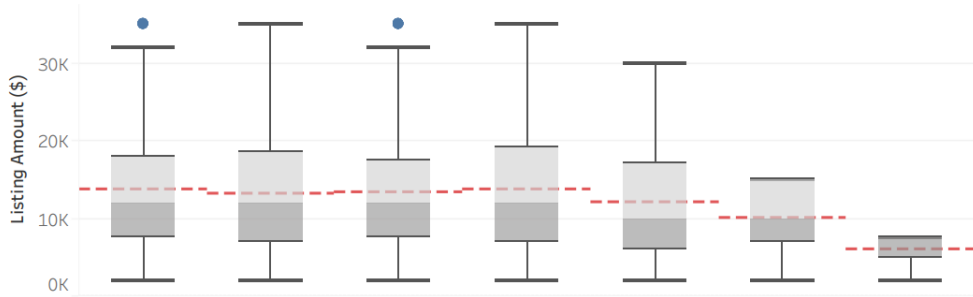
Borrower Rate across Prosper Rating. Red dotted lines indicate average.

**Figure 4. Summary Statistics of Key Variables by Credit Grade—Prosper, Individual Loans**

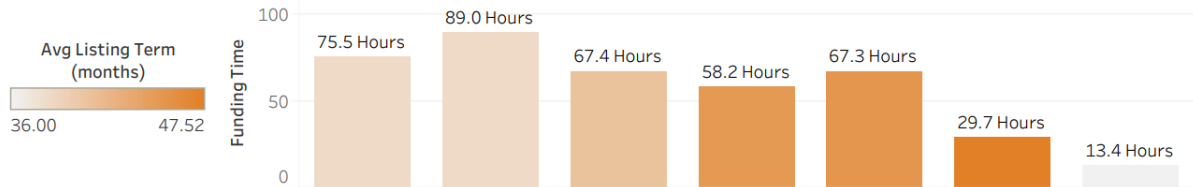
From AA (left-most column) to HR (right-most column)



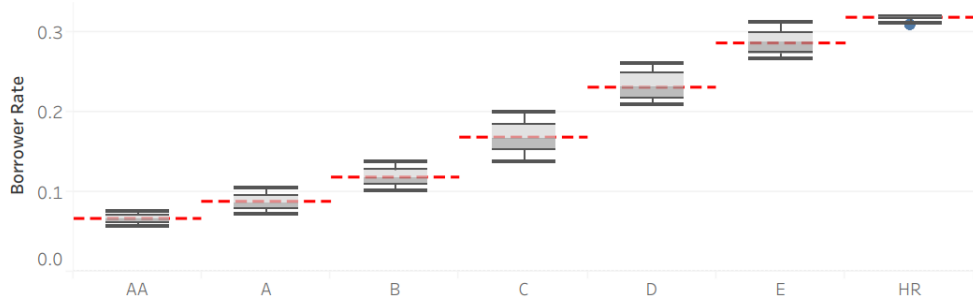
Number of loans, broken down first by Prosper Rating then Prosper Scores (red) and Borrower Income Range (blue).



Listing Amount for each Prosper Rating. Red dotted lines indicate average.



For each bar, height corresponds to length of average funding time, and color corresponds to average listing terms.

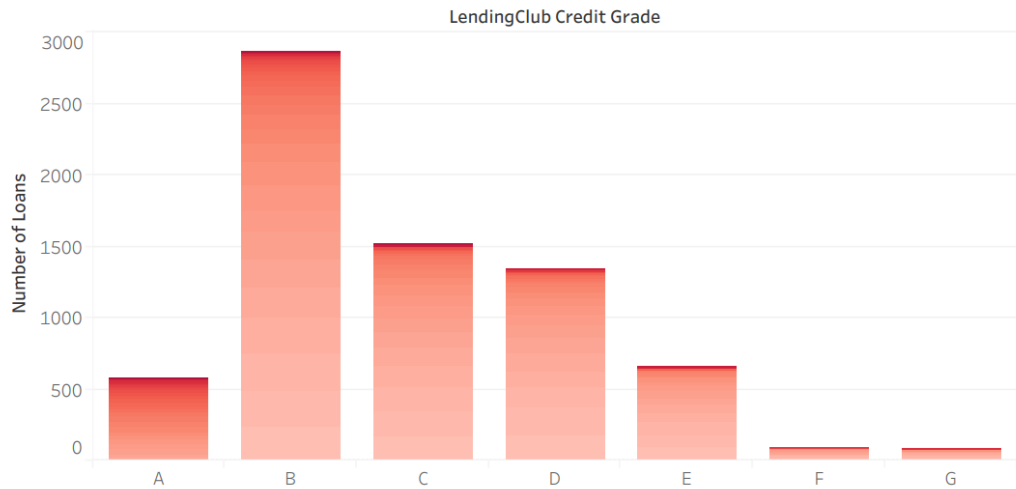


Borrower Rate across Prosper Rating. Red dotted lines indicate average.

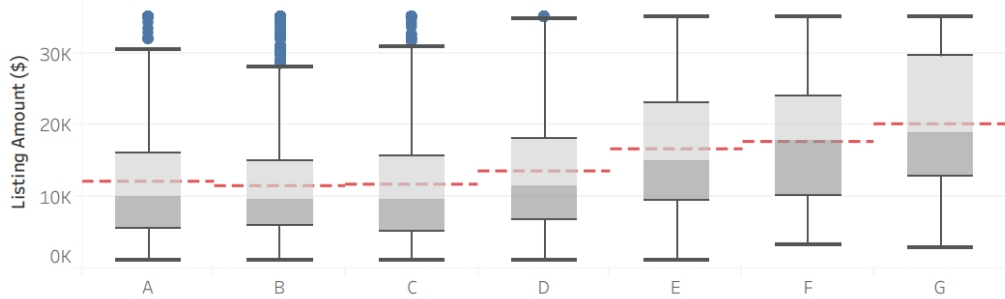


**Figure 5. Summary Statistics of Key Variables by Credit Grade—LC, Individual Loans**

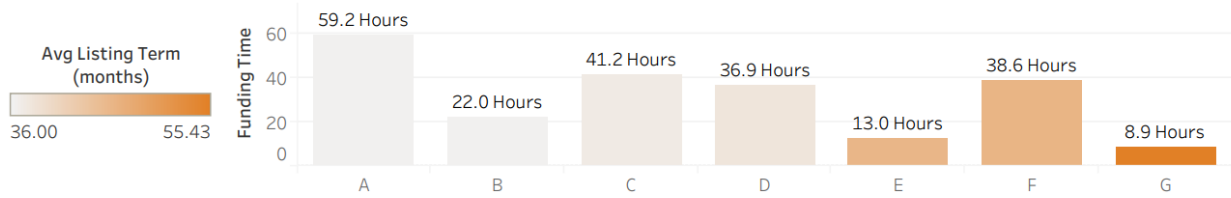
From A (left-most column) to G (right-most column)



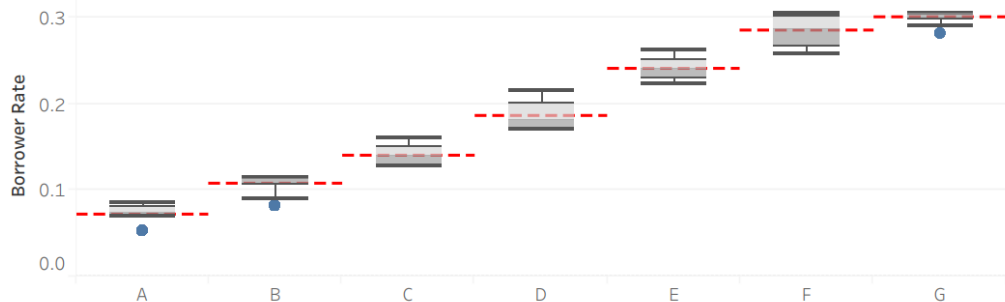
Number of loans, broken down first by LendingClub Credit Grade (comparable to Prosper Rating), then FICO Score Ranges (red). Darker shades of red indicate higher FICO score ranges. Highest range is 845-850; lowest, 660-664.



Listing Amount for each LendingClub Credit Grade. Red dotted lines indicate average.



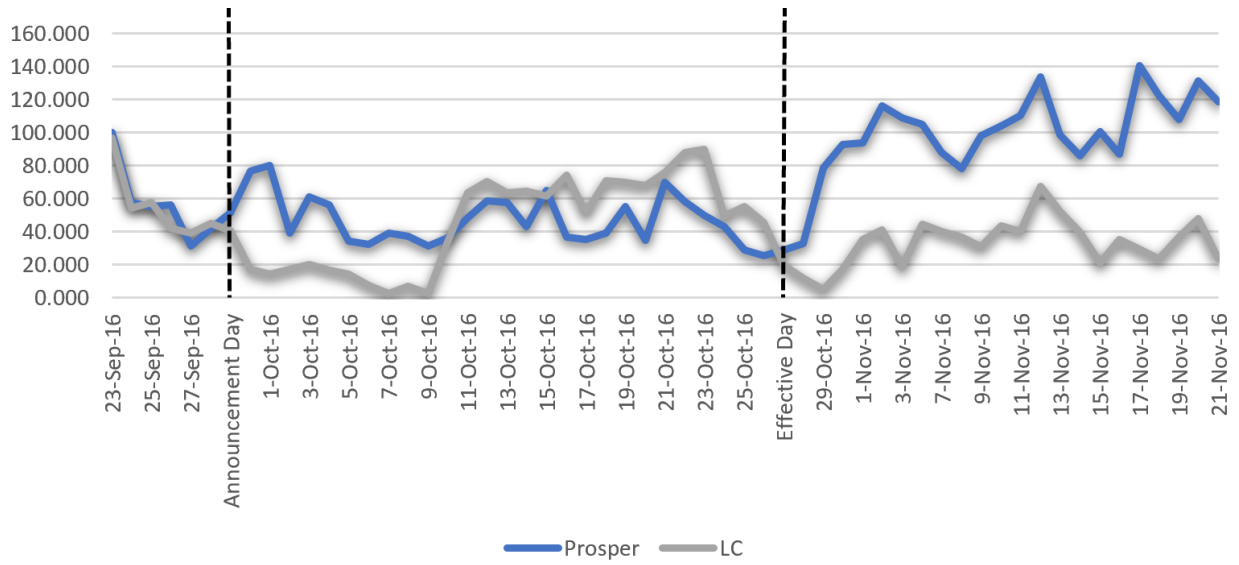
For each bar, height corresponds to length of average funding time, and color corresponds to average listing terms.



Borrower Rate across LendingClub Credit Grades. Red dotted lines indicate average.

**Figure 6. Parallel Trend**

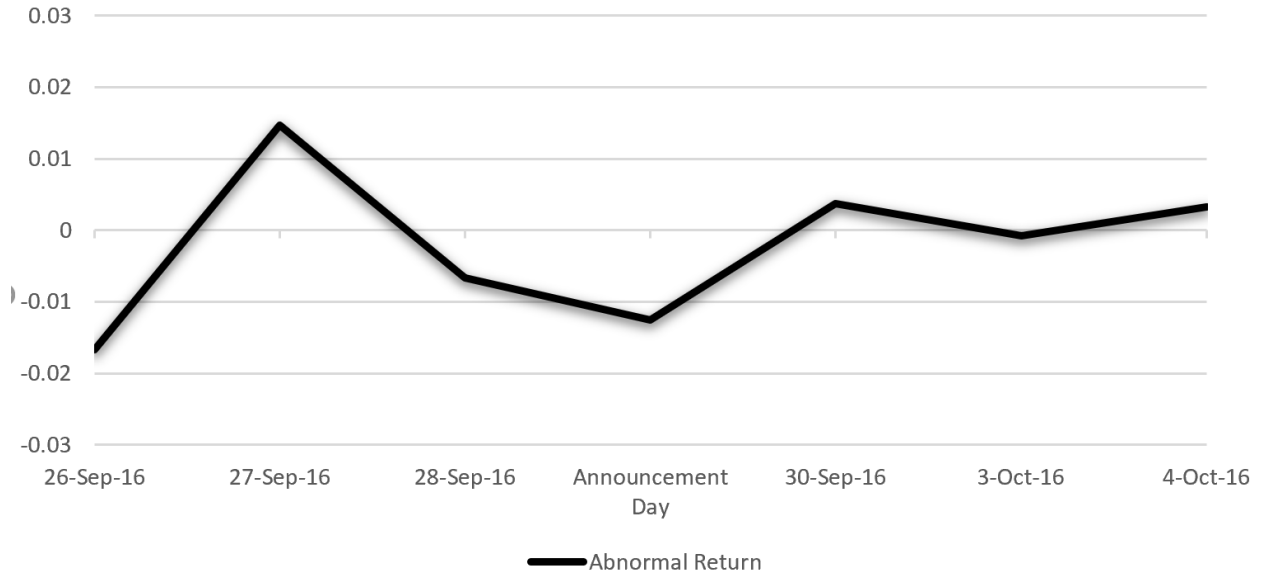
The graph plots the average funding time for new listed loans by date for both Prosper and LC.



**Figure 7. Event study**

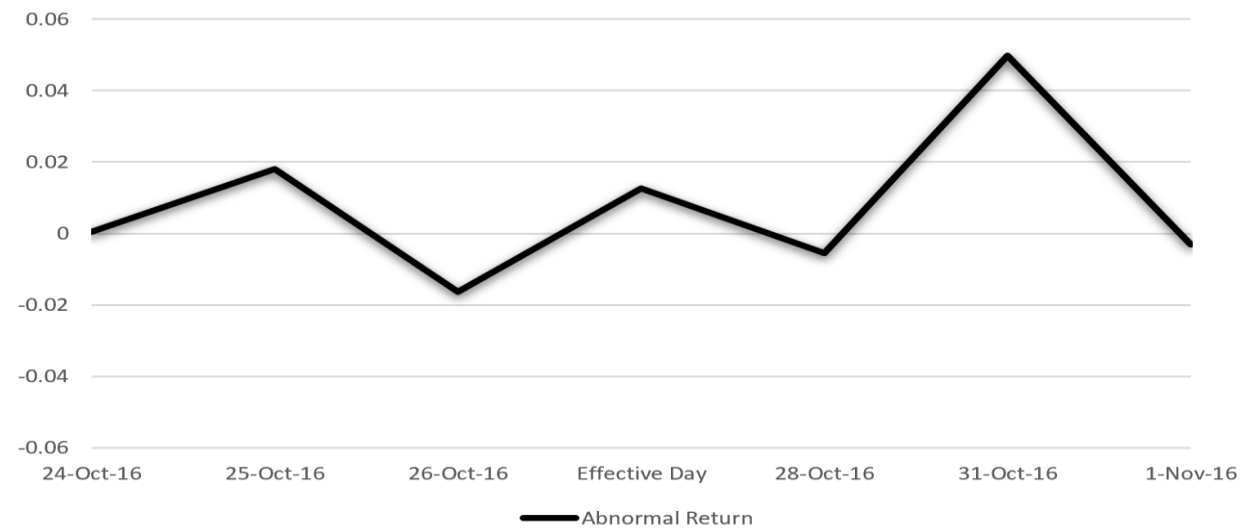
The graphs plot the daily abnormal stock returns for LC around Prosper’s shut down of secondary market. The daily abnormal returns are generated by the “Event Study” tool from WRDS. We use 100 trading days as the estimation window and 50 days as the gap between estimation window and event window. Event window is a 7-day window with 3 days before and 3 days after the event date.

a. Fama-French 3 factor model – announcement day



Test Statistic = -0.53 (check whether the average abnormal return is statistically different from zero)

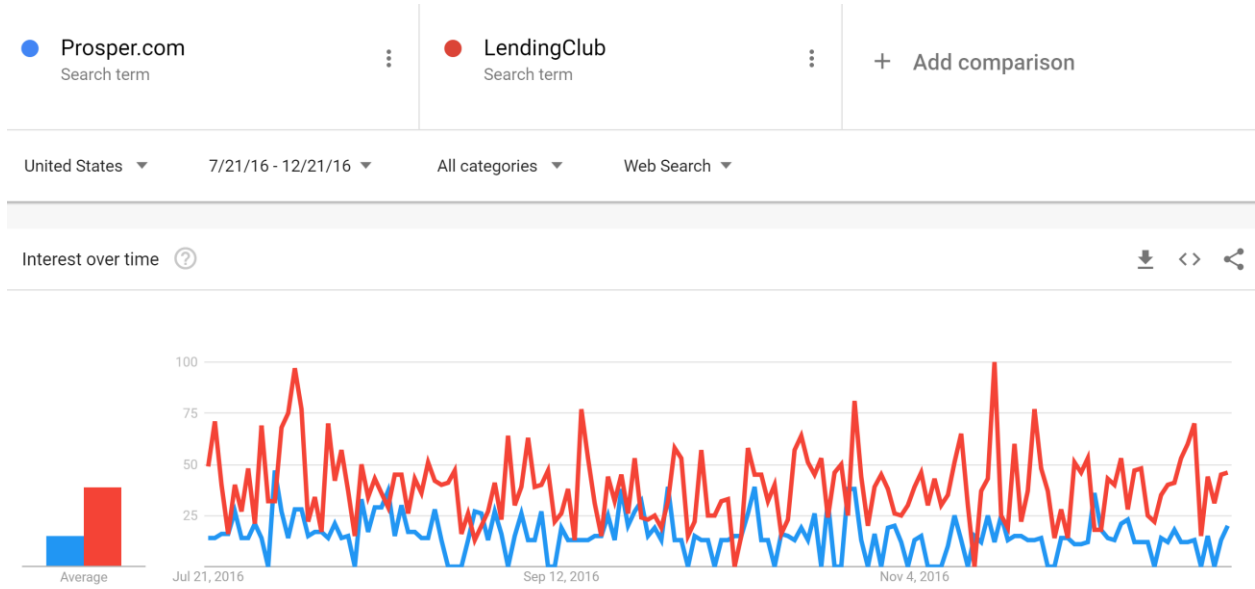
b. Fama-French 3 factor model – implementation day



Test Statistic = 0.98 (check whether the average abnormal return is statistically different from zero)

### Figure 8. Google trend

This figure plots the Google Trends with search terms: “Lending Club” and “Prosper.com” around Prosper’s shut down of secondary market.

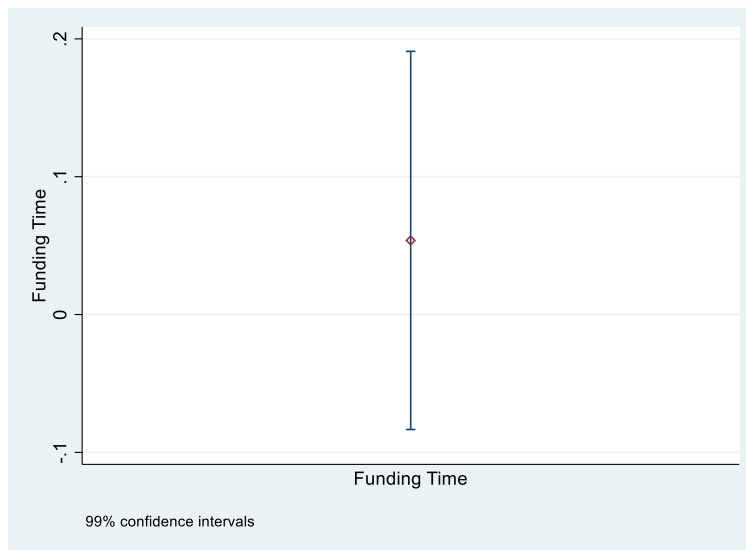


### Figure 9. Placebo test

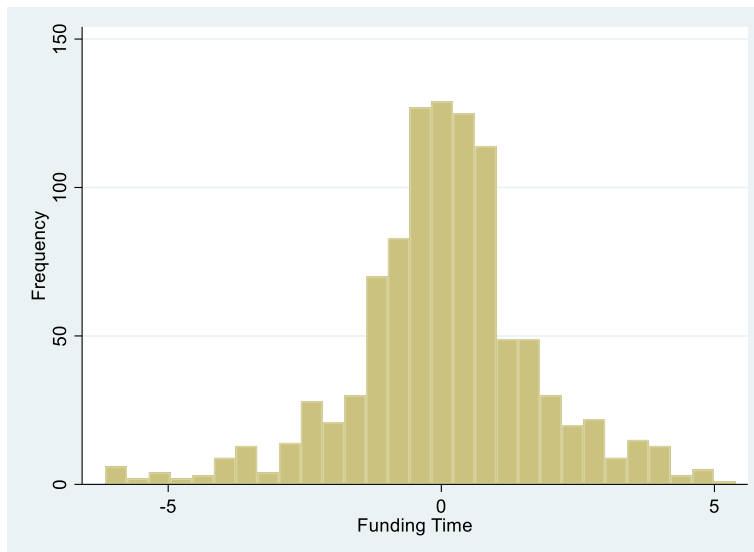
The graph a plots the results of a placebo test. We repeat the analysis of the effect of Prosper's shut down of secondary market on listing's funding time on 1000 unique days before Oct 27<sup>th</sup>, 2016 instead of using Oct 27<sup>th</sup>, 2016 as the event date. Graph b plots the distribution of the test. The unit for *Funding Time* is hour.

#### a. Placebo test results

Variable	N	Mean	S.E.	99% CI
Funding Time	1,000	0.054	0.053	(-0.083, 0.191)



#### b. Distribution of the test



**Table 1. Mechanisms**

<b>Prosper</b>					
Measure	<b><i>Yield</i></b>				
Decision maker	Prosper				
Goal	To attract lenders				
	Liquidity Effect		Lending Club Effect		Aggregate effect
	Liquidity	Effect of liquidity	LC yield	Effect of LC yield	
High quality loans	↓	↑	-	-	↑
Low quality loans	↓	↑	↑	↑	↑↑
Measure	<b><i>Funding Time</i></b>				
Decision maker	Lenders				
	Liquidity Effect		Yield Effect		Aggregate effect
	Liquidity	Effect of liquidity	Yield	Effect of yield	
High quality loans	↓	↑	↓	↑	↑↑
Low quality loans	↓	↑	↓	↑	↑↑
Measure	<b><i>Issuance/listing</i></b>				
Decision maker	Borrowers				
	Yield effect		Funding time effect		Aggregate effect
	Yield	Effect of yield	Funding time	Effect of funding time	
High quality loans	↓	↑	↑	↓	↑↓
Low quality loans	↓	↑	↑	↓	↑↓

(Table 1 continued)

<b>Lending Club (LC)</b>					
Measure	<b><i>Yield</i></b>				
Decision maker	LC				
Goal	To attract lenders				
	Liquidity Effect		Prosper Effect		Aggregate effect
	Liquidity	Effect of liquidity	Prosper yield	Effect of Prosper yield	
High quality loans	↑	↓	↑	↑	↓↑
Low quality loans	↑	↓	↑	↑	↓↑
Measure	<b><i>Funding Time</i></b>				
Decision maker	Lenders				
	Liquidity Effect		Yield Effect		Aggregate effect
	Liquidity	Effect of liquidity	Yield	Effect of yield	
High quality loans	↑	↓	↑	↓	↓↓
Low quality loans	↑	↓	↑	↓	↓↓
Measure	<b><i>Issuance/listing</i></b>				
Decision maker	Borrowers				
	Yield effect		Funding time effect		Aggregate effect
	Yield	Effect of yield	Funding time	Effect of funding time	
High quality loans	↑	↓	↓	↑	↓↑
Low quality loans	↑	↓	↓	↑	↓↑

**Table 2. Summary Statistics**

This table presents the summary statistics for market related data.

	N	Mean	S.D.	Percentile Distribution		
				25th	Median	75th
Ted Spread	28	0.006	0.000	0.005	0.006	0.006
Stock Market Return	28	-0.001	0.002	-0.003	-0.001	0.001
Stock Market Volatility	28	0.004	0.003	0.003	0.004	0.006



**Table 3. Impact on Funding Time—Prosper vs. LC**

This table examines the effect of Prosper’s shut down of secondary market on listing’s funding time for both Prosper and LC. *Prosper* takes a value of one for Prosper listings and zero for LC listings. Panel A is univariate tests. Panel B is multivariate regressions. We exclude those listings with start time before the implementation date and end time after the implementation date. We also exclude withdrawn listings. The data used in this regression consists of listing level cross sectional data with 28-day window centered on the implementation date of secondary market shut down of Prosper on Oct 27th, 2016. In Panel B, *Funding Time* is a measure for the listing’s funding time by calculating the duration between the listing’s start time and end time. The unit for *Funding Time* is hour. *Post* takes a value of one if the listing’s start date and end date are both on 10/27/2016 and for 13 days thereafter, and 0 if the listing’s start date and end date are both within a 14 days window before 10/27/2016. The regression also includes a set of control variables. In Panel B, column (1) is just univariate test; column (2) adds loan characteristics (the unit for *Listing Amount* is \$1000); column (3) adds borrower characteristics; column (4) adds market related controls. Market related controls are measured at lagged 5-trading day level as of each listing’s start date and funding time volatility are measured at lagged one-week level as of each listing’s start date. *Stock Market Return* is measured using average of daily market return. *Stock Market Volatility* is measured using the standard deviation of daily market returns. *TED Spread* is measured using average TED rate. Statistical significance at the 10%, 5% and 1% levels is denoted by \*, \*\* and \*\*\*, respectively. t-statistics are in parentheses.

Panel A							
	Prosper			LC			
	Post	Pre	(1)	Post	Pre	(2)	(1) – (2)
	mean	mean	Diff	mean	mean	Diff	DID
Funding Time	58.477	40.001	18.476*** (6.66)	20.335	39.703	-19.368*** (-19.16)	37.844*** (15.15)
Observations	837	747	1,584	3,168	3,979	7,147	8,731

(Table 3 continued)

Panel B				
VARIABLES	(1) Funding Time	(2) Funding Time	(3) Funding Time	(4) Funding Time
Prosper × Post	37.844*** (15.15)	36.020*** (15.26)	35.990*** (15.25)	32.580*** (14.12)
Prosper	0.298 (0.17)	8.450*** (4.87)	9.176*** (5.23)	11.000*** (6.45)
Post	-19.370*** (-18.14)	-20.220*** (-19.85)	-20.300*** (-19.81)	-23.240*** (-21.96)
Listing Amount		1.297*** (23.63)	1.499*** (24.10)	1.436*** (23.76)
Listing Term		0.498*** (7.56)	0.487*** (7.34)	0.442*** (6.85)
Borrower Rate		-167.700*** (-21.32)	-180.400*** (-22.28)	-174.500*** (-22.17)
Income Range			-3.004*** (-6.62)	-3.042*** (-6.91)
Stock Market Return				-3,435*** (-12.37)
Stock Market Volatility				482.500 (1.64)
Ted Spread				284.200*** (11.30)
Funding Time Volatility				0.181*** (6.95)
Constant	39.700*** (55.84)	28.740*** (11.44)	25.920*** (2.72)	-141.100*** (-8.28)
Borrower State FEs	N	N	Y	Y
Observations	8,731	8,731	8,602	8,602
R-squared	0.066	0.168	0.178	0.226

**Table 4. Impact on Funding Time—Prosper, Individual vs. Institutional Loans**

This table examines the effect of Prosper’s shut down of secondary market on listing’s funding time for Prosper’s institutional loans vs. individual loans. All other specifications are same as in Table 3.

Panel A						
	Individual			Institutional		
	Post	Pre	(1)	Post	Pre	(2)
	mean	mean	Diff	mean	mean	Diff
Funding Time	62.070	42.666	19.404*** (6.88)	5.628	2.865	2.763*** (8.64)
Observations	837	747	1,584	4,645	6,244	10,889

**Table 5. Impact on Funding Time—Prosper, All Loans**

This table examines the effect of Prosper’s shut down of secondary market on listing’s funding time. All other specifications are same as in Table 3.

Panel A			
	Post (1)	Pre (2)	Difference: (1) – (2) (3)
Full Sample	14.265	7.164	7.101*** (13.21)
Observations	5,482	6,991	12,473
Grade AA	21.802	8.914	12.888*** (5.61)
Observations	450	602	1,052
Grade A	17.219	6.784	10.435*** (7.39)
Observations	959	1,188	2,147
Grade B	9.225	6.999	2.226** (2.22)
Observations	1,240	1,555	2,795
Grade C	12.196	6.265	5.931*** (6.26)
Observations	1,570	1,805	3,375
Grade D	20.308	9.161	11.147*** (6.70)
Observations	713	1,079	1,792
Grade E	13.201	3.917	9.284*** (6.43)
Observations	315	490	805
Grade HR	10.444	8.803	1.641 (0.86)
Observations	235	272	507

(Table 5 continued)

Panel B				
VARIABLES	(1) Funding Time	(2) Funding Time	(3) Funding Time	(4) Funding Time
Grade AA × Post	12.450*** (6.74)	12.210*** (6.63)	11.870*** (6.49)	10.690*** (5.85)
Grade A × Post	10.410*** (8.09)	10.490*** (8.16)	10.670*** (8.36)	10.050*** (7.77)
Grade B × Post	2.152* (1.91)	2.121* (1.88)	1.933* (1.72)	1.839 (1.60)
Grade C × Post	5.978*** (5.84)	5.837*** (5.69)	5.863*** (5.76)	5.379*** (5.14)
Grade D × Post	11.040*** (7.71)	11.030*** (7.75)	11.130*** (7.88)	10.370*** (7.26)
Grade E × Post	10.450*** (4.88)	10.190*** (4.76)	10.840*** (5.10)	9.446*** (4.46)
Grade HR × Post	1.264 (0.48)	1.275 (0.49)	0.996 (0.38)	1.121 (0.43)
Grade A	-2.017 (-1.36)	-2.315 (-1.49)	-3.000* (-1.95)	-3.220** (-2.12)
Grade B	-1.629 (-1.14)	-2.378 (-1.33)	-3.358* (-1.89)	-3.409* (-1.95)
Grade C	-2.510* (-1.80)	-3.481 (-1.39)	-4.400* (-1.77)	-4.387* (-1.79)
Grade D	0.342 (0.23)	-0.825 (-0.23)	-1.443 (-0.40)	-1.105 (-0.31)
Grade E	-4.869*** (-2.70)	-4.723 (-1.00)	-5.376 (-1.15)	-5.036 (-1.10)
Grade HR	0.488 (0.23)	3.076 (0.57)	3.588 (0.66)	3.270 (0.61)
Listing Amount		0.316*** (8.80)	0.462*** (11.87)	0.468*** (12.21)
Listing Term		0.145*** (5.37)	0.141*** (5.25)	0.136*** (5.12)
Borrower Rate		0.607 (0.03)	-5.861 (-0.29)	-6.866 (-0.35)
Income Range			-2.210*** (-8.68)	-2.216*** (-8.83)
Stock Market Return				-111.300 (-0.69)
Stock Market Volatility				916.900*** (6.10)
Ted Spread				290.900*** (18.01)
Funding Time Volatility				0.048 (0.56)
Constant	8.787*** (7.27)	-1.065 (-0.52)	15.170** (2.51)	-147.400*** (-13.50)
Borrower State FEs	N	N	Y	Y
Observations	12,473	12,473	12,473	12,473
R-squared	0.023	0.034	0.055	0.082

(Table 5 continued)

Panel C				
VARIABLES	(1) Funding Time	(2) Funding Time	(3) Funding Time	(4) Funding Time
Grade AA × Post (-1)	-0.949 (-0.64)	-0.980 (-0.67)	-0.739 (-0.51)	1.913 (1.20)
Grade A × Post (-1)	0.812 (0.78)	0.798 (0.76)	0.476 (0.46)	3.152** (2.56)
Grade B × Post (-1)	-1.813** (-1.98)	-1.835** (-2.01)	-2.047** (-2.26)	0.733 (0.65)
Grade C × Post (-1)	1.386 (1.63)	1.309 (1.55)	1.294 (1.54)	4.180*** (3.85)
Grade D × Post (-1)	-2.586** (-2.33)	-2.683** (-2.42)	-2.884*** (-2.63)	-0.099 (-0.08)
Grade E × Post (-1)	0.409 (0.25)	0.533 (0.33)	0.122 (0.08)	2.879* (1.66)
Grade HR × Post (-1)	4.070* (1.85)	4.084* (1.86)	3.761* (1.73)	6.627*** (2.92)
Grade AA × Post (+1)	2.260 (1.44)	2.238 (1.43)	2.002 (1.29)	2.053 (1.29)
Grade A × Post (+1)	2.619** (2.47)	2.631** (2.48)	2.603** (2.47)	2.710** (2.43)
Grade B × Post (+1)	-1.844* (-1.96)	-1.819* (-1.93)	-1.984** (-2.13)	-1.733* (-1.71)
Grade C × Post (+1)	1.183 (1.38)	1.130 (1.32)	1.222 (1.44)	1.506 (1.60)
Grade D × Post (+1)	0.356 (0.29)	0.330 (0.27)	0.398 (0.33)	0.493 (0.39)
Grade E × Post (+1)	1.134 (0.63)	1.111 (0.62)	1.295 (0.73)	1.398 (0.77)
Grade HR × Post (+1)	3.013 (1.39)	3.037 (1.41)	2.793 (1.31)	2.888 (1.33)
Grade AA × Post (+2)	0.738 (0.41)	0.593 (0.33)	0.292 (0.16)	1.849 (0.98)
Grade A × Post (+2)	8.723*** (7.14)	8.756*** (7.17)	8.552*** (7.07)	10.390*** (7.53)
Grade B × Post (+2)	4.184*** (4.04)	4.118*** (3.97)	3.726*** (3.63)	5.560*** (4.52)
Grade C × Post (+2)	2.876*** (2.98)	2.779*** (2.88)	2.678*** (2.80)	4.642*** (3.92)
Grade D × Post (+2)	3.158** (2.25)	3.084** (2.20)	3.162** (2.28)	4.824*** (3.12)
Grade E × Post (+2)	6.574*** (3.11)	6.626*** (3.13)	6.957*** (3.32)	8.021*** (3.67)
Grade HR × Post (+2)	2.957 (1.22)	2.943 (1.22)	2.656 (1.11)	4.413* (1.79)
Grade A	-3.004** (-2.29)	-3.134** (-2.34)	-3.297** (-2.48)	-3.392** (-2.57)
Grade B	-1.806 (-1.43)	-2.108 (-1.47)	-2.530* (-1.79)	-2.803** (-1.99)
Grade C	-2.628**	-3.002*	-3.456*	-3.877**

	(-2.11)	(-1.68)	(-1.95)	(-2.20)
Grade D	1.389	0.922	0.571	0.057
	(1.02)	(0.38)	(0.24)	(0.02)
Grade E	-2.986*	-3.136	-3.523	-4.124
	(-1.84)	(-1.01)	(-1.15)	(-1.35)
Grade HR	-1.670	-0.885	-0.707	-1.491
	(-0.90)	(-0.25)	(-0.20)	(-0.42)
Listing Amount		0.112***	0.194***	0.195***
		(5.04)	(8.09)	(8.19)
Listing Term		0.054***	0.052***	0.052***
		(3.21)	(3.12)	(3.15)
Borrower Rate		0.639	-2.010	1.060
		(0.05)	(-0.16)	(0.09)
Income Range			-1.217***	-1.188***
			(-7.79)	(-7.65)
Stock Market Return				-992.500***
				(-5.94)
Stock Market Volatility				153.900
				(1.15)
Ted Spread				15.960
				(0.90)
Funding Time Volatility				-0.559***
				(-9.50)
Constant	6.467***	2.887*	16.100***	8.239
	(5.97)	(1.94)	(4.24)	(0.77)
Borrower State FEs	N	N	Y	Y
Observations	11,953	11,953	11,953	11,953
R-squared	0.016	0.020	0.046	0.057

**Table 6. Impact on Funding Time—Prosper, Institutional Loans**

Panel A			
	Post (1)	Pre (2)	Difference: (1) – (2) (3)
Full Sample	5.628	2.865	2.763*** (8.64)
Observations	4,645	6,244	10,889
Grade AA	6.914	2.890	4.024*** (3.21)
Observations	362	530	892
Grade A	9.194	3.699	5.495*** (5.78)
Observations	857	1,142	1,999
Grade B	3.254	2.855	0.399 (0.75)
Observations	1,103	1,471	2,574
Grade C	4.209	2.368	1.841*** (3.70)
Observations	1,393	1,608	3,001
Grade D	9.384	3.049	6.335*** (5.96)
Observations	599	945	1,544
Grade E	0.779	0.865	-0.086 (-0.31)
Observations	213	401	614
Grade HR	5.684	6.584	-0.900 (-0.29)
Observations	118	147	265



(Table 6 continued)

Panel B				
VARIABLES	(1) Funding Time	(2) Funding Time	(3) Funding Time	(4) Funding Time
Grade AA × Post	3.971*** (3.55)	3.963*** (3.54)	3.734*** (3.35)	2.268** (2.01)
Grade A × Post	5.515*** (7.43)	5.603*** (7.53)	5.577*** (7.53)	4.266*** (5.60)
Grade B × Post	0.409 (0.63)	0.436 (0.66)	0.370 (0.57)	-0.976 (-1.43)
Grade C × Post	1.838*** (3.06)	1.828*** (3.02)	1.857*** (3.08)	0.516 (0.82)
Grade D × Post	5.902*** (6.88)	5.912*** (6.91)	5.941*** (6.97)	4.400*** (5.03)
Grade E × Post	0.406 (0.29)	0.204 (0.15)	0.406 (0.29)	-1.325 (-0.95)
Grade HR × Post	-0.337 (-0.17)	-0.364 (-0.18)	-0.627 (-0.31)	-2.203 (-1.09)
Grade A	0.821 (0.95)	0.458 (0.51)	0.070 (0.077)	0.040 (0.033)
Grade B	0.004 (0.01)	-0.901 (-0.86)	-1.476 (-1.41)	-1.479 (-1.41)
Grade C	-0.474 (-0.58)	-2.029 (-1.36)	-2.604* (-1.75)	-2.550* (-1.72)
Grade D	0.067 (0.08)	-2.307 (-1.07)	-2.758 (-1.29)	-2.559 (-1.20)
Grade E	-1.776 (-1.63)	-4.194 (-1.50)	-4.661* (-1.67)	-4.427 (-1.59)
Grade HR	2.459 (1.61)	0.688 (0.21)	0.968 (0.29)	1.162 (0.35)
Listing Amount		0.100*** (4.72)	0.203*** (8.88)	0.208*** (9.09)
Listing Term		0.071*** (4.44)	0.069*** (4.31)	0.068*** (4.30)
Borrower Rate		11.000 (0.92)	7.957 (0.66)	7.186 (0.60)
Income Range			-1.715*** (-11.27)	-1.703*** (-11.23)
Stock Market Return				-703.900*** (-7.20)
Stock Market Volatility				-253.200*** (-2.79)
Ted Spread				-6.824 (-0.67)
Funding Time Volatility				-0.040 (-0.75)
Constant	2.882*** (4.04)	-1.919 (-1.59)	9.303** (2.55)	14.600** (2.13)
Borrower State FEs	N	N	Y	Y
Observations	10,889	10,889	10,889	10,889
R-squared	0.018	0.023	0.038	0.044

(Table 6 continued)

Panel C				
VARIABLES	(1) Funding Time	(2) Funding Time	(3) Funding Time	(4) Funding Time
Grade AA × Post (-1)	0.224 (0.19)	0.218 (0.19)	0.463 (0.40)	0.959 (0.77)
Grade A × Post (-1)	0.381 (0.49)	0.407 (0.52)	0.374 (0.48)	0.914 (0.98)
Grade B × Post (-1)	-0.809 (-1.17)	-0.810 (-1.18)	-0.889 (-1.29)	-0.324 (-0.38)
Grade C × Post (-1)	-0.168 (-0.25)	-0.212 (-0.32)	-0.225 (-0.34)	0.374 (0.44)
Grade D × Post (-1)	0.158 (0.18)	0.090 (0.10)	-0.062 (-0.07)	0.462 (0.46)
Grade E × Post (-1)	-0.876 (-0.66)	-0.812 (-0.61)	-0.836 (-0.63)	-0.271 (-0.19)
Grade HR × Post (-1)	3.215 (1.45)	3.205 (1.45)	2.822 (1.28)	3.143 (1.40)
Grade AA × Post (+1)	1.724 (1.38)	1.781 (1.43)	1.692 (1.36)	0.891 (0.70)
Grade A × Post (+1)	1.132 (1.41)	1.236 (1.54)	1.227 (1.53)	0.499 (0.59)
Grade B × Post (+1)	-1.178 (-1.635)	-1.109 (-1.54)	-1.161 (-1.61)	-1.858** (-2.38)
Grade C × Post (+1)	0.203 (0.31)	0.218 (0.33)	0.199 (0.30)	-0.407 (-0.55)
Grade D × Post (+1)	2.244** (2.32)	2.226** (2.30)	2.187** (2.27)	1.408 (1.41)
Grade E × Post (+1)	-1.012 (-0.67)	-1.214 (-0.80)	-1.080 (-0.71)	-1.961 (-1.28)
Grade HR × Post (+1)	3.001 (1.30)	2.951 (1.28)	2.737 (1.19)	1.672 (0.73)
Grade AA × Post (+2)	2.897** (2.10)	2.859** (2.08)	2.793** (2.03)	3.100** (2.12)
Grade A × Post (+2)	7.767*** (8.49)	7.874*** (8.60)	7.725*** (8.46)	8.329*** (7.91)
Grade B × Post (+2)	2.210*** (2.81)	2.227*** (2.82)	2.101*** (2.67)	2.669*** (2.80)
Grade C × Post (+2)	3.971*** (5.40)	3.960*** (5.37)	3.933*** (5.35)	4.572*** (4.97)
Grade D × Post (+2)	6.602*** (6.07)	6.555*** (6.03)	6.606*** (6.09)	6.891*** (5.69)
Grade E × Post (+2)	0.858 (0.48)	0.823 (0.46)	1.058 (0.59)	0.654 (0.35)
Grade HR × Post (+2)	3.067 (1.25)	3.000 (1.22)	2.662 (1.09)	2.396 (0.97)
Grade A	1.083 (1.08)	0.682 (0.66)	0.543 (0.53)	0.468 (0.46)
Grade B	0.841 (0.86)	-0.085 (-0.08)	-0.369 (-0.33)	-0.496 (-0.45)
Grade C	-0.094	-1.723	-2.019	-2.192

	(-0.10)	(-1.24)	(-1.46)	(-1.59)
Grade D	0.483	-2.037	-2.220	-2.383
	(0.45)	(-1.07)	(-1.17)	(-1.26)
Grade E	-0.370	-3.285	-3.549	-3.755
	(-0.28)	(-1.34)	(-1.46)	(-1.55)
Grade HR	-1.499	-4.130	-3.671	-3.678
	(-0.82)	(-1.38)	(-1.23)	(-1.24)
Listing Amount		0.075***	0.147***	0.148***
		(4.37)	(7.92)	(8.06)
Listing Term		0.044***	0.042***	0.043***
		(3.40)	(3.26)	(3.31)
Borrower Rate		13.500	11.260	12.370
		(1.39)	(1.16)	(1.29)
Income Range			-1.196***	-1.169***
			(-9.73)	(-9.56)
Stock Market Return				-552.100***
				(-4.30)
Stock Market Volatility				-231.900**
				(-2.21)
Ted Spread				-5.153
				(-0.36)
Funding Time Volatility				-0.371***
				(-7.99)
Constant	1.739**	-1.863	4.124	9.850
	(2.06)	(-1.61)	(1.35)	(1.15)
Borrower State FEs	N	N	Y	Y
Observations	10,749	10,749	10,749	10,749
R-squared	0.024	0.028	0.041	0.052

**Table 7. Impact on Funding Time—Prosper, Individual loans**

Panel A			
	Post (1)	Pre (2)	Difference: (1) – (2) (3)
Full Sample	62.071	42.666	19.404*** (6.88)
Observations	837	747	1,584
Grade AA	83.214	54.300	28.914*** (2.96)
Observations	88	72	160
Grade A	84.004	83.718	0.286 (0.02)
Observations	102	46	148
Grade B	56.300	82.579	-26.279*** (-3.31)
Observations	137	84	221
Grade C	75.539	35.975	39.564*** (7.47)
Observations	177	197	374
Grade D	78.687	53.755	24.932*** (3.27)
Observations	114	134	248
Grade E	41.435	16.586	24.849*** (4.58)
Observations	102	89	191
Grade HR	15.335	12.085	3.250 (1.40)
Observations	117	125	242

(Table 7 continued)

Panel B				
VARIABLES	(1) Funding Time	(2) Funding Time	(3) Funding Time	(4) Funding Time
Grade AA × Post	29.220*** (3.60)	22.050*** (2.98)	22.480*** (3.05)	8.139 (1.13)
Grade A × Post	0.397 (0.04)	-0.950 (-0.12)	-4.652 (-0.56)	-20.820*** (-2.58)
Grade B × Post	-26.540*** (-3.75)	-20.220*** (-3.13)	-19.820*** (-3.09)	-35.950*** (-5.61)
Grade C × Post	39.780*** (7.52)	41.050*** (8.48)	40.730*** (8.46)	30.560*** (6.34)
Grade D × Post	25.140*** (3.86)	21.530*** (3.64)	22.560*** (3.83)	13.180** (2.28)
Grade E × Post	24.850*** (3.36)	25.760*** (3.77)	24.920*** (3.63)	12.220* (1.83)
Grade HR × Post	3.345 (0.51)	3.133 (0.52)	2.511 (0.42)	-5.150 (-0.89)
Grade A	29.580*** (3.07)	28.480*** (3.16)	31.480*** (3.50)	29.650*** (3.44)
Grade B	28.850*** (3.52)	22.860** (2.57)	20.700** (2.34)	20.540** (2.42)
Grade C	-18.020** (-2.56)	-22.550** (-2.00)	-23.070** (-2.06)	-22.110** (-2.07)
Grade D	-0.954 (-0.13)	4.472 (0.28)	6.193 (0.39)	7.589 (0.49)
Grade E	-37.410*** (-4.62)	-27.510 (-1.35)	-23.430 (-1.15)	-20.010 (-1.03)
Grade HR	-41.900*** (-5.55)	-10.930 (-0.47)	-3.836 (-0.17)	-1.659 (-0.07)
Listing Amount		2.774*** (15.71)	3.304*** (17.01)	3.270*** (17.54)
Listing Term		0.704*** (5.62)	0.686*** (5.51)	0.629*** (5.28)
Borrower Rate		-50.210 (-0.56)	-92.270 (-1.02)	-114.200 (-1.32)
Income Range			-7.952*** (-7.04)	-8.120*** (-7.52)
Stock Market Return				-3,824.000*** (-4.81)
Stock Market Volatility				-192.900 (-0.28)
Ted Spread				436.200*** (6.74)
Funding Time Volatility				2.094*** (5.86)
Constant	53.990*** (8.97)	-3.263 (-0.35)	26.860 (1.08)	-217.600*** (-5.16)
Borrower State FEs	N	N	Y	Y
Observations	1,584	1,584	1,584	1,584
R-squared	0.200	0.340	0.381	0.436

(Table 7 continued)

Panel C				
VARIABLES	(1) Funding Time	(2) Funding Time	(3) Funding Time	(4) Funding Time
Grade AA × Post (-1)	-12.720* (-1.65)	-13.800* (-1.96)	-12.250* (-1.73)	10.500 (1.25)
Grade A × Post (-1)	0.709 (0.059)	-9.553 (-0.86)	-14.050 (-1.24)	10.730 (0.87)
Grade B × Post (-1)	-19.530** (-2.41)	-20.710*** (-2.79)	-25.360*** (-3.40)	-2.610 (-0.30)
Grade C × Post (-1)	14.420*** (3.19)	10.010** (2.41)	11.300*** (2.71)	35.760*** (5.52)
Grade D × Post (-1)	-10.330* (-1.77)	-11.310** (-2.12)	-11.530** (-2.16)	12.860* (1.75)
Grade E × Post (-1)	11.120* (1.715)	12.410** (2.09)	11.030* (1.86)	34.670*** (4.56)
Grade HR × Post (-1)	8.301 (1.48)	8.658* (1.69)	8.297 (1.62)	33.670*** (4.66)
Grade AA × Post (+1)	-14.520** (-1.97)	-18.950*** (-2.80)	-17.210** (-2.51)	-9.166 (-1.22)
Grade A × Post (+1)	-8.973 (-0.84)	-22.370** (-2.27)	-25.680** (-2.54)	-18.310* (-1.74)
Grade B × Post (+1)	-40.310*** (-6.11)	-36.830*** (-6.09)	-37.300*** (-6.15)	-30.900*** (-4.48)
Grade C × Post (+1)	11.080** (2.40)	11.930*** (2.79)	12.610*** (2.95)	22.300*** (4.12)
Grade D × Post (+1)	-12.410** (-2.12)	-13.450** (-2.51)	-12.610** (-2.35)	-3.855 (-0.61)
Grade E × Post (+1)	5.173 (0.83)	8.353 (1.44)	8.018 (1.38)	14.920** (2.26)
Grade HR × Post (+1)	3.172 (0.62)	3.770 (0.81)	3.639 (0.77)	11.360** (1.98)
Grade AA × Post (+2)	12.610 (1.04)	14.870 (1.33)	18.280 (1.63)	22.090* (1.90)
Grade A × Post (+2)	15.160 (1.17)	12.230 (1.03)	10.100 (0.84)	15.240 (1.22)
Grade B × Post (+2)	18.540** (2.46)	22.550*** (3.26)	22.020*** (3.16)	20.820*** (2.68)
Grade C × Post (+2)	17.180** (2.23)	24.110*** (3.39)	23.740*** (3.34)	24.410*** (3.06)
Grade D × Post (+2)	-7.839 (-0.96)	-8.246 (-1.10)	-6.780 (-0.91)	-2.032 (-0.24)
Grade E × Post (+2)	20.840*** (2.86)	21.850*** (3.25)	21.270*** (3.14)	26.570*** (3.46)
Grade HR × Post (+2)	4.864 (0.80)	4.166 (0.75)	3.867 (0.69)	11.450* (1.74)
Grade A	-8.245 (-0.74)	2.139 (0.21)	5.314 (0.50)	4.032 (0.39)
Grade B	9.135 (1.16)	8.914 (1.12)	10.15 (1.27)	9.976 (1.27)
Grade C	-24.250***	-23.630***	-22.130**	-23.230***

	(-3.66)	(-2.67)	(-2.49)	(-2.66)
Grade D	0.034	5.661	10.110	9.172
	(0.01)	(0.47)	(0.83)	(0.77)
Grade E	-36.650***	-29.870**	-23.980	-24.690**
	(-5.03)	(-2.01)	(-1.60)	(-1.68)
Grade HR	-39.110***	-19.370	-11.710	-13.380
	(-5.80)	(-1.16)	(-0.70)	(-0.81)
Listing Amount		1.905***	2.227***	2.229***
		(14.00)	(14.65)	(14.86)
Listing Term		0.306***	0.292***	0.306***
		(3.35)	(3.19)	(3.40)
Borrower Rate		-36.790	-70.080	-70.350
		(-0.58)	(-1.10)	(-1.12)
Income Range			-4.186***	-4.304***
			(-5.39)	(-5.64)
Stock Market Return				-6,089.000***
				(-5.18)
Stock Market Volatility				1,599.000**
				(2.09)
Ted Spread				137.300
				(1.57)
Funding Time Volatility				-0.399
				(-1.28)
Constant	47.980***	17.160**	44.630***	-52.810
	(8.35)	(2.29)	(2.80)	(-1.05)
Borrower State FEs	N	N	Y	Y
Observations	1,204	1,204	1,204	1,204
R-squared	0.201	0.333	0.375	0.400

**Table 8. Impact on Funding Time—LC, Individual loans**

This table examines the effect of LC's shut down of secondary market on LC individual listing's funding time.  $Post(k)$ , where  $k$  ranges from -2 to +2, are a set of four dummy variables that represent the weeks relative to the event date. All other specifications are same as in Table 7.

Panel A				
VARIABLES	(1) Funding Time	(2) Funding Time	(3) Funding Time	(4) Funding Time
Grade A × Post	-79.590*** (-24.54)	-81.680*** (-26.19)	-82.870*** (-26.40)	-83.460*** (-26.89)
Grade B × Post	-6.435*** (-4.38)	-5.595*** (-3.96)	-5.704*** (-4.01)	-10.290*** (-7.19)
Grade C × Post	-11.860*** (-5.25)	-11.960*** (-5.50)	-11.970*** (-5.47)	-13.000*** (-5.93)
Grade D × Post	-29.350*** (-13.70)	-28.130*** (-13.53)	-28.040*** (-13.38)	-31.730*** (-15.26)
Grade E × Post	-6.454** (-1.98)	-4.931 (-1.57)	-4.997 (-1.58)	-6.832** (-2.20)
Grade F × Post	-44.600*** (-4.27)	-28.760*** (-2.85)	-29.730*** (-2.94)	-31.500*** (-3.19)
Grade G × Post	-2.709 (-0.31)	-1.885 (-0.22)	-1.300 (-0.15)	-1.698 (-0.21)
Grade B	-73.060*** (-28.92)	-62.610*** (-22.75)	-63.310*** (-22.82)	-60.310*** (-22.17)
Grade C	-54.150*** (-21.09)	-33.570*** (-9.41)	-34.390*** (-9.56)	-35.290*** (-10.04)
Grade D	-47.930*** (-17.68)	-16.020*** (-3.19)	-16.680*** (-3.30)	-18.340*** (-3.71)
Grade E	-83.490*** (-28.40)	-41.920*** (-6.05)	-41.730*** (-5.96)	-43.860*** (-6.42)
Grade F	-52.230*** (-10.63)	-0.686 (-0.08)	0.642 (0.07)	-5.560 (-0.61)
Grade G	-88.590*** (-14.92)	-37.410*** (-3.66)	-37.100*** (-3.61)	-40.210*** (-4.00)
Listing Amount		1.091*** (20.64)	1.221*** (20.09)	1.166*** (19.64)
Listing Term		0.531*** (6.60)	0.524*** (6.39)	0.464*** (5.79)
Borrower Rate		-311.900*** (-8.34)	-329.000*** (-8.69)	-292.700*** (-7.91)
Income Range			-1.808*** (-3.96)	-1.803*** (-4.05)
Stock Market Return				-2,848.000*** (-10.30)
Stock Market Volatility				7.351 (0.02)
Ted Spread				214.900*** (8.51)
Funding Time Volatility				0.126*** (4.98)
Constant	98.560***	89.170***	89.000***	-39.670**



	(43.23)	(20.40)	(8.77)	(-2.25)
Borrower State FEs	N	N	Y	Y
Observations	7,147	7,147	7,018	7,018
R-squared	0.185	0.247	0.256	0.292

---

(Table 8 continued)

Panel B				
VARIABLES	(1) Funding Time	(2) Funding Time	(3) Funding Time	(4) Funding Time
Grade A × Post (-1)	0.670 (0.16)	-0.557 (-0.14)	0.503 (0.12)	16.430*** (3.69)
Grade B × Post (-1)	2.132 (1.41)	2.815* (1.92)	2.581* (1.76)	17.570*** (6.92)
Grade C × Post (-1)	8.150*** (4.54)	8.462*** (4.84)	8.447*** (4.78)	22.93*** (8.75)
Grade D × Post (-1)	3.621 (1.63)	3.323 (1.54)	4.481** (2.05)	19.080*** (6.56)
Grade E × Post (-1)	5.416** (2.16)	5.760** (2.36)	5.741** (2.35)	19.560*** (6.19)
Grade F × Post (-1)	-15.250** (-2.15)	-9.579 (-1.39)	-9.402 (-1.36)	5.195 (0.73)
Grade G × Post (-1)	0.636 (0.09)	4.429 (0.65)	3.938 (0.58)	19.880*** (2.84)
Grade A × Post (+1)	-27.420*** (-7.83)	-29.400*** (-8.64)	-29.500*** (-8.66)	-19.050*** (-5.28)
Grade B × Post (+1)	-10.750*** (-7.54)	-9.801*** (-7.05)	-9.883*** (-7.11)	-1.307 (-0.68)
Grade C × Post (+1)	1.262 (0.48)	2.091 (0.82)	2.939 (1.14)	11.710*** (4.12)
Grade D × Post (+1)	-13.440*** (-6.24)	-13.360*** (-6.33)	-12.640*** (-5.99)	-4.408* (-1.80)
Grade E × Post (+1)	0.996 (0.34)	1.144 (0.40)	1.144 (0.40)	6.838** (2.20)
Grade F × Post (+1)	-22.450** (-2.49)	-12.280 (-1.39)	-11.110 (-1.27)	-6.104 (-0.70)
Grade G × Post (+1)	2.063 (0.26)	5.770 (0.75)	5.536 (0.73)	15.340** (2.02)
Grade A × Post (+2)	-28.780*** (-8.43)	-31.590*** (-9.51)	-31.460*** (-9.45)	-32.890*** (-9.68)
Grade B × Post (+2)	-6.364*** (-4.20)	-5.308*** (-3.59)	-5.821*** (-3.93)	-7.551*** (-4.46)
Grade C × Post (+2)	1.407 (0.71)	1.087 (0.57)	1.355 (0.71)	-1.278 (-0.60)
Grade D × Post (+2)	-9.174*** (-4.14)	-9.316*** (-4.28)	-8.477*** (-3.87)	-10.47*** (-4.51)
Grade E × Post (+2)	-0.850 (-0.30)	-0.0876 (-0.032)	-0.583 (-0.21)	-3.142 (-1.10)
Grade F × Post (+2)	-25.040*** (-2.65)	-15.160 (-1.65)	-15.240* (-1.66)	-14.840 (-1.64)
Grade G × Post (+2)	-5.866 (-0.77)	-2.776 (-0.38)	-2.004 (-0.27)	-0.625 (-0.09)
Grade B	-25.770*** (-8.98)	-18.500*** (-6.29)	-18.080*** (-6.12)	-17.080*** (-5.88)
Grade C	-22.380*** (-7.79)	-6.261* (-1.87)	-6.326* (-1.88)	-6.387* (-1.93)
Grade D	-18.630***	8.088*	7.496*	6.407

	(-6.09)	(1.86)	(1.71)	(1.49)
Grade E	-33.930***	2.776	3.575	2.403
	(-10.90)	(0.50)	(0.64)	(0.44)
Grade F	-16.980***	27.720***	27.360***	23.760***
	(-3.58)	(3.83)	(3.74)	(3.31)
Grade G	-33.130***	12.320	13.420*	8.502
	(-6.08)	(1.52)	(1.66)	(1.07)
Listing Amount		0.529***	0.610***	0.591***
		(13.71)	(13.90)	(13.71)
Listing Term		0.256***	0.230***	0.207***
		(4.45)	(3.97)	(3.63)
Borrower Rate		-255.0***	-263.700***	-238.500***
		(-9.24)	(-9.49)	(-8.72)
Income Range			-1.236***	-1.168***
			(-3.82)	(-3.68)
Stock Market Return				-3,073***
				(-6.77)
Stock Market Volatility				-614.400*
				(-1.90)
Ted Spread				-136.600***
				(-5.00)
Funding Time Volatility				0.202***
				(10.78)
Constant	42.380***	46.720***	43.200***	101.800***
	(15.99)	(12.43)	(5.761)	(6.02)
Borrower State FEs	N	N	Y	Y
Observations	5,496	5,496	5,405	5,405
R-squared	0.098	0.147	0.159	0.191

**Table 9. Impact on Funding Cost—Prosper**

This table examines the effect of Prosper’s shut down of secondary market on the credit spread. Credit grade AA is omitted as the baseline. Interest rate is quoted in basis points. All other specifications are same as in Table 3.

Panel A: Aggregate Level			
	Post (1)	Pre (2)	Difference: (1) – (2) (3)
Full Sample	1544.478	1604.647	-60.169*** (-4.75)
Observations	5,482	6,991	12,473
Grade AA	635.535	674.589	-39.054*** (-9.86)
Observations	450	602	1,052
Grade A	855.764	913.855	-58.091*** (-14.65)
Observations	959	1,188	2,147
Grade B	1161.497	1217.965	- 56.468*** (-15.83)
Observations	1,240	1,555	2,795
Grade C	1656.17	1715.297	-59.127*** (-9.75)
Observations	1,570	1,805	3,375
Grade D	2314.331	2312.898	1.433 (0.18)
Observations	713	1,079	1,792
Grade E	2914.686	2823.957	90.729*** (9.51)
Observations	315	490	805
Grade HR	3189.340	3141.088	48.252*** (26.09)
Observations	235	272	507

(Table 9 continued)

Panel B: Aggregate Level				
VARIABLES	(1) Borrower Rate	(2) Borrower Rate	(3) Borrower Rate	(4) Borrower Rate
Grade A × Post	-19.200* (-1.93)	-18.480* (-1.86)	-16.540* (-1.67)	-16.530* (-1.66)
Grade B × Post	-17.580* (-1.84)	-16.380* (-1.72)	-15.270 (-1.60)	-15.270 (-1.60)
Grade C × Post	-20.230** (-2.17)	-19.870** (-2.14)	-18.410** (-1.98)	-18.320** (-2.00)
Grade D × Post	40.330*** (3.90)	40.580*** (3.94)	41.800*** (4.05)	41.790*** (4.05)
Grade E × Post	129.600*** (10.36)	128.200*** (10.29)	127.900*** (10.25)	127.700*** (10.23)
Grade HR × Post	87.140*** (6.12)	87.740*** (6.18)	89.290*** (6.28)	89.460*** (6.29)
Post	-38.890*** (-4.76)	-39.480*** (-4.85)	-40.460*** (-4.96)	-42.190*** (-5.11)
Grade A	235.000*** (35.83)	233.700*** (35.75)	231.400*** (35.31)	231.500*** (35.32)
Grade B	539.100*** (85.67)	534.200*** (84.92)	530.800*** (83.88)	530.900*** (83.89)
Grade C	1,036.000*** (168.00)	1,029.000*** (166.00)	1,024.000*** (163.60)	1,025.000*** (163.70)
Grade D	1,634.000*** (245.00)	1,624.000*** (241.30)	1,619.000*** (238.40)	1,619.000*** (238.30)
Grade E	2,145.000*** (268.90)	2,136.000*** (265.30)	2,131.000*** (262.60)	2,131.000*** (262.60)
Grade HR	2,462.000*** (257.10)	2,464.000*** (256.10)	2,459.000*** (254.50)	2,459.000*** (254.40)
Listing Amount		0.014 (0.09)	0.247 (1.42)	0.249 (1.43)
Listing Term		1.143*** (9.58)	1.123*** (9.39)	1.124*** (9.40)
Income Range			-3.999*** (-3.52)	-3.953*** (-3.48)
Stock Market Return				-333.800 (-0.47)
Stock Market Volatility				-1,182.000* (-1.76)
Ted Spread				-17.430 (-0.24)
Constant	678.800*** (127.00)	635.800*** (90.65)	635.000*** (24.10)	649.300*** (13.27)
Borrower State FEs	N	N	Y	Y
Observations	12,473	12,473	12,473	12,473
R-squared	0.965	0.965	0.966	0.966

(Table 9 continued)

Panel C: Aggregate Level				
VARIABLES	(1) Borrower Rate	(2) Borrower Rate	(3) Borrower Rate	(4) Borrower Rate
Grade A × Post (-1)	-1.206 (-0.0)	0.413 (0.03)	0.100 (0.01)	-0.033 (-0.01)
Grade B × Post (-1)	4.227 (0.33)	4.261 (0.33)	4.762 (0.37)	4.330 (0.34)
Grade C × Post (-1)	12.180 (0.97)	11.770 (0.94)	12.090 (0.97)	11.560 (0.93)
Grade D × Post (-1)	17.370 (1.28)	17.250 (1.27)	16.560 (1.22)	16.370 (1.21)
Grade E × Post (-1)	32.860** (2.04)	34.750** (2.16)	34.160** (2.12)	34.240** (2.13)
Grade HR × Post (-1)	19.300 (0.99)	19.320 (1.00)	18.680 (0.96)	17.910 (0.92)
Grade A × Post (+1)	-22.410 (-1.61)	-21.370 (-1.54)	-19.650 (-1.41)	-19.240 (-1.39)
Grade B × Post (+1)	-13.490 (-1.00)	-12.700 (-0.95)	-10.880 (-0.81)	-11.000 (-0.82)
Grade C × Post (+1)	-13.920 (-1.06)	-13.920 (-1.06)	-11.770 (-0.90)	-12.060 (-0.92)
Grade D × Post (+1)	47.670*** (3.26)	47.570*** (3.26)	48.320*** (3.31)	48.420*** (3.32)
Grade E × Post (+1)	146.90*** (8.39)	146.60*** (8.40)	146.50*** (8.38)	146.60*** (8.39)
Grade HR × Post (+1)	95.210*** (4.85)	95.350*** (4.87)	97.470*** (4.98)	97.190*** (4.97)
Grade A × Post (+2)	-16.380 (-1.02)	-14.410 (-0.90)	-12.120 (-0.76)	-11.440 (-0.72)
Grade B × Post (+2)	-16.880 (-1.11)	-15.320 (-1.01)	-14.130 (-0.93)	-14.050 (-0.92)
Grade C × Post (+2)	-9.729 (-0.65)	-9.051 (-0.61)	-7.550 (-0.50)	-7.361 (-0.49)
Grade D × Post (+2)	55.950*** (3.33)	56.410*** (3.37)	57.490*** (3.43)	57.470*** (3.43)
Grade E × Post (+2)	146.300*** (7.17)	147.000*** (7.23)	145.800*** (7.15)	145.100*** (7.12)
Grade HR × Post (+2)	99.650*** (4.50)	100.600*** (4.55)	102.000*** (4.61)	102.800*** (4.65)
Post (-1)	-12.990 (-1.20)	-13.010 (-1.20)	-12.940 (-1.19)	-28.210** (-2.37)
Post (+1)	-44.300*** (-3.84)	-44.440*** (-3.87)	-45.820*** (-3.98)	-56.320*** (-4.74)
Post (+2)	-47.790*** (-3.61)	-48.780*** (-3.697)	-49.630*** (-3.76)	-50.730*** (-3.67)
Grade A	235.300*** (24.41)	233.200*** (24.27)	230.900*** (23.99)	230.900*** (23.99)
Grade B	536.700*** (57.63)	531.900*** (57.21)	527.900*** (56.60)	528.100*** (56.64)
Grade C	1,030.000***	1,023.000***	1,018.000***	1,018.000***

	(112.30)	(111.50)	(110.40)	(110.50)
Grade D	1,625.000***	1,616.000***	1,611.000***	1,611.000***
	(161.70)	(160.30)	(159.10)	(159.20)
Grade E	2,128.000***	2,118.000***	2,113.000***	2,113.000***
	(178.00)	(176.60)	(175.70)	(175.80)
Grade HR	2,453.000***	2,454.000***	2,449.000***	2,449.000***
	(179.60)	(179.60)	(178.80)	(178.90)
Listing Amount		-0.022	0.210	0.207
		(-0.13)	(1.18)	(1.16)
Listing Term		1.095***	1.074***	1.076***
		(8.93)	(8.74)	(8.76)
Income Range			-3.949***	-3.884***
			(-3.408)	(-3.35)
Stock Market Return				2,734.000**
				(2.20)
Stock Market Volatility				-3,283.000***
				(-3.38)
Ted Spread				-0.651
				(-0.01)
Constant	685.300***	644.600***	642.200***	664.600***
	(85.99)	(69.96)	(23.32)	(8.66)
Borrower State FEs	N	N	Y	Y
Observations	11,953	11,953	11,953	11,953
R-squared	0.965	0.965	0.965	0.966

(Table 9 continued)

Panel D: Institutional Loans			
	Post (1)	Pre (2)	Difference: (1) – (2) (3)
Full Sample	1493.572	1559.645	-66.073*** (-5.14)
Observations	4,645	6,244	10,889
Grade AA	634.555	674.556	-40.001*** (-9.13)
Observations	362	530	892
Grade A	855.856	914.072	-58.216*** (-14.15)
Observations	857	1,142	1,999
Grade B	1161.554	1217.948	-56.394*** (-15.13)
Observations	1,103	1,471	2,574
Grade C	1656.402	1716.203	-59.801*** (-9.36)
Observations	1,393	1,608	3,001
Grade D	2315.258	2313.588	1.670 (0.19)
Observations	599	945	1,544
Grade E	2915.005	2831.803	83.202*** (7.37)
Observations	213	401	614
Grade HR	3189.644	3140.204	49.440*** (19.07)
Observations	118	147	265



(Table 9 continued)

Panel E: Institutional Loans				
VARIABLES	(1) Borrower Rate	(2) Borrower Rate	(3) Borrower Rate	(4) Borrower Rate
Grade A × Post	-18.850* (-1.76)	-18.400* (-1.72)	-16.510 (-1.54)	-16.470 (-1.54)
Grade B × Post	-17.020 (-1.64)	-16.230 (-1.57)	-14.860 (-1.44)	-14.710 (-1.42)
Grade C × Post	-20.430** (-2.01)	-20.640** (-2.04)	-19.230* (-1.90)	-19.110* (-1.88)
Grade D × Post	41.040*** (3.64)	41.180*** (3.67)	42.240*** (3.75)	42.310*** (3.76)
Grade E × Post	122.600*** (8.58)	121.100*** (8.51)	121.700*** (8.53)	121.300*** (8.50)
Grade HR × Post	88.810*** (4.79)	89.160*** (4.83)	91.290*** (4.94)	91.480*** (4.95)
Post	-39.370*** (-4.40)	-39.730*** (-4.45)	-40.900*** (-4.58)	-42.330*** (-4.67)
Grade A	235.200*** (34.08)	233.900*** (34.02)	231.700*** (33.58)	231.900*** (33.60)
Grade B	539.100*** (81.04)	534.100*** (80.33)	531.000*** (79.33)	531.100*** (79.34)
Grade C	1,037.000*** (157.70)	1,030.000*** (156.00)	1,026.000*** (153.60)	1,026.000*** (153.70)
Grade D	1,635.000*** (229.40)	1,624.000*** (225.80)	1,620.000*** (222.90)	1,620.000*** (222.80)
Grade E	2,153.000*** (247.70)	2,144.000*** (244.50)	2,139.000*** (241.80)	2,139.000*** (241.80)
Grade HR	2,461.000*** (201.10)	2,463.000*** (200.70)	2,458.000*** (199.60)	2,458.000*** (199.60)
Listing Amount		-0.033 (-0.20)	0.127 (0.69)	0.128 (0.698)
Listing Term		1.155*** (9.09)	1.146*** (8.99)	1.149*** (9.01)
Income Range			-2.884** (-2.36)	-2.831** (-2.32)
Stock Market Return				-57.660 (-0.08)
Stock Market Volatility				-1,267.000* (-1.77)
Ted Spread				13.080 (0.16)
Constant	678.900*** (119.00)	636.000*** (84.93)	636.500*** (22.27)	634.200*** (11.61)
Borrower State FEs	N	N	Y	Y
Observations	10,889	10,889	10,889	10,889
R-squared	0.961	0.961	0.961	0.961

(Table 9 continued)

Panel F: Institutional Loans				
VARIABLES	(1) Borrower Rate	(2) Borrower Rate	(3) Borrower Rate	(4) Borrower Rate
Grade A × Post (-1)	-1.614 (-0.116)	0.221 (0.02)	-0.120 (-0.01)	-0.331 (-0.02)
Grade B × Post (-1)	4.404 (0.33)	4.535 (0.34)	5.182 (0.39)	4.683 (0.35)
Grade C × Post (-1)	10.870 (0.82)	10.240 (0.77)	10.330 (0.78)	9.780 (0.74)
Grade D × Post (-1)	19.900 (1.38)	19.830 (1.38)	19.070 (1.32)	19.100 (1.33)
Grade E × Post (-1)	33.100* (1.88)	35.260** (2.01)	35.000** (1.99)	35.360** (2.02)
Grade HR × Post (-1)	18.850 (0.76)	18.900 (0.7)	19.130 (0.77)	19.900 (0.80)
Grade A × Post (+1)	-22.850 (-1.54)	-21.780 (-1.47)	-20.200 (-1.37)	-19.950 (-1.35)
Grade B × Post (+1)	-15.550 (-1.08)	-14.920 (-1.04)	-12.710 (-0.88)	-12.960 (-0.90)
Grade C × Post (+1)	-16.850 (-1.19)	-17.550 (-1.25)	-15.650 (-1.11)	-16.030 (-1.14)
Grade D × Post (+1)	49.810*** (3.16)	49.860*** (3.171)	50.700*** (3.22)	51.050*** (3.24)
Grade E × Post (+1)	143.600*** (7.31)	142.600*** (7.29)	144.300*** (7.36)	144.600*** (7.38)
Grade HR × Post (+1)	95.550*** (3.65)	95.710*** (3.67)	99.300*** (3.81)	101.300*** (3.89)
Grade A × Post (+2)	-15.060 (-0.91)	-13.090 (-0.80)	-10.590 (-0.64)	-9.918 (-0.60)
Grade B × Post (+2)	-14.640 (-0.92)	-13.340 (-0.84)	-11.750 (-0.74)	-11.520 (-0.73)
Grade C × Post (+2)	-10.760 (-0.69)	-10.780 (-0.69)	-9.259 (-0.59)	-8.877 (-0.57)
Grade D × Post (+2)	53.980*** (3.08)	54.350*** (3.109)	55.380*** (3.16)	55.540*** (3.17)
Grade E × Post (+2)	136.500*** (6.03)	138.100*** (6.12)	137.200*** (6.06)	135.800*** (6.00)
Grade HR × Post (+2)	103.000*** (3.66)	103.900*** (3.71)	105.500*** (3.76)	106.100*** (3.78)
Post (-1)	-12.100 (-1.05)	-12.150 (-1.06)	-12.010 (-1.04)	-27.560** (-2.19)
Post (+1)	-42.940*** (-3.44)	-43.120*** (-3.47)	-44.640*** (-3.59)	-55.710*** (-4.35)
Post (+2)	-48.860*** (-3.55)	-49.740*** (-3.62)	-50.870*** (-3.70)	-50.960*** (-3.54)
Grade A	235.100*** (23.36)	233.000*** (23.23)	230.700*** (22.95)	230.800*** (22.97)
Grade B	536.300*** (54.84)	531.300*** (54.45)	527.500*** (53.86)	527.900*** (53.92)
Grade C	1,031.000***	1,024.000***	1,020.000***	1,020.000***

	(106.20)	(105.50)	(104.50)	(104.60)
Grade D	1,624.000***	1,614.000***	1,610.000***	1,609.000***
	(151.60)	(150.30)	(149.10)	(149.20)
Grade E	2,134.000***	2,124.000***	2,119.000***	2,118.000***
	(162.50)	(161.30)	(160.40)	(160.40)
Grade HR	2,451.000***	2,452.000***	2,446.000***	2,445.000***
	(134.20)	(134.40)	(133.80)	(133.80)
Listing Amount		-0.057	0.110	0.108
		(-0.34)	(0.60)	(0.58)
Listing Term		1.140***	1.128***	1.132***
		(8.87)	(8.75)	(8.79)
Income Range			-3.008**	-2.943**
			(-2.45)	(-2.40)
Stock Market Return				2,897.000**
				(2.25)
Stock Market Volatility				-3,385.000***
				(-3.31)
Ted Spread				32.520
				(0.24)
Constant	685.500***	643.600***	643.000***	647.200***
	(81.24)	(66.10)	(21.49)	(7.77)
Borrower State FEs	N	N	Y	Y
Observations	10,749	10,749	10,749	10,749
R-squared	0.961	0.961	0.961	0.961

(Table 9 continued)

Panel G: Individual Loans			
	Post (1)	Pre (2)	Difference: (1) – (2) (3)
Full Sample	1826.986	1980.807	-153.821*** (-3.57)
Observations	837	747	1,584
Grade AA	639.568	674.833	-35.265*** (-3.73)
Observations	88	72	160
Grade A	854.990	908.456	-53.466*** (-3.14)
Observations	102	46	148
Grade B	1161.037	1218.274	-57.237*** (-4.33)
Observations	137	84	221
Grade C	1654.345	1707.904	-53.559*** (-2.78)
Observations	177	197	374
Grade D	2309.456	2308.030	1.426 (0.07)
Observations	114	134	248
Grade E	2914.020	2788.607	125.413*** (6.84)
Observations	102	89	191
Grade HR	3189.034	3142.128	46.906*** (17.70)
Observations	117	125	242

(Table 9 continued)

Panel H: Individual Loans				
VARIABLES	(1) Borrower Rate	(2) Borrower Rate	(3) Borrower Rate	(4) Borrower Rate
Grade A × Post	-16.670 (-0.54)	-14.080 (-0.46)	-8.046 (-0.26)	-7.860 (-0.25)
Grade B × Post	-20.440 (-0.76)	-15.020 (-0.55)	-9.365 (-0.34)	-9.894 (-0.36)
Grade C × Post	-16.760 (-0.68)	-11.770 (-0.48)	-5.408 (-0.22)	-6.119 (-0.25)
Grade D × Post	38.230 (1.44)	38.870 (1.47)	44.530* (1.66)	44.780* (1.67)
Grade E × Post	162.200*** (5.80)	163.40*** (5.85)	164.600*** (5.78)	162.800*** (5.71)
Grade HR × Post	83.710*** (3.15)	86.150*** (3.25)	86.1300*** (3.21)	83.870*** (3.11)
Post	-36.800* (-1.78)	-39.310* (-1.91)	-41.650** (-2.00)	-41.060* (-1.92)
Grade A	229.900*** (9.37)	228.300*** (9.33)	223.600*** (8.98)	222.600*** (8.93)
Grade B	539.700*** (25.85)	534.000*** (25.58)	525.700*** (24.76)	523.900*** (24.60)
Grade C	1,029.000*** (57.49)	1,019.000*** (56.39)	1,009.000*** (54.97)	1,009.000*** (54.98)
Grade D	1,630.000*** (85.77)	1,622.000*** (84.83)	1,611.000*** (82.77)	1,610.000*** (82.54)
Grade E	2,110.000*** (102.40)	2,101.000*** (100.70)	2,094.000*** (98.72)	2,094.000*** (98.70)
Grade HR	2,464.000*** (128.10)	2,468.000*** (127.10)	2,461.000*** (125.00)	2,460.000*** (124.70)
Listing Amount		0.456 (0.93)	1.195** (2.17)	1.263** (2.29)
Listing Term		1.094*** (3.14)	1.039*** (2.95)	1.037*** (2.95)
Income Range			-11.600*** (-3.63)	-11.740*** (-3.68)
Stock Market Return				-3,531.000 (-1.52)
Stock Market Volatility				325.100 (0.16)
Ted Spread				-151.300 (-0.79)
Constant	678.500*** (44.28)	632.000*** (31.39)	619.200*** (9.02)	690.600*** (5.58)
Borrower State FEs	N	N	Y	Y
Observations	1,584	1,584	1,584	1,584
R-squared	0.977	0.977	0.978	0.978

(Table 9 continued)

Panel I: Individual Loans				
VARIABLES	(1) Borrower Rate	(2) Borrower Rate	(3) Borrower Rate	(4) Borrower Rate
Grade A × Post (-1)	-8.605 (-0.14)	-12.370 (-0.20)	5.100 (0.08)	5.130 (0.08)
Grade B × Post (-1)	-19.410 (-0.41)	-20.520 (-0.43)	-23.360 (-0.49)	-22.780 (-0.48)
Grade C × Post (-1)	22.970 (0.61)	23.170 (0.61)	29.230 (0.76)	29.400 (0.77)
Grade D × Post (-1)	-8.428 (-0.21)	-7.966 (-0.20)	-6.189 (-0.15)	-5.875 (-0.14)
Grade E × Post (-1)	22.150 (0.52)	22.920 (0.54)	25.570 (0.59)	25.460 (0.59)
Grade HR × Post (-1)	26.630 (0.66)	26.770 (0.67)	37.290 (0.92)	37.690 (0.92)
Grade A × Post (+1)	-25.730 (-0.47)	-28.040 (-0.51)	-8.964 (-0.16)	-8.176 (-0.14)
Grade B × Post (+1)	-3.136 (-0.08)	0.294 (0.01)	15.77 (0.37)	16.500 (0.39)
Grade C × Post (+1)	5.557 (0.15)	10.650 (0.29)	30.100 (0.80)	29.200 (0.77)
Grade D × Post (+1)	28.740 (0.72)	28.970 (0.73)	39.010 (0.96)	38.520 (0.95)
Grade E × Post (+1)	164.000*** (4.01)	166.500*** (4.07)	166.200*** (3.97)	166.600*** (3.97)
Grade HR × Post (+1)	99.2100*** (2.62)	100.300*** (2.64)	109.600*** (2.84)	109.200*** (2.82)
Grade A × Post (+2)	-38.760 (-0.51)	-39.630 (-0.53)	-32.950 (-0.43)	-33.490 (-0.43)
Grade B × Post (+2)	-51.900 (-0.86)	-48.020 (-0.79)	-48.730 (-0.79)	-49.530 (-0.80)
Grade C × Post (+2)	3.943 (0.06)	12.450 (0.20)	6.887 (0.11)	5.392 (0.09)
Grade D × Post (+2)	84.970 (1.37)	86.280 (1.39)	90.720 (1.45)	90.78 (1.44)
Grade E × Post (+2)	165.800*** (2.76)	165.000*** (2.753)	166.300*** (2.735)	166.600*** (2.74)
Grade HR × Post (+2)	80.140 (1.39)	80.950 (1.41)	86.910 (1.49)	88.750 (1.52)
Post (-1)	-19.970 (-0.613)	-20.050 (-0.62)	-27.630 (-0.84)	-28.660 (-0.72)
Post (+1)	-49.820 (-1.60)	-50.810 (-1.63)	-60.270* (-1.89)	-59.620* (-1.68)
Post (+2)	-30.640 (-0.60)	-31.630 (-0.61)	-31.380 (-0.602)	-38.150 (-0.71)
Grade A	234.300*** (4.95)	236.700*** (4.996)	227.500*** (4.64)	227.600*** (4.64)
Grade B	542.800*** (16.33)	539.400*** (16.22)	528.600*** (15.69)	528.300*** (15.65)
Grade C	1,019.000***	1,011.000***	999.500***	999.800***

	(36.39)	(35.80)	(34.74)	(34.68)
Grade D	1,635.000***	1,629.000***	1,618.000***	1,618.000***
	(55.75)	(55.23)	(53.90)	(53.77)
Grade E	2,105.000***	2,098.000***	2,093.000***	2,093.000***
	(68.38)	(67.51)	(66.14)	(66.05)
Grade HR	2,456.000***	2,459.000***	2,445.000***	2,445.000***
	(86.19)	(85.74)	(83.69)	(83.47)
Listing Amount		0.365	1.190*	1.160
		(0.582)	(1.68)	(1.63)
Listing Term		0.731*	0.635	0.618
		(1.737)	(1.49)	(1.45)
Income Range			-11.860***	-11.790***
			(-3.29)	(-3.27)
Stock Market Return				-1,138.000
				(-0.20)
Stock Market Volatility				-1,060.000
				(-0.30)
Ted Spread				-166.600
				(-0.45)
Constant	683.100***	652.000***	638.400***	733.800***
	(28.14)	(22.50)	(8.89)	(3.37)
Borrower State FEs	N	N	Y	Y
Observations	1,204	1,204	1,204	1,204
R-squared	0.979	0.979	0.980	0.980

**Table 10. Impact on Funding Cost—LC, Individual loans**

This table examines the effect of Prosper's shut down of secondary market on the credit spread of LC's loans. Credit grade A is omitted as the baseline. Panel B examines the dynamics effects by week. Interest rate is quoted in basis points. All other specifications are same as in Table 8.

VARIABLES	Panel A			
	(1) Borrower Rate	(2) Borrower Rate	(3) Borrower Rate	(4) Borrower Rate
Grade B × Post	25.270** (2.33)	26.180** (2.42)	25.630** (2.35)	27.230** (2.48)
Grade C × Post	-2.082 (-0.17)	0.492 (0.04)	1.388 (0.11)	2.088 (0.17)
Grade D × Post	1.123 (0.09)	6.778 (0.57)	6.804 (0.57)	7.806 (0.65)
Grade E × Post	18.960 (1.35)	21.450 (1.53)	18.840 (1.34)	19.240 (1.36)
Grade F × Post	178.500*** (5.35)	193.300*** (5.79)	192.200*** (5.74)	189.600*** (5.66)
Grade G × Post	82.810*** (2.91)	82.710*** (2.91)	87.170*** (3.06)	85.660*** (3.01)
Post	-13.690 (-1.38)	-13.820 (-1.40)	-13.570 (-1.37)	-12.460 (-1.23)
Grade B	346.800*** (45.00)	346.100*** (45.02)	343.400*** (44.24)	340.500*** (43.53)
Grade C	690.700*** (88.19)	688.300*** (87.99)	682.400*** (85.96)	681.200*** (85.77)
Grade D	1,150.000*** (139.20)	1,146.000*** (138.10)	1,136.000*** (134.20)	1,134.000*** (133.70)
Grade E	1,693.000*** (188.80)	1,679.000*** (180.20)	1,670.000*** (175.70)	1,668.000*** (174.80)
Grade F	2,095.000*** (139.80)	2,079.000*** (136.30)	2,071*** (132.30)	2,070.000*** (132.30)
Grade G	2,254.000*** (124.40)	2,226.000*** (119.00)	2,212*** (116.70)	2,208.000*** (116.40)
Listing Amount		-0.283* (-1.69)	0.392** (2.04)	0.432** (2.25)
Listing Term		1.535*** (6.04)	1.601*** (6.19)	1.633*** (6.31)
Income Range			-10.160*** (-7.05)	-10.220*** (-7.10)
Stock Market Return				3,342.000*** (3.68)
Stock Market Volatility				41.140 (0.05)
Ted Spread				0.000 (1.12)
Constant	714.300*** (102.70)	662.200*** (58.05)	740.100*** (23.95)	760.000*** (13.65)
Borrower State FEs	N	N	Y	Y
Observations	7,147	7,147	7,018	7,018
R-squared	0.951	0.951	0.952	0.952



(Table 10 continued)

Panel B				
VARIABLES	(1) Borrower Rate	(2) Borrower Rate	(3) Borrower Rate	(4) Borrower Rate
Grade B × Post (-1)	44.020** (2.09)	45.740** (2.18)	42.440** (2.00)	42.210** (1.99)
Grade C × Post (-1)	45.430** (2.10)	47.600** (2.21)	42.440* (1.95)	42.790** (1.97)
Grade D × Post (-1)	6.972 (0.31)	10.150 (0.45)	3.474 (0.15)	3.789 (0.17)
Grade E × Post (-1)	24.620 (1.06)	27.360 (1.18)	23.880 (1.02)	24.120 (1.03)
Grade F × Post (-1)	184.800*** (4.71)	188.900*** (4.83)	183.600*** (4.64)	183.900*** (4.65)
Grade G × Post (-1)	133.600*** (3.45)	141.600*** (3.67)	141.100*** (3.62)	140.600*** (3.61)
Grade B × Post (+1)	46.670*** (2.58)	48.500*** (2.69)	46.440** (2.56)	46.980*** (2.59)
Grade C × Post (+1)	15.120 (0.72)	18.490 (0.89)	19.160 (0.91)	19.880 (0.95)
Grade D × Post (+1)	-2.316 (-0.12)	5.785 (0.30)	3.968 (0.20)	3.911 (0.20)
Grade E × Post (+1)	36.880* (1.68)	38.150* (1.74)	34.350 (1.56)	36.540* (1.66)
Grade F × Post (+1)	279.600*** (6.06)	295.300*** (6.40)	298.600*** (6.44)	300.300*** (6.49)
Grade G × Post (+1)	158.900*** (3.86)	162.900*** (3.97)	164.900*** (4.02)	165.600*** (4.04)
Grade B × Post (+2)	60.280*** (3.38)	61.440*** (3.45)	59.305*** (3.30)	56.460*** (3.13)
Grade C × Post (+2)	27.260 (1.45)	30.810 (1.64)	29.840 (1.57)	30.320 (1.60)
Grade D × Post (+2)	-10.370 (-0.53)	-2.701 (-0.14)	-5.829 (-0.30)	-7.388 (-0.38)
Grade E × Post (+2)	22.330 (1.06)	26.390 (1.25)	23.400 (1.10)	21.290 (1.00)
Grade F × Post (+2)	227.600*** (4.74)	237.000*** (4.95)	230.900*** (4.80)	220.900*** (4.59)
Grade G × Post (+2)	158.400*** (3.99)	160.900*** (4.06)	166.800*** (4.22)	159.000*** (4.01)
Post (-1)	-28.090 (-1.42)	-28.620 (-1.45)	-25.160 (-1.26)	-36.430 (-1.63)
Post (+1)	-25.390 (-1.52)	-26.000 (-1.56)	-24.110 (-1.44)	-35.750** (-1.9)
Post (+2)	-27.500* (-1.69)	-27.360* (-1.68)	-25.720 (-1.57)	-11.110 (-0.65)
Grade B	333.300*** (24.31)	332.400*** (24.30)	332.000*** (23.97)	331.300*** (23.93)
Grade C	673.400*** (49.06)	670.300*** (48.93)	667.600*** (48.13)	666.700*** (48.10)
Grade D	1,157.000***	1,150.000***	1,144.000***	1,142.000***

	(79.15)	(78.58)	(77.01)	(76.97)
Grade E	1,686.000***	1,671.000***	1,664.000***	1,663.000***
	(113.3)	(110.50)	(108.20)	(108.10)
Grade F	2,024.000***	2,010.000***	2,003***	2,002.000***
	(89.20)	(88.16)	(85.75)	(85.78)
Grade G	2,210.000***	2,177***	2,164.000***	2,163.000***
	(84.84)	(81.73)	(80.84)	(80.88)
Listing Amount		-0.199	0.455**	0.481**
		(-1.05)	(2.10)	(2.22)
Listing Term		1.650***	1.710***	1.727***
		(5.87)	(5.99)	(6.05)
Income Range			-9.779***	-9.915***
			(-6.15)	(-6.24)
Stock Market Return				4,698.000**
				(2.08)
Stock Market Volatility				235.100
				(0.17)
Ted Spread				394.800***
				(2.92)
Constant	722.600***	665.100***	743.000***	534.000***
	(57.06)	(41.39)	(20.91)	(6.37)
Borrower State FEs	N	N	Y	Y
Observations	5,496	5,496	5,405	5,405
R-squared	0.956	0.956	0.957	0.957

**Table 11. Impact on Funding Quantity—Prosper, Loans**

This table examines the effect of Prosper’s shut down of secondary market on number of loans change within each credit grade. We count the total number of loans for each day during our 28-day period and then run a univariate test for the mean comparison. We include all listings except for those withdrawn listings. All other specifications are same as in Table 3.

Panel A: Aggregate level			
	Post (1)	Pre (2)	Difference: (1) – (2) (3)
Full Sample	421.692	513.928	-92.236 (-1.05)
Grade AA	34.615	44.214	-9.599 (-1.25)
Grade A	73.769	87.357	-13.588 (-0.81)
Grade B	95.385	112.500	-17.115 (-0.90)
Grade C	120.769	133.571	-12.802 (-0.66)
Grade D	54.846	80.286	-25.440* (-1.93)
Grade E	24.231	35.500	-11.270* (-1.91)
Grade HR	18.077	20.500	-2.423 (-0.60)

(Table 11 continued)

Panel B: Aggregate level							
VARIABLES	Grade AA	Grade A	Grade B	Grade C	Grade D	Grade E	Grade HR
	Number of loans	Number of loans	Number of loans	Number of loans	Number of loans	Number of loans	Number of loans
Post (-1)	6.714 (0.71)	-1.286 (-0.06)	1.857 (0.07)	18.860 (0.63)	20.290 (1.217)	8.429 (1.15)	-1.000 (-0.19)
Post (+1)	8.476 (0.86)	15.8 (0.71)	12.600 (0.48)	41.360 (1.32)	7.024 (0.405)	3.548 (0.46)	3.333 (0.59)
Post (+2)	-18.860* (-1.98)	-40.000* (-1.87)	-40.860 (-1.62)	-41.710 (-1.39)	-34.430* (-2.07)	-16.140** (-2.20)	-8.286 (-1.54)
Constant	40.860*** (6.07)	88.000*** (5.81)	111.600*** (6.25)	124.100*** (5.84)	70.140*** (5.95)	31.290*** (6.03)	21.000*** (5.51)
Observations	28	28	28	28	28	28	28
R-squared	0.305	0.235	0.179	0.253	0.337	0.352	0.170

(Table 11 continued)

Panel C: Institutional loans							
VARIABLES	Grade AA	Grade A	Grade B	Grade C	Grade D	Grade E	Grade HR
	Number of loans	Number of loans	Number of loans	Number of loans	Number of loans	Number of loans	Number of loans
Post (-1)	6.429 (0.67)	0.429 (0.02)	6.714 (0.26)	14.570 (0.49)	23.000 (1.38)	9.000 (1.20)	0.595 (0.13)
Post (+1)	0.429 (0.043)	4.976 (0.22)	3.690 (0.14)	29.600 (0.96)	3.452 (0.20)	-2.071 (-0.26)	-0.667 (-0.14)
Post (+2)	-11.240 (-1.13)	-29.860 (-1.31)	-37.140 (-1.45)	-16.570 (-0.54)	-24.570 (-1.48)	-13.430* (-1.78)	-3.333 (-0.69)
Constant	35.570*** (5.25)	83.860*** (5.43)	103.100*** (5.69)	109.600*** (5.20)	57.710*** (4.91)	24.570*** (4.62)	11.830*** (3.48)
Observations	28	28	28	28	28	28	28
R-squared	0.128	0.113	0.141	0.095	0.264	0.281	0.037

(Table 11 continued)

Panel D: Individual loans							
VARIABLES	Grade AA Number of loans	Grade A Number of loans	Grade B Number of loans	Grade C Number of loans	Grade D Number of loans	Grade E Number of loans	Grade HR Number of loans
Post (-1)	0.286 (0.09)	-1.714 (-0.52)	-4.857 (-1.37)	4.286 (0.80)	-2.714 (-0.96)	-0.571 (-0.21)	-3.286 (-1.50)
Post (+1)	8.048** (2.52)	10.860*** (3.16)	8.905** (2.41)	11.760** (2.11)	3.571 (1.21)	5.619* (1.991)	2.310 (1.01)
Post (+2)	-3.952 (-1.24)	-2.429 (-0.74)	-2.929 (-0.79)	-11.400* (-2.05)	-9.857*** (-3.47)	-2.714 (-1.00)	-5.429** (-2.48)
Constant	5.286** (2.43)	4.143* (1.77)	8.429*** (3.35)	14.570*** (3.85)	12.430*** (6.19)	6.7140*** (3.50)	10.860*** (7.00)
Observations	28	28	28	28	28	28	28
R-squared	0.385	0.451	0.415	0.435	0.498	0.288	0.374

**Table 12. Impact on Funding Quantity—LC, Loans**

This table examines the effect of Prosper’s shut down of secondary market on number of issuances change within each credit grade for LC. All other specifications are same as in Table 11.

Panel A			
	Post (1)	Pre (2)	Difference: (1) – (2) (3)
Full Sample	264.000	362.286	-98.286 (-1.38)
Grade A	24.000	29.929	-5.929 (-0.93)
Grade B	131.333	103.857	27.476 (1.03)
Grade C	34.500	113.214	-78.714*** (-4.11)
Grade D	52.250	66.357	-14.107 (-0.88)
Grade E	17.750	36.857	-19.107*** (-2.68)
Grade F	2.833	8.615	-5.782** (-2.35)
Grade G	3.667	5.182	-1.515 (-1.26)

(Table 12 continued)

Panel B							
VARIABLES	Grade A	Grade B	Grade C	Grade D	Grade E	Grade F	Grade G
	Number of loans	Number of loans	Number of loans	Number of loans	Number of loans	Number of loans	Number of loans
Post (-1)	-10.430 (-1.20)	-9.714 (-0.27)	-21.570 (-0.81)	-23.860 (-1.09)	-7.143 (-0.72)	-5.786** (-2.27)	1.133 (0.67)
Post (+1)	-12.290 (-1.41)	38.710 (1.05)	-96.570*** (-3.63)	-21.290 (-0.97)	-26.000** (-2.63)	-8.286** (-2.62)	-1.467 (-0.87)
Post (+2)	-9.543 (-1.00)	0.0857 (0.01)	-79.60** (-2.73)	-32.690 (-1.36)	-18.030 (-1.67)	-8.619** (-2.72)	-0.417 (-0.23)
Constant	35.140*** (5.71)	108.700*** (4.19)	124.000*** (6.60)	78.290*** (5.05)	40.430*** (5.79)	11.290*** (6.51)	4.667*** (4.11)
Observations	28	28	28	28	28	28	28
R-squared	0.097	0.084	0.438	0.090	0.266	0.438	0.123



**Table 13. Impact on Loan/borrower quality changes—Prosper**

This table examines the effect of Prosper’s shut down of secondary market on loan/borrower quality (Prosper Score) changes within each credit grade. We exclude those listings with start time before the implementation date and end time after the implementation date. We also exclude withdrawn listings. All other specifications are same as in Table 3.

Panel A			
	Post (1)	Pre (2)	Difference: (1) – (2) (3)
Full Sample	7.421	7.382	0.039 (0.91)
Observations	5,482	6,991	12,473
Grade AA	10.171	10.168	-0.003 (-0.05)
Observations	450	602	1,052
Grade A	9.278	9.240	0.038 (0.56)
Observations	959	1,188	2,147
Grade B	8.000	8.143	-0.143** (-2.10)
Observations	1,240	1,555	2,795
Grade C	7.053	6.971	0.082 (1.29)
Observations	1,570	1,805	3,375
Grade D	5.736	5.695	0.041 (0.54)
Observations	713	1,079	1,792
Grade E	4.647	4.737	-0.090 (-0.92)
Observations	315	490	805
Grade HR	2.821	2.930	-0.109 (-1.26)
Observations	235	272	507

(Table 13 continued)

Panel B	
VARIABLES	(1) Prosper Score
Grade AA × Post (-1)	0.020 (0.15)
Grade A × Post (-1)	-0.237** (-2.46)
Grade B × Post (-1)	-0.179** (-2.13)
Grade C × Post (-1)	-0.153* (-1.96)
Grade D × Post (-1)	-0.042 (-0.41)
Grade E × Post (-1)	-0.120 (-0.80)
Grade HR × Post (-1)	-0.106 (-0.52)
Grade AA × Post (+1)	0.016 (0.11)
Grade A × Post (+1)	-0.076 (-0.78)
Grade B × Post (+1)	-0.195** (-2.25)
Grade C × Post (+1)	0.017 (0.22)
Grade D × Post (+1)	0.035 (0.31)
Grade E × Post (+1)	-0.081 (-0.49)
Grade HR × Post (+1)	-0.189 (-0.95)
Grade AA × Post (+2)	-0.001 (-0.01)
Grade A × Post (+2)	-0.072 (-0.64)
Grade B × Post (+2)	-0.339*** (-3.56)
Grade C × Post (+2)	-0.061 (-0.68)
Grade D × Post (+2)	0.030 (0.23)
Grade E × Post (+2)	-0.344* (-1.77)
Grade HR × Post (+2)	-0.177 (-0.80)
Grade A	-0.830*** (-6.88)
Grade B	-1.938*** (-16.64)
Grade C	-3.120***

Grade D	(-27.21) -4.456***
Grade E	(-35.45) -5.363***
Grade HR	(-35.90) -7.184***
Constant	(-42.08) 10.170***
Observations	(102.10) 11,953
R-squared	0.535

---

**Table 14. Impact on Loan Terms—Prosper**

This table examines the effect of Prosper’s shut down of secondary market on loan term changes within each credit grade for Prosper. We exclude those listings with start time before the implementation date and end time after the implementation date. We also exclude withdrawn listings. All other specifications are same as in Table 3.

Panel A: Aggregate Level			
	Post (1)	Pre (2)	Difference: (1) – (2) (3)
Full Sample	42.199	42.214	-0.015 (-0.08)
Observations	5,482	6,991	12,473
Grade AA	38.027	37.515	0.512 (1.32)
Observations	450	602	1,052
Grade A	38.578	38.687	-0.109 (-0.33)
Observations	959	1,188	2,147
Grade B	41.303	41.834	-0.531 (-1.37)
Observations	1,240	1,555	2,795
Grade C	44.255	44.058	0.197 (0.50)
Observations	1,570	1,805	3,375
Grade D	46.569	46.276	0.293 (0.51)
Observations	713	1,079	1,792
Grade E	47.200	45.453	1.747** (2.04)
Observations	315	490	805
Grade HR	36.000	36.000	0.000 (.)
Observations	235	272	507

(Table 14 continued)

Panel B: Institutional Loans			
	Post (1)	Pre (2)	Difference: (1) – (2) (3)
Full Sample	42.298	42.196	0.102 (0.50)
Observations	4,645	6,244	10,889
Grade AA	37.856	37.539	0.317 (0.76)
Observations	362	530	892
Grade A	38.604	38.690	-0.086 (-0.25)
Observations	857	1,142	1,999
Grade B	41.483	41.840	-0.357 (-0.88)
Observations	1,103	1,471	2,574
Grade C	44.339	43.836	0.503 (1.21)
Observations	1,393	1,608	3,001
Grade D	46.698	46.514	0.184 (0.29)
Observations	599	945	1,544
Grade E	46.704	45.157	1.547 (1.55)
Observations	213	401	614
Grade HR	36.000	36.000	0.000 (.)
Observations	118	147	265

(Table 14 continued)

Panel C: Individual Loans			
	Post (1)	Pre (2)	Difference: (1) – (2) (3)
Full Sample	41.649	42.361	-0.712 (-1.36)
Observations	837	747	1,584
Grade AA	38.727	37.333	1.394 (1.29)
Observations	88	72	160
Grade A	38.352	38.608	-0.256 (-0.20)
Observations	102	46	148
Grade B	39.854	41.714	-1.860 (-1.43)
Observations	137	84	221
Grade C	43.593	45.868	-2.275* (-1.90)
Observations	177	197	374
Grade D	45.895	44.597	1.298 (0.87)
Observations	114	134	248
Grade E	48.235	46.786	1.449 (0.83)
Observations	102	89	191
Grade HR	36.000	36.000	0.000 (.)
Observations	117	125	242

**Table 15. Impact on Loan Terms—LC, Individual loans**

This table examines the effect of Prosper’s shut down of secondary market on loan term changes within each credit grade for LC. We exclude those listings with start time before the implementation date and end time after the implementation date. We also exclude withdrawn listings. All other specifications are same as in Table 2.

	Post (1)	Pre (2)	Difference: (1) – (2) (3)
Full Sample	36.863	38.925	-2.062*** (-13.17)
Observations	3,168	3,979	7,147
Grade A	36.416	36.081	0.335* (1.67)
Observations	288	295	583
Grade B	36	36.537	-0.537*** (-6.00)
Observations	1,576	1,294	2,870
Grade C	36.115	37.637	-1.522*** (-5.04)
Observations	414	1,099	1,513
Grade D	36.076	39.630	-3.554*** (-10.23)
Observations	627	714	1,341
Grade E	44.676	46.301	-1.625* (-1.66)
Observations	213	445	658
Grade F	37.411	47.851	-10.440*** (-3.47)
Observations	17	81	98
Grade G	55.636	55.294	0.342 (0.16)
Observations	33	51	84

## REFERENCES

- Acharya, V. V., & Pedersen, L. H. (2005). Asset pricing with liquidity risk. *Journal of financial Economics*, 77(2), 375-410.
- Butler, A. W., Grullon, G., & Weston, J. P. (2005). Stock market liquidity and the cost of issuing equity. *Journal of Financial and Quantitative Analysis*, 40(2), 331-348.
- Brunnermeier, M. K., & Pedersen, L. H. (2009). Funding liquidity and market liquidity. *Review of Financial Studies*, 22(2201-2238), 6.
- Chordia, T., Roll, R., & Subrahmanyam, A. (2000). Commonality in liquidity. *Journal of financial economics*, 56(1), 3-28.
- Chordia, T., Sarkar, A., & Subrahmanyam, A. (2005). *The joint dynamics of liquidity, returns, and volatility across small and large firms* (No. 207). Staff Report.
- Chen, L., Lesmond, D., & Wei, J. (2005). Corporate yield spreads and bond liquidity, forthcoming. *Journal of Finance*.
- Drucker, S., & Puri, M. (2008). On loan sales, loan contracting, and lending relationships. *The Review of Financial Studies*, 22(7), 2835-2872.
- Gupta, A., Singh, A. K., & Zebedee, A. A. (2008). Liquidity in the pricing of syndicated loans. *Journal of Financial Markets*, 11(4), 339-376.
- Holden, C. W., Jacobsen, S., & Subrahmanyam, A. (2014). The empirical analysis of liquidity. *Foundations and Trends® in Finance*, 8(4), 263-365.
- Hanselaar, R. M., Stulz, R. M., & Van Dijk, M. A. (2018). Do firms issue more equity when markets become more liquid?. *Journal of Financial Economics*.
- Krishnamurthy, A. (2002). The bond/old-bond spread. *Journal of financial Economics*, 66(2-3), 463-506.
- Kamstra, M. J., Roberts, G. S., & Shao, P. (2013). Does the secondary loan market reduce borrowing costs? *Review of Finance*, 18(3), 1139-1181.
- Longstaff, F. A. (2002). *The flight-to-liquidity premium in US Treasury bond prices* (No. w9312). National Bureau of Economic Research.
- Longstaff, F. A., Mithal, S., & Neis, E. (2005). Corporate yield spreads: Default risk or liquidity? New evidence from the credit default swap market. *The Journal of Finance*, 60(5), 2213-2253.
- Pástor, L., & Stambaugh, R. F. (2003). Liquidity risk and expected stock returns. *Journal of Political economy*, 111(3), 642-685.
- Panunzi, F., Ellul, A., & Pagano, M. (2009). Inheritance law and investment in family firms.



## Appendix 1.

**Table A1. Definition of Variables**

Variable	Definition	Source
Prosper	A dummy variable that equals one if the listing belongs to Prosper, and zero if it belongs to LC.	Prosper.com & Lendingclub.com
Post	A dummy variable that equals one if the listing's start date and end date are both on 10/27/2016 and for 13 days thereafter, and 0 if the listing's start date and end date are both within a 14 days window before 10/27/2016.	Prosper.com
Listing Amount	The amount that the member requested to borrow in the listing.	Prosper.com & Lendingclub.com
Listing Term	The term of the loan.	Prosper.com & Lendingclub.com
Grade X	Credit Grade of the borrower at the time the listing was created. A category variable that equals one for each credit grade for each listing.	Prosper.com & Lendingclub.com

Variable	Definition	Source
Income Range	The income range of the borrower at the time the listing was created. It ranges from 2-6. 2 represents income range of \$1-24,999; 3 represents income range of \$25,000-49,000; 4 represents income range of \$50,000-74,999; 5 represents income range of \$75,000-99,999; 6 represents income range of \$100,000+.	Prosper.com & Lendingclub.com
Stock Market Return	It is the daily S&P 500 returns using close price. Calculated as the average daily market return at lagged 5-trading day level as of each listing's start date.	S&P 500
Stock Market Volatility	Calculated as the standard deviation of daily market return at lagged 5-trading day level as of each listing's start date.	S&P 500
Ted Spread	It is the difference between three-month Treasury bill and three-month LIBOR based on US dollar. Calculated as the average ted rate at lagged 5-trading day level as of each listing's start date.	St. Louis Fed
Funding Time Volatility	Calculated as the standard deviation of daily average funding time of listings at lagged one-week level as of each listing's start date.	Prosper.com & Lendingclub.com
Funding Time	A measure for the listing's funding time by calculating the duration between the listing's start time and end time. The unit is hour.	Prosper.com & Lendingclub.com
Borrower Rate	Interest rate of the listing.	Prosper.com & Lendingclub.com